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the Mont Saint Hilaire Nature Centre**

By : Emmanuel Raufflet, Maria Tengö,
Marc-André Guertin, Kafui Dansou
and Louis Jacques Filion

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**Landscape Entrepreneurship:
Lessons from the Mont Saint Hilaire Nature Centre**

Emmanuel Raufflet
HEC Montreal

Maria Tengö
Stockholm Resilience Centre
Stockholm University

Marc-André Guertin
Mont Saint Hilaire Nature Centre
Quebec

Kafui Dansou
HEC Montreal

Louis Jacques Fillion
Rogers-J.A.Bombardier Chair of Entrepreneurship
HEC Montreal

Summary

This working paper focuses on a little documented aspect of the entrepreneurial process, namely landscape entrepreneurship. Based on the experience of the Nature Centre in Mont Saint Hilaire, Québec, we define *landscape entrepreneurship* as a set of innovative activities conducted by an actor aimed at sustaining and developing ecological and social processes in a specific region or landscape so as to improve the ecosystem for human wellbeing.

This paper comprises four sections. In the first, we distinguish between “classical” and “social” entrepreneurship and situate the notion of landscape entrepreneurship. In the second, we describe the experience of the Mont Saint Hilaire Nature Centre, a biosphere reserve located 40 km South-East of Montreal. In the third section, we propose four perspectives on landscape entrepreneurship based on the experience of the Nature Centre, namely (1) landscape entrepreneurship as social entrepreneurship and organizing; (2) landscape entrepreneurship and the potential and challenges of stakeholder engagement processes; (3) landscape entrepreneurship and the construction of resilience in social/ ecological systems; and (4) landscape entrepreneurship as seen from the experience and lessons learned in the development and implementation of a framework for conservation. In the fourth section, we identify lessons and insights potentially relevant to our understanding of the role and forms of entrepreneurship in addressing social and environmental concerns. We conclude by pointing out tensions that arise in the complex process of landscape entrepreneurship, and suggest that landscape entrepreneurship could be at the tipping point of an emerging field of study with significant implications for related disciplines and fields of study.

Landscape Entrepreneurship: Lessons from the Mont Saint Hilaire Nature Centre

Introduction

Entrepreneurship as a mean to meet social needs

Entrepreneurship is a process that can be applied to all kinds of human activities, not just creating businesses. For example, it can be used to add value to many aspects of our lives and the natural environment. This chapter is very much in line with this way of thinking, which is being put forward by an increasing number of authors in the field (Kao, 1995; Kao, Kao and Kao, 2002 and 2005). The case study discussed here is an example of social entrepreneurship applied to regional conservation and ecology. The analysis of the Nature Centre at Mont Saint Hilaire, south-east of Montreal, Canada, using the perspectives outlined in this chapter, aim to shed light on what we broadly refer to here as “landscape entrepreneurship”.

For the purposes of this paper, we define *landscape entrepreneurship* as a set of innovative activities conducted by an actor aimed at sustaining and developing ecological and social processes in a specific region or landscape so as to improve the ecosystem for human wellbeing. The actor may be an individual or a group of individuals, acting independently of government structures. The organization may be a non-governmental organization (NGO). Landscape entrepreneurship activities may be profit-oriented, or non-profit-oriented. The case presented here involves a non-profit situation. We propose that social-ecological entrepreneurs can play a crucial and innovative role in promoting and navigating ecological change to help save our planet and to improve conditions for human life.

Our definition of the term “landscape” comprises interpretations from cultural geography, a distinct area of study that looks at the combined work of nature and humans¹, as well as from landscape ecology where landscape denotes a mosaic of landscape elements with ecosystems interacting across space (Forman and Godron 1986). In this chapter, we focus on the management of ecosystems from two standpoints: (1) recognizing spatial connectivity (connections between spaces); and (2) recognizing the interdependence between ecological and human-related processes.

In addition, our perspective on sustainable development is derived from resilience science. Resilience is the capacity to absorb change without losing the capacity to continue to develop (Holling 1986; Gunderson and Holling 2001). Resilience science has its roots in ecology but is developing into a science of how to manage systems where social and ecological processes interact.

Resilience as applied to ecosystems, or to integrated systems of people and the natural environment, has three defining characteristics (Carpenter et al. 2001). The first is the degree of change a system can undergo and still maintain the same level of control over function and structure. The second is the degree to which a system is capable of self-organization. The third characteristic is the ability to build and increase capacity for learning and adaptation. In a resilient system, such as the specific landscape discussed here, disturbance and change have the potential to create opportunity for innovation and development (Folke 2006). Acting on that potential, however, requires the presence of entrepreneurs—actors who know how to take advantage of opportunity. Ecological activities require more and more innovative capabilities.

¹ Cultural landscape was defined by UNESCO (2005), in *Operational Guidelines for the Implementation of the World Heritage Convention*. Paris: UNESCO World Heritage Centre. Page 83.

This chapter comprises four sections. In the first, we distinguish between “classical” and “social” entrepreneurship and situate the notion of landscape entrepreneurship. In the second, we describe the experience of the Mont Saint Hilaire Nature Centre, a biosphere reserve located 40 km south-east of Montreal. In the third section, we propose four perspectives on landscape entrepreneurship based on the experience of the Nature Centre, namely (1) landscape entrepreneurship as social entrepreneurship and organizing; (2) landscape entrepreneurship and the potential and challenges of stakeholder engagement processes; (3) landscape entrepreneurship and the construction of resilience in social/ecological systems; and (4) landscape entrepreneurship as seen from the experience and lessons learned in the implementation of a UN developed framework for conservation. In the fourth section, we identify lessons and insights potentially relevant to our understanding of the role and forms of entrepreneurship in addressing social and environmental concerns. We conclude by pointing out tensions that arise in the complex process of landscape entrepreneurship, and suggesting that landscape entrepreneurship is at the tipping point of an emerging field of study with significant implications for related disciplines and fields of study.

1. From classic to social entrepreneurship

Entrepreneurship began as a term denoting opportunity detection as a means to innovation. Schumpeter (1934) referred to the effect of entrepreneurial activities as “creative destruction”: entrepreneurs develop new products that make those already on the market obsolete (see also McCraw, 2007). Over the last decade, a growing number of researchers have remarked that entrepreneurship occurs not only because an entrepreneur recognizes a business opportunity, but also out of necessity. We observed this phenomenon several times in the course of our research, in particular, in a study of self-employed persons (before it became part of the entrepreneurship literature), where more than 25% of the sample had gone into business simply because they could not find a job (Filion, 1996; 2004).

If we look closely at the life stories of entrepreneurs, it becomes clear that many launched their businesses in response to a specific social or human need, rather than to pursue what is commonly termed a business opportunity. The trajectory of three recognized “classical” entrepreneurs illustrates this search for the answer to a need.

Alexander Graham Bell (MacKay, 1997) had a relative with impaired hearing, so he worked on a device to amplify sound. It was only later that he started to develop devices to carry sound, which led to the invention of the telephone.

Joseph Armand Bombardier (MacDonald, 2001) ran a small-town garage where he repaired farm machinery. He was a handyman-inventor, developing all kinds of farm equipment. When a close relative died because roads were blocked during a snowstorm, and the person could not be transported to hospital, Bombardier swore this would never happen again, and built a snowmobile. The original idea was for a vehicle that could take sick people to hospital. Word of the new vehicle spread quickly. The Canadian Army asked him to produce snowmobiles for its Second World War operations in northern Europe. The light-weight vehicles could carry six to ten people and gave a tremendous advantage to the Canadian troops operating in northern environments. After the War, people in Canada began to buy snowmobiles as transport during the long winters. Bombardier went on to develop the skidoo, again with the aim of providing a flexible vehicle that could go anywhere across snow.

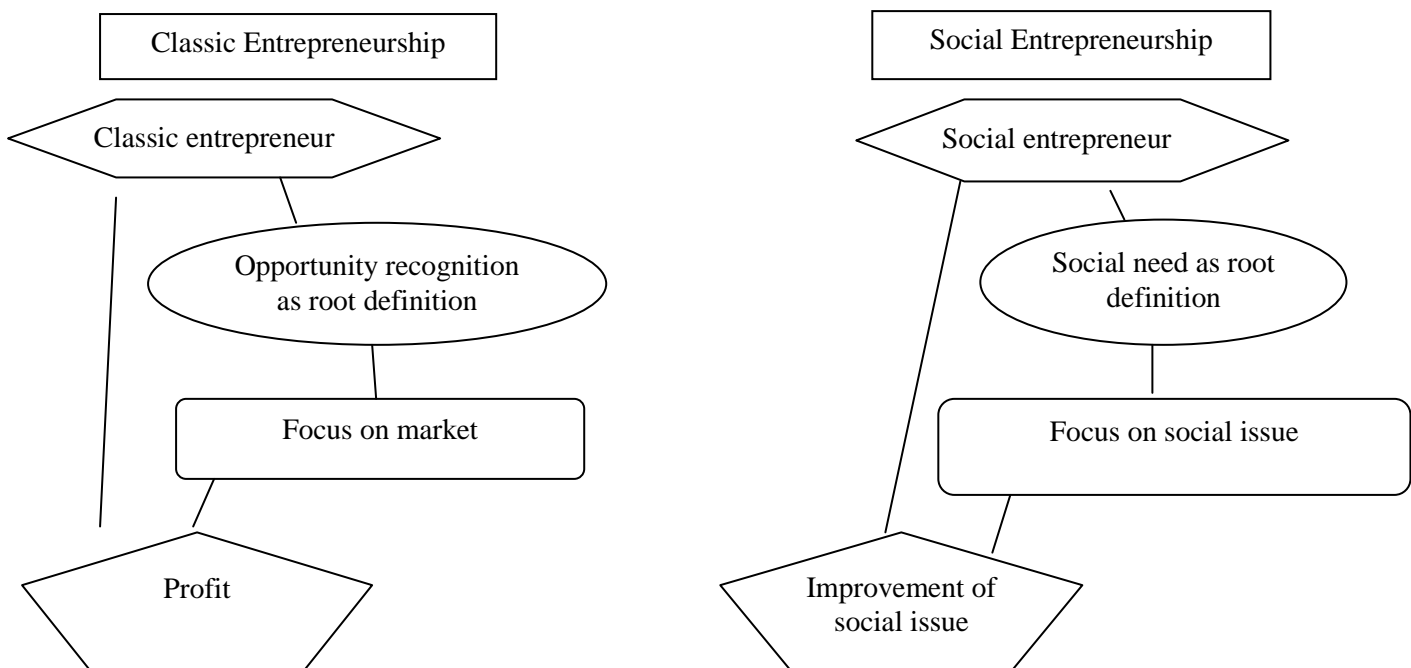
Yvon Chouinard (2006) was the creator of Chouinard Equipment, which went on to become Black Diamond, a leader in mountaineering equipment in the U.S. Some years later, he founded Patagonia. Chouinard is a mountain climber, and he needed equipment and clothing suited to the kinds of activities he enjoyed.

Examples abound where entrepreneurship occurred as a result of someone wanting to meet a human or social need, rather than simply take advantage of a business opportunity. This is certainly the case for many inventors who became entrepreneurs, and for most social entrepreneurs. Clearly, a business

opportunity is usually preceded by need, but the difference with the cases cited above is that the entrepreneurs in question did not regard the opportunity as a means of building a business; they wanted to fulfill the underlying need, and they set up the business to do that. This is not the same thing, and does not lead to the same process. The original purpose and root definition are not in the same category of activity systems, so the learning process will not be geared to the same pattern.

We consider landscape entrepreneurship to be part of *ecopreneurship*, which can be classified in the broader category of social entrepreneurship. Figure 1 below lists some of the differences between classic and social entrepreneurship.

Figure 1. Differences between classic and social entrepreneurship



Over the last decade, there has been a surge of interest in the notion of social entrepreneurship. Landscape entrepreneurship is a form of social entrepreneurship that involves a social cause where something needs to be protected. The process involved resembles that used in social entrepreneurship, but one aspect that may be specific to landscape entrepreneurship is the fact that it is a *complex process* with many actors and stakeholders involved, some in conflicting situations, focused on a central issue. In the case of the Mont Saint Hilaire Nature Centre, the central issue was the protection of the natural environment of an exceptional geographic site. In the next section, we describe the trajectory and experience of the Nature Centre.

2. Case study: The Mont Saint Hilaire Nature Centre

“The problem with the protection of nature is that when the situation is not urgent, people don’t think about it, and when the situation becomes urgent, it is often too late. We face this dilemma: when there’s a fire we extinguish it, but if there’s no fire, why prevent it? In conservation, this has always been the challenge. People wait till it is urgent, and then when it is too late, they have to pay three times the price for something they could have saved with less effort before”.

A manager at Mont Saint Hilaire Nature Centre, 2008

The Nature Centre

Mont Saint Hilaire is a beautiful mountain, a hiker's paradise and one of the best preserved Monteregian hills in the Montreal area. Located near the Richelieu River about 40 km south-east of Montreal, it is renowned for the diversity of its flora and fauna, as well as for its numerous minerals. Mont Saint Hilaire is also known for its rich human history, which dates back to at least 8,000 years. Throughout the periods of human settlement in the region, from the period when it was home to Native Americans to the time of European settlements, and subsequent periods of private ownership, this exceptional ecosystem has been preserved more or less intact².

Mont Saint Hilaire covers a geographic area of some 1,100 hectares. At its heart is Hertel Lake, covering some 32 hectares. The site boasts one of the last remnants of old growth deciduous forest in Quebec, with trees more than 400 years old, consisting mainly of sugar maple and beech, white ash, bitternut hickory, basswood, red pine, white pine and eastern hemlock. The mountain is also home to nearly 1,000 species of plants, mammals, birds, reptiles and amphibians—more than 50 of them rare or endangered. Mont Saint Hilaire is also recognized for the richness of its minerals; at least 16 were first discovered and named here, and it is listed as one of the top ten mineral-collecting sites in the world.

Mont Saint Hilaire is located near a major urban area of some 3.5 million people. Surrounding the site is a greenbelt consisting of a number of privately owned lots with various types of natural growth including forested areas³, apple orchards and farmland. The greenbelt offers essential cover and corridors for the local fauna and a protective buffer zone for the mountain. The orchards draw many visitors to the area, contributing to a flourishing industry, and the apple blossoms add to the mountain's natural beauty. These economic activities do, however, make the mountain's ecosystem more vulnerable. The resulting increase in urban development and higher levels of human disturbances are the reasons the Nature Centre developed a regional conservation program to protect the mountain and surrounding areas⁴.

Mont Saint Hilaire holds a storied place in Quebec's artistic and political history, associated with Quebec's intelligentsia in the late 19th and 20th centuries. Paul-Émile Borduas, principal author of the *Refus global* manifesto, was born and went to school there, apprenticing with another legendary local painter, Ozias Leduc, at his studio on the Montée des Trente. Leduc's mystical paintings of the mountain are now iconic, including *L'Heure Mauve* and *Neige Dorée*⁵. Modern dance and experimental film on dance in Quebec were also born here, when Françoise Sullivan, a frequent visitor to painter Jean-Paul Riopelle's country house at Saint-Hilaire (along with other artists in the Automatist movement) and a contributor to the *Refus global*, improvised *Danse dans la neige* in the fields below the mountain to the music of wind and crunching snow. Filmed by Riopelle and photographed by Maurice Perron in 1947, the work was remounted for the 2007 film *Les Saisons Sullivan*.

Evidence also suggests that Mont Saint Hilaire, particularly the *Pain de Sucre* summit, was a sacred site for the Algonquin First Nations. Many local legends relate to the mountain; for instance, the unusual ice patterns found on the northern cliff-face of the mountain where a vaguely horse-shaped ice formation does not melt until late in the spring, is said to represent the spirit of a local farmer's horse warning farmers against planting their crop as long as the ice formation remains⁶.

The History of the Mont Saint Hilaire Nature Centre

² McGill website: <http://www.mcgill.ca/gault/reserve/history/>

³ . The Virtual Museum :

http://virtualmuseum.ca/Exhibitions/Hilaire/html-en/index.php?page=nature_locations_perimeter.html

⁴ . UNESCO Biosphere Reserve website:

<http://www.unesco.org/mabdb/br/brdir/directory/biores.asp?mode=all&code=CAN+01>

⁵ . Musée des beaux arts de Mont Saint-Hilaire : <http://www.mbamsh.qc.ca/>

⁶ . Wikipedia site: http://en.wikipedia.org/wiki/Mont_Saint-Hilaire

Since 1958, when it became the property of McGill University, the Nature Centre at Mont Saint Hilaire (then known as the Gault Nature Reserve) has gone through several management phases, both in terms of the type of activities developed, and the organizational structure adopted.

The early years (1958-1972)

In 1958, Andrew Hamilton Gault⁷ donated his personal estate on the upper slopes of the mountain to McGill University. Surprisingly, during the early years, the University was uncertain as to how the land should be used. Gault specified that he was making the bequest

*that its beauties and amenities may be preserved for all time to come, not only to the immediate interests of the university itself, but through its corridors of learning, as a great heritage for the benefit and enjoyment of youth of Canada*⁸.

Patrick D. Baird was appointed director of the Gault Estate (1958 - 1968) and in accordance with the recommendations in a University committee report, introduced plans that made the land available to McGill departments for education and research. In line with past practices, the policy allowed for the continued use of the site for recreational purposes by local residents and the general public.

In 1970, the University and the Estate's Board of Directors commissioned the National (U.S.) Audubon Society to do a complete study of the mountain. The report recommended the creation of a Nature Conservation Centre which would promote the conservation of the mountain's resources, and administer activities to help protect its ecosystems from human overuse and misuse⁹.

On her appointment as the second director of the Gault Estate in December 1970, Alice E. Johannsen set out to develop the Nature Conservation Centre as an essential complement to academic activities on the mountain.

The conservation phase (1972-1995/6)

Alice Johannsen had been the director of the Redpath Museum (a unique interdisciplinary arm's-length institution within the Faculty of Science at McGill University¹⁰). In 1972, she founded the Nature Conservation Centre at Mont Saint Hilaire. She moved into Gault House, Gault's original home on the mountain, and assumed directorship of both the Gault Estate and the newly created Nature Conservation Centre.

The University supported the creation of the Nature Conservation Centre, and the Board of Directors of the Gault Estate decided to focus the Centre's efforts on three areas: (1) preservation of the Gault Estate; (2) increasing public outreach; and (3) expanding the reach of the Gault Estate's programs through a stewardship program that encouraged collaboration with local residents and private landowners in the protection of the area's unique habitats.

Under Johannsen's leadership, the Gault Estate became recognized internationally as a major draw for recreational activities in the area. Johannsen, thanks to her connections in outdoor recreation and the tourism industry, raised funds to build ski hills and develop recreational programs, as well as build the Nature Centre Pavilion. In 1978, she succeeded in having the Gault Nature Reserve named a

⁷ A British army officer and, at some point in his life, a member of Parliament in the UK, the son of a wealthy family, Gault lived in England but spent time at his Mont Saint-Hilaire Estate. See: Williams, J. (1995). *First in the Field*, Gault of Patricias. Leo Cooper, London. 278 p. ISBN 0-85052-436-9.

⁸ . McGill website : <http://www.mcgill.ca/gault/reserve/>

⁹ . McGill website : <http://www.mcgill.ca/files/gault/planang.pdf>

¹⁰ . McGill website : <http://www.mcgill.ca/redpath/>

biosphere reserve under UNESCO's Man and the Biosphere program, which is aimed at protecting representative examples of the world's ecosystems. It was the first Canadian site to be so listed.

Also in the 1970s, Quebec's Ministry of Education launched several programs for environmental education that included guided tours to protected areas. It was a move inspired by the vision of Frère Marie-Victorin, an eminent Quebec botanist who had created the Botanical Gardens in Montreal and promoted natural history and environmental education. Throughout the 1980s, all across Quebec, programs for school visits to protected areas received substantial grants from the Quebec government. At the Nature Centre, school visits reached 70,000 in the 1980s, accounting for the bulk of the Centre's revenues.

Several McGill departments used the Gault Estate for field courses on ecology. A number of research projects were also conducted in the area. Over a mere six years (1986 to 1992), 121 scientific articles in geography, geology, biology, ecology, plant science and entomology¹¹ were published based on research carried out at the Gault Estate.

In 1979, Michel Drew was appointed to succeed Alice Johannsen on her retirement as Director of the Gault Estate and Director of the Nature Conservation Centre. In the 1990s, he led the Nature Conservation Centre through a severe financial crisis, which threatened the future of the biosphere reserve. In the early 1990s, budget cuts at the Ministry of Education led to a drastic reduction in the number of school trips to the Centre. By 1995, the Nature Conservation Centre was on the verge of financial collapse, with an accumulated debt of \$500, 000.

The financial crisis revealed that the Nature Centre needed to clarify its mission, which would encompass both public education and outreach, and scientific research. Until the crisis hit, the Nature Centre had never thought to write a mission statement. It had a charter, developed under Alice Johannsen's directorship, which served it well. With the new challenges to the Centre, the McGill University Board of Directors felt that an unequivocal mission statement was needed, one that would help unify the activities of the Director, the staff, and fundraisers.

A mission statement for a dual undertaking

The drafting of a mission statement for the Nature Conservation Centre was also motivated by the need to assert and make visible to all stakeholders the dual nature of the Centre's undertaking. Starting in the 1960s, the Mont Saint Hilaire region had been experiencing significant changes, putting increased pressure on the area's natural resources. The Centre was also facing internal challenges resulting from the tension between stakeholders advocating a greater focus on conservation and research, and those proposing an expansion of interpretive and outreach activities.

At the regional level, the once prosperous apple orchards had become less profitable, and speculators were actively buying up the land for housing projects. Several orchards were transformed into residential areas with evocative names that made reference to the former idyllic surroundings, such as "The Three Apples". An order-in-council (later, the *Act to Preserve Agricultural Land, Bill 129*), which came into effect in 1978, put an end to the sale of the orchards for non-agricultural purposes.

Farmland also underwent significant changes as family-run farms were transformed into niche agricultural operations. Traditional farm allotments included a wooded area to supply the family's needs and wood for the construction of farm buildings. The new agricultural niche operations, however, did not need this wood, and treed areas on farm properties were rapidly disappearing.

¹¹ . Ecological Monitoring and Assessment Network website:
<http://www.eman-rese.ca/eman/reports/publications/gault/intro.html>

The construction of the Trans-Canada Highway beginning in the early 1960s, linking to Highway 116, improved road access to Mont Saint Hilaire from Montreal and other major urban areas. This encouraged residential developments on the sides of the mountain. As a result, the population of Mont St-Hilaire grew from 6,000 in 1975 to 16,000 at the end of 2007. This demographic explosion and the increase in housing starts meant that the green belt around the mountain began to shrink. In addition to the obvious pressure on land use for new housing projects, the influx of new residents also posed new challenges for the management of the natural resources of the region.

As a result, tensions developed between the various interests in the region. In 1988, this situation led to the creation of the "Friends of the Mountain", a citizen movement that pressured the local government to slow down construction around the mountain. The town responded favourably, imposing a moratorium on housing development on the southern slope. Further conflict developed in 1997, this time over the construction of residences on a plateau near the Dieppe Cliffs on the western slope. The Cliffs were known as a nesting site for peregrine falcons (designated by the Quebec Government as a protected species). An agreement was finally struck between the town and the owner of the property at the base of the mountain, through which the town acquired the portion of the land adjacent to the Mont Saint Hilaire biosphere reserve.

The beginning of a new era

The recurring civic tension coupled with the economic development of the region, and the Nature Centre's internal struggles led to the development of a new platform. The Nature Centre took up the challenge of incorporating a broader perspective, based on the fact that the protection of the Reserve required promoting the protection of the surrounding area. It was the beginning of a new era that saw the launch of a stewardship program to promote the protection of endangered species at the regional level, thereby maintaining the greenbelt around the mountain. The stewardship program led to six bequests of privately owned lots sheltering endangered species (about 17 ha), the signing of two conservation agreements with the owners of land occupied by endangered species (between the Municipality of Sainte Madeleine and the Nature Centre), and the inclusion of five lots in a wildlife refuge to protect the nesting habitat of the peregrine falcon.

In addition, for many years, researchers had been gathering data on the mountain's ecosystems and had generated information that had the potential to assist regional decision-makers in developing land use practices that would be respectful of conservation. Using this information, the Centre developed a series of tools to help local administrators manage local resources: among them, atlases, and databases using a Geographical Information System (GIS) to integrate data on the natural environment in support of local planning processes and implementation. The system also facilitated collaboration on data gathering outside the biosphere reserve—information that would prove invaluable in the formulation of the Nature Centre development plan. The Nature Centre also developed closer relationships with municipal and regional authorities during those years, in order to have a voice in future land use and zoning discussions.

These changes in focus and new developments called for the writing of a mission statement that would clearly lay out the mission of the Nature Centre. This was done in 2001. The aim was to improve communication with the different groups involved, and to guide the Centre's actions to address both the conservation objective and the public outreach and regional vision.

The mission of the Nature Centre was then stated as follows:

1. Assure the short and long-term integrity of the mountain's natural heritage.
2. Offer to all groups of society a privileged contact with nature accompanied by a range of educational and cultural activities.

3. Promote the conservation of natural environments in the region. In the words of a longstanding member of the Gault Estate Board¹²:

We felt that it wouldn't make sense if the Centre's work didn't go further. Expanding it to the region also fitted nicely with the concept of a biosphere reserve which is not just like a little museum. The biosphere is supposed to be a place of influence. It has to influence a whole region, so although the structure of the biosphere reserve was sort of vague for us, the idea wasn't. And its philosophy resonated with what we were feeling.

In June 1995, for the first time, the directorship of the Gault Estate was separated from that of the Nature Conservation Centre. Martin Lechowicz became the Gault Estate's third Director, and Kees Vanderheyden was then chosen as director of the Nature Conservation Centre.

The Nature Centre: Exerting influence on regional ecological issues

The Nature Centre's efforts to protect the areas around the mountain were developed in partnership with numerous private landowners, municipalities and local authorities. The actions of the Centre also included working with the whole community to protect the mountain's immediate surroundings to ensure that they remained natural areas.

Getting organized with new tools: Development plan and multimedia tools

A key concern for the Nature Centre is to develop new tools that would help decision-makers manage the natural environment, and assist in the formulation of its own management plan. To this end, in developing these tools it adopted a three-stage approach which consisted of: (1) identifying the geographic priorities through the development of very detailed plans of the area; (2) consulting with local decision-makers on these findings; and (3) presenting proposals to the Municipality on the use of the natural resources surrounding the Mont Saint Hilaire reserve.

This approach was used by the Nature Centre in discussions about land use and zoning decisions affecting new housing developments, as well as when they presented the Centre's Development Plan for 2003-2006, and in subsequent years¹³. The 2003-2006 Plan illustrates the awareness and strategy within the Centre to manage "out", i.e., to nurture and develop its relationships with visitors, local communities, and other actors in the region, and to manage "in" by maintaining a consensus and mutual vision within the organization. The Plan also affirmed that the science that was the foundation of the Centre's activities Centre was being conducted properly.

Nature Centre partnerships with regional authorities

Partnerships with local decision-makers have included collaboration initiatives with the municipalities, and with the community-at-large including private landowners. In the case of private landowners, partnerships consisted of donations of habitats of endangered species and the signing of agreements for the preservation of vulnerable species. A partnership with the Town of Mont-Hilaire was also established to protect the ecological richness of the mountain's surroundings while taking the expectations and concerns of the citizens into account. Finally, to complement other communication activities directed towards the general public, a CD-ROM entitled *Atlas of the forested areas of the Richelieu region: Understanding and protecting our heritage* was created with the goal of increasing public awareness about the need to protect forested areas in the region. It included a presentation of

¹² Interview with a member of the Gault Estate Board of Directors in February 2008.

¹³ . The Nature Centre website : <http://www.centrenature.qc.ca/en/pdf/MasterPlan2004.pdf>

the different types of forests in the Richelieu region, and provided general information about the entire region.

The Nature Centre's partnering approach: Making partnerships work

Working with local landowners, municipalities and community groups was no easy task, however. The Nature Centre had no formal authority over the management of the natural environments surrounding the mountain. One of the Nature Centre leaders equated the role of the Centre with that of an orchestra conductor:

In the orchestra, making sure that everybody plays the same tune in a harmonious way is not a given. Sometimes, to introduce some new activities, it is very weird. People get very strict about it, and you have to make sure that the Nature Centre is not viewed as four different entities melted into one, but rather four parties collaborating together towards a common goal¹⁴.

First, in its dealings with municipal and regional actors, the Centre used several approaches to inform and influence them to incorporate conservation objectives into their decision-making processes. The use of the GIS, for instance, allowed the Centre to share information on local ecology in an integrated manner, and to support conservation priorities for the region. This approach aimed to create a more territory-embedded regional planning, which contrasted with more traditional forms of planning that tended to be centered around administrative boundaries, sometimes regardless of ecological natural boundaries.

Second, the Nature Centre worked to build the emblematic value of the mountain in the regional landscape to bring its partners together. The mountain was used to symbolize the link between them; its human history, natural richness and beauty attract much attention. Over the years, the Nature Centre developed several activities related to the promotion of local traditions and cultural heritage. For instance, the Centre organizes an annual event named "Tales of the Fall", an autumn storytelling festival where stories and legends from the Mont Saint Hilaire area are shared. Seasonal activities also include "Christmas at the Mountain", a local song festival, a Photography Competition and so on.

Third, in working with municipalities and regional authorities, members of the Natural Centre are guided by ideas of a sustainably managed region and a way of thinking that recognizes that change does take time. They are less concerned about structures, and in fact, the Nature Centre management structure is very simple. The Nature Centre's managers are motivated by the desire to connect with local partners, to create a sense of shared regional goals, and to work in a non-confrontational manner to identify practical solutions that satisfy all the parties concerned.

3. The Nature Centre as landscape entrepreneur: Four perspectives

In this section, we propose four perspectives from which to look at the experience of the Nature Centre, centred on the notion of landscape entrepreneurship. These perspectives are (1) landscape entrepreneurship as a component of social entrepreneurship and organizing; (2) landscape entrepreneurship and the challenges of stakeholder engagement in the process; (3) landscape entrepreneurship and the construction of resilience in social/ ecological systems; and (4) landscape entrepreneurship as seen through the experience of implementing a UN developed framework for conservation.

3.1. Landscape entrepreneurship as a component of social entrepreneurship and organizing

¹⁴ Interview with a Nature Centre senior officer (June 18, 2008)

The first perspective builds on social entrepreneurship and focuses on the organizational dimensions of the process of landscape entrepreneurship. As mentioned in the introduction, social entrepreneurs are motivated by intentions related to addressing a social issue; their root definition consists of "meeting a social need" in the broad sense. In this section, based on the experience of the Nature Centre, we explore how the definition of this "social need" or "intention" has evolved over time, as well as the implications of this change for the organization, based on its mission and its processes. These changes are summarized in Table 1 below.

The mission of the Nature Centre before the mid 1990s, informed by Gault's and Johannsen's intentions, focused on two dimensions, namely conservation and recreation, that valued scientific thinking and a focus on research: the landscape was viewed as a field station with exceptional value from the scientific and aesthetic perspectives. Defining the mission this way implied the development of internal competencies, as a research station (working for scientists), as a research centre (working with scientists), and as a recreational centre (providing services by working with individuals trained to manage outdoor recreation programs). The "intention"—defined here as what the Nature Centre intended to accomplish in light of the identified social need, was based on the premise (1) that scientific research would lead to an improved understanding of the mineral, vegetal and animal populations and ecosystems of the reserve, which would in turn lead to better management decisions; and (2) that environmental education—learning about and experiencing nature—by school children, weekend visitors, hikers, and others, would lead to their developing more sophisticated perceptions of nature. In turn, these experiences and heightened awareness and knowledge would influence collective perceptions of nature, eventually contributing to better ecosystem management.

Table 1: Transition from a conservation-recreation focus to conversation-building.

Intention/mission	Conservation-Recreation	Conversation
Intention: What are the potential contributions of the organization to a better future?	Science and Research Environmental education and experience Learning about and experiencing nature by visitors (children, young people, weekend visitors, hikers, etc...) will have an impact on their perception of nature. In turn, this increased awareness and knowledge will influence collective consideration and care for nature. In turn, this will lead to better ecosystem management.	Science and Research Environmental education and experience Regional influence Influence decision-makers, users, land-owners and people who live around the mountain through workshops, conversations, courses, public lectures, presentations, etc... based on scientific knowledge. Translate into tools (scale models, graphics, maps) useful to existing administrative and individual decision-making processes.
Organizational Mission	Maintain a natural heritage Protect species Educate through visits and education programs Provide recreational experiences to improve ecological sensitivity	Maintain a natural heritage, and protect species Educate through visits and general education programs Provide recreational experiences
What is the Reserve about?	Reserve as living museum, island, protected area.	Reserve connects to non-reserve areas for ecosystem-services (corridor) and species-habitat. Flora and fauna do not respect human boundaries. Reserve ecosystems are

		interdependent with the future of regional ecosystems.
Who contributes to realizing the mission?	Scientists, with applied and theoretical research Educators, who provide knowledge that helps develop scientific thinking and makes people more sensitive to ecological issues	Scientists, communicators, mobilizers, conveners Scientific, connection, communication, interpersonal skills, etc.

The two-part (financial and mission-related) crisis in the mid-1990s led to the inclusion of a third aspect to this mission: a regional scope. This decision was based on the recognition of ecological and social interdependencies. In terms of natural interdependencies, it recognized that the ecological integrity and resilience of the reserve depended on the regional landscapes; in terms of social interdependencies, it recognized the need to embed the reserve in the social, administrative and economic regional consciousness.

This broader, three-part mission had implications for the core competency of the organization; individuals capable of embedding the reserve in the regional consciousness had to be recruited. These individuals had to be able to translate scientific research into information designed for local and regional decision-makers. They had to connect the recreational activities to the overall mission of the organization. And they had to be boundary-crossers, connecting inside with outside and reformulating previously formulated intentions (Gault's and Johannsen's) for a new context.

In other words, they needed to become entrepreneurial actors. They could not manage the system in the usual ways. They had to become much more creative, innovative, and entrepreneurial. The new intention of the Nature Centre after the mid-1990s was to influence decision-makers, landowners, local residents and users through training, conversations, education, and presentations based on the scientific knowledge accumulated about the deterioration of the local environment. All this needed to be translated into concrete models. People were dealing with a problem situation where there were no past examples from which they could draw a pattern of strategy for action. They had to muddle through, quickly and in such a manner as to get the public support for them to act in a way that would be perceived as unusual. They had to swim against the tide. This landscape entrepreneurship activity involved new ways of thinking and of doing for the long term. The old mental model of how we relate with Mother Nature had to be changed quickly, through an intensive program of information and education about social consciousness, if the ecosystem was to be preserved for future generations.

3.2 Landscape entrepreneurship and the challenges of stakeholder engagement in the process;

The second perspective from which we can look at the experience of the Nature Centre focuses on landscape entrepreneurship as a multi-stakeholder partnership. Partnerships in natural resource management are often developed when mounting social, economic and environmental challenges lead concerned stakeholders to promote integrative management schemes. The experience of the Nature Centre at Mont Saint Hilaire provides an interesting illustrative case. Indeed, the partnership of the Nature Centre currently includes the Nature Centre itself, McGill University, private landowners, the surrounding municipalities, and in particular, the Town of Mont Saint Hilaire which has been actively involved, and the community at large.

Economic and social changes that have taken place over the past 40 years have altered the existing balance between the natural resource preservation and the use of both the reserve area (the mountain) and the surrounding land (the lower slopes). More specifically, the presence of a growing number of visitors has led to discussions at the Nature Centre about whether new infrastructure development should be considered in the mountain area. In a similar vein, in the Mont Saint Hilaire vicinity, a wave of urbanization and high-intensity farming have given rise to a civic debate about the region and its

future. While some groups have been advocating further development, others have denounced the threat that economic development poses to safeguarding the mountain's unique biodiversity and natural beauty.

The conflicting interests and the search for solutions to shared problems provided a fertile ground for partnership formation. Multi-stakeholder collaboration has been an alternative and more promising approach to managing local resources compared with the endless, and fruitless, confrontation between different stakeholder groups. The creation of partnerships for natural resource protection and management is a deliberate effort, a demanding process, and a risky venture.

Natural resource management partnerships are driven by an entrepreneurial force, which supports the building of constructive and enduring interactions among the various stakeholders. The Nature Centre has been playing a catalyst role in the case of Mont Saint Hilaire. By broadening the geographic scope of its actions to interact with the various groups in the local communities, it has been instrumental in bringing different voices to the table to reflect together on the preservation and use of Mont Saint Hilaire and surrounding areas. Multi-stakeholders were invited to participate in discussions to express and share their values, goals and objectives and to join a process where they could find common ground with others.

The efforts undertaken by the Nature Centre to rally conflicting interests – including extensive urbanization, speculation, economic productivity, preservation, research, education and recreational interests – were built on a recognition of the differing, and often opposing, demands on the resources. This was an essential part of the process for an effective nurturing to build bridges and eventually collaboration among the stakeholders.

The development of partnerships takes into account the forces at play. Different types of interaction may be required depending on the types of stakeholders involved. At the Nature Centre, there is a core group where partnership works in a very positive way. The dialogue with these stakeholders became part of the regular activities. Ideas and propositions are debated in good faith. Other stakeholders who do not participate in this forum are consulted on specific issues of interest to them. This two-pronged approach allows the Nature Centre to involve stakeholders in a meaningful and non-threatening way, and helps build effective collaboration.

Shared values and intentions as the basis for the entrepreneurial dynamic of partnerships

Collaborative arrangements often take shape owing to the values and intentions the partnerships espouse, and their evolution depends on the strength and relevance of these shared values and intentions over time. Indeed, these values serve as the glue, the bonding factor, which symbolizes the aspirations and hopes of the partnership. These values may be developed when the social entrepreneurs involved bring stakeholders together to reflect on and devise new management schemes. In some instances, however, as in the case of the Nature Centre, the values originate with the property owner. Andrew Hamilton Gault bequeathed the land to McGill University in 1958 to enable future generations to use it for recreation purposes, research and education. This intention guided the formulation of strategic planning and management plans over the years. It went from a charter in the 1970s to a mission statement congruent with the partnership development efforts.

The original intention served as the cornerstone of the whole project. It fuelled the development of partnerships and remained critical for the continuous development of the project. It acquired additional substance and meaning when invoked by the social entrepreneurs to clarify the higher goal being pursued and its implications for current stakeholders and the partnership's activities. The vision statement was developed from the original intention. It may evolve over time to take into account changes in the physical environment, economic situation and social setting. The entrepreneurs' ability

to give it contemporary meaningfulness in order to mobilize stakeholders remains a key ingredient in the formation of multi-stakeholder partnerships that really work.

These partnerships were developed to contend with differing interests and conflicting demands on the natural resources, but the creation of collaborative arrangements never completely wiped away opposing views. Indeed, the idea that participating in a collective undertaking will homogenize the views of stakeholders seems incongruous (e.g., Berghöfer and Berghöfer, 2006). Rather, partnerships facilitate negotiated agreement on shared values which find roots in the original intention. Over time, if all conditions were to remain unchanged, it is conceivable that differing opinions would gradually converge and that broader and more holistic perspectives could be held by each group of stakeholders.

However, life is often capricious and conditions rarely remain static. It is thus not surprising that when partnerships face natural resource disturbances, economic downturns or changes of actors in stakeholder groups, new tensions may emerge and may challenge the very substance of the existing partnerships. These changes may unsettle the dynamics between stakeholders, the order of priorities that had been agreed to, or the bases of the understanding between stakeholders. The challenge is then to sustain the collaboration in the inevitably changing conditions that characterize integrative natural resource management. The ability to hold the original intention high and to give it meaning in changing conditions lies at the heart of the maintenance of multi-stakeholder partnerships. It is through landscape entrepreneurial action that stakeholders are mobilized to form partnerships. It is also through that process that the original intention continues to guide stakeholders' collaboration.

It is important to note that Gault's original intention serves as a foundational resource not only because it provided meaning that was used for the crafting of a vision statement, but also because it was given substance through the actions undertaken by the partnerships involved. A series of programs organized by the Nature Centre highlight the diverse yet complementary values that characterize the region, such as the aesthetic and cultural values associated to the mountain, the scientific value of its rich biodiversity, the economic value of surrounding orchards and farms, and the community values held by those living in both the rural areas and the surrounding municipalities. The development of an atlas, the frequent use of GIS to ground land use planning exercises, and the organization of social events such as the Tales of the Fall, are examples of specific activities that epitomize the integrated management intention that the partnerships uphold (Nature Centre website: <http://www.centrenature.qc.ca/en/activities/index.html>).

Landscape entrepreneurship involving multi-stakeholder partnerships for natural resource management is not without risks: challenges always arise as natural, social and economic conditions evolve and stakeholders' interests may also change as a result. The entrepreneurial endeavour may be viewed as continuous and enduring efforts to give current meaning to the original intention and maintain social mobilization. It proceeds through a series of achievements, when it manages to surmount socio-economic and environmental hurdles. Success may not be linear, as previous achievements may be lost when new challenges arise, but when effective, it offers complementary achievements to previous realizations and supports the advancement of the collaborative arrangements.

3.3 Landscape entrepreneurship and the construction of resilience in social-ecological systems

The third perspective focuses on the connections between landscape entrepreneurship and resilience. Our starting point is that ecosystems are not only the home of species threatened by human activities, but also constitute the basis of human life. Ecosystems and the organisms that live there are indispensable for our well-being; they generate food, **fibres, and medicines; purify water, recycle nutrients, and pollinate crops**, to mention just a few "ecosystem services" we take for granted. Further, ecosystems are essential to our spiritual wellbeing, as sources of play, inspiration, understanding, physical health and sanity (Millennium Ecosystem Assessment 2005). Thus, sustaining

such ecosystem services, in an era of climate change and increasing human pressure, is essential to securing human wellbeing in the future.

Obstacles to the resilience of ecosystems arise from the fact that there is a general mismatch between the ecological processes that underlie the generation of ecosystem services and existing ecosystem management regimes. The first obstacle is spatial: critical ecological processes typically occur at a scale that crosses municipal or other administrative boundaries. The second obstacle is temporal: ecological time spans and cycles are often longer than management plans or typical election cycles. The third obstacle concerns focus: authorities focusing on maximizing agricultural yield in the landscape, or protecting single species in specific habitats, have little preparedness for dealing with change occurring across the landscape, especially for dealing with changes that happen abruptly, such as the construction of a road or buildings.

This mismatch is illustrated around Mont Saint Hilaire, where forest remnants are scattered across the landscape between the Monteregian hills. Three Quebec ministries and several municipalities are involved in environmental issues, with very little coordination among them. Hence the need to increase resilience by connecting management across geographic areas, improving the match between ecological and decision-making processes, and across spheres of authority including collaboration among stakeholders.

Numerous recommendations exist as to how ecosystem management should be improved for more sustainable futures, framed by theories on adaptive management and resilience, the ecosystem approach, and others (Holling, 1978, Christensen et al. 1996). A key question that has not been sufficiently addressed is, how do you go from “business as usual” management to innovative and adaptive ways to manage the environment? How do you transform conventional management approaches to ecosystem management that acknowledges integrated social-ecological feedbacks at a landscape scale? We use the case of the Nature Centre at Mont Saint Hilaire to argue that in a specific landscape such as the urbanized area around Mont Saint Hilaire, a landscape entrepreneur such as the Centre has the potential to build resilience and thus enhance the capacity of the system to navigate change. The defining characteristics of resilience, as we have seen, are: a) the degree of change or disturbance that can be buffered; b) the capacity for self-organization, or re-organization following disruptive change; and c) the ability to build and increase the capacity for learning and adaptation. Along with this, we will also revisit the challenges for ecosystem management mentioned above.

Building a buffer: Shifting the focus from the mountain to the landscape

First, the Nature Centre shifted its focus from protecting a mountain and the endangered species in its biosphere reserve, to managing forest cover with a wider landscape perspective through the mobilization of regional actors for sustainable development. The Centre introduced and promoted the corridor perspective to see wooded areas not as discrete areas but as pathways that connect the Monteregian hills.

Second, the Centre worked intensively to expand the perimeter of the Gault Nature Reserve and to establish stewardship agreements with private landowners to secure these corridors. This increased the potential for animals and seeds to spread in the landscape, colonize or recolonize disturbed areas, and maintain healthy ecosystems¹⁵.

Third, the Centre worked to move forest conservation and environmental concerns higher on the agenda of municipal managers and decision-makers at regional and provincial levels. Getting the message from ecology research across contributed to increasing awareness about the importance of forests for human wellbeing, as did showing how small-scale decisions—for example the protection

¹⁵ Research in ecology shows that maintaining a network of forest ecosystems across the landscape contributes to buffering for disturbance such as conversion of forest to agriculture and infrastructure development.

of key forested areas that improved the corridor pathways—can have an impact on a larger landscape scale.

The Nature Centre also highlighted possible activities and tools to protect ecosystems, and identified how existing rules, such as agricultural zoning, could be applied to protect forests. Stewardship agreements and mobilization of existing rules and norms for forest protection can be seen as enhancing a buffer against forest loss within the social system.

Providing direction for self-organization: Mobilizing local support

The corridor project promoted by the Nature Centre provided a framework for ecosystem management in the region, a project that brought people together and enabled different actors to envision their respective contributions. The project, maps and data were presented in a CD-ROM produced by the Centre as well as in workshops and individual meetings with decision-makers. The Centre works with a wide set of actors and in many partnership projects, thus building a network of actors that can be mobilized as needed. For example, in a neighbouring municipality, an area with valuable forest in one of the forest corridors was threatened by illegal logging. The Nature Centre found out, and informed the authorities. After preventing the logging, the Centre was contacted as a potential partner. As the property could not be logged, it lost its interest to the owners, and the Nature Centre could, through its various partners, mobilize the financial resources to acquire it and turn it into a publicly available reserve. That is another example of landscape entrepreneurship.

Trust is essential to make partnerships work. As described in the previous perspectives (see above, sections 3.1, 3.2, 3.3), the Nature Centre has built credibility and trust in a network of actors that can be mobilized to respond to new events and threats, be they disruptions, such as the logging in the example above, or opportunities, such as new municipal leadership. Further, their work with the CD project had a strong focus, indicating areas and issues with strategic impact for the development of the region, be they ecological, such as how the amount of forest cover increases property value, or social such as how heritage buildings and local businesses contribute to value.

Thus, the Nature Centre contributes to the capacity to organize for strategic decision-making in the region, connecting people and bringing key issues to light, presenting them within a framework that provides sense-making and pathways for action.

Building a centre for learning

The crisis of urban development that threatened the mountain perimeter in the 1990s taught the managers at the Centre the importance of gathering information proactively. In negotiations with municipalities and developers, existing information about the forest around the Gault Estate and its values could be used to craft a win-win solution for conservation, development interest and to negotiate protection for the most valuable areas.

The Nature Centre is emerging as a centre for knowledge on conservation and sustainable development in the region, and municipalities as well as regional authorities turn to them for consultation. They have compiled existing information, and generated new information through research as well as practical experience with the restoration of forest habitat. The Centre is now seen as an asset to the region. As the management of forest and environmental issues is highly fragmented in the region across a wide range of authorities as well as across municipalities, the staff at the Nature Centre have developed excellent databases that help them provide information, continuity, depth of knowledge and understanding that would otherwise be lacking.

The material is also presented and communicated in new and attractive ways. They make extensive use of communicative tools such as maps and GIS. The Centre's "social marketing" approach (i.e., making this information available) tailors or "packages" the information for the different audiences they address, according to their culture and educational levels. For example, when presenting an

inventory of forest values to a municipality, they also included information on how the presence of forest affects housing prices.

In short, the Nature Centre's activities as a landscape entrepreneur build capacity to navigate change by a) enhancing the protection of existing assets, such as remnant old-growth forest in the corridors; b) increasing social connectivity and awareness to organize for problem solving across fiscal boundaries; and c) building a platform for acquiring expertise and spreading knowledge. The case illustrates how the need to protect the landscape generated windows of opportunity to transform existing traditional management practices into an entrepreneurial organization.

3.4 Landscape entrepreneurship as seen through the experience of implementing a UN framework for conservation

The fourth perspective builds on the experience of "making it happen" in and around the Nature Centre in the biosphere reserve. It focuses on the tensions between the general principles of a UNESCO-based¹⁶ framework for stakeholder engagement and the challenges of making it happen on the ground from the standpoint of an organization. This section focuses on the activities, strategies and tactics of entrepreneurship for conservation. UNESCO proposes a framework for stakeholder engagement in biosphere reserves (UNESCO, 1996), which can take many forms based on locally relevant geographic and cultural characteristics.

However, these structures face several challenges to become reality: they do require investments in time and in financial resources. Their construction often doesn't fit within the time constraints of local stakeholders. They may be perceived as inefficient and irrelevant. The Nature Centre's experience as the principal manager of the Mont-Saint-Hilaire Biosphere Reserve shows limitations to an institutionalized approach linked to formal structures of forum and stakeholders' consultation as proposed by UNESCO. This section focuses on the Nature Centre's entrepreneurial approach to stakeholder engagement based on three factors: small gains; small but incremental consensus-building; and concrete actions that contribute to building a sense of place.

Framework for biosphere reserve activities: The limitations of the Seville strategy

The UNESCO Seville strategy proposes a framework for biosphere reserve activities¹⁷. Its three main objectives are to: (1) Use biosphere reserves to conserve natural and cultural diversity; (2) Use biosphere reserves as models of land management and approaches to sustainable development; and (3) Use biosphere reserves for research, monitoring, education and training. In this light, biosphere reserves are more than just parks or protected areas. They strive to be facilitators and partners, providing both a forum and a helping hand for groups to discuss and understand conservation and sustainability (Francis 2004). In other words, actors within a biosphere reserve are invited to "think globally and act locally". Both the controversial nature of conservation issues and the necessity to be guided by or to promote sustainable development to maintain cultural and biological diversity within a biosphere reserve make stakeholder and public participation a fundamental component of the Seville Strategy.

The Seville Strategy suggests that to facilitate stakeholder participation, actors should (1) survey the interests of the various stakeholders and fully involve them in planning and decision-making for the management and use of the reserve (II.1.5); (2) develop and establish institutional mechanisms to manage, co-ordinate and integrate the biosphere reserve's programs and activities (II.2.3); and (3) establish a local consultation framework in which the reserve's economic and social stakeholders are represented, including a full range of interests.

¹⁶ UNESCO: United Nations Educational, Scientific and Cultural Organization.

¹⁷ UNESCO organized the International Conference on Biosphere Reserves, held in Seville (Spain) in 1995. The Conference drew up the Seville Strategy that recommends action to be undertaken for the future development of biosphere reserves in the 21st century.

The Nature Centre's experience as the principal manager of the Mont-Saint-Hilaire Biosphere Reserve shows the limitations of an institutionalized approach linked to formal structures of forum and stakeholder consultation as proposed by UNESCO. Implementing such a strategy involves overcoming several obstacles.

First, such processes do require time—sometimes months before any consensus or decision is reached. Second, such lengthy processes mobilize many stakeholders and often require a secretariat to coordinate activities, which is costly for small organisations. Third, it may be difficult to facilitate such demanding processes within the various time constraints and agendas of multiple stakeholders.

Fourth, it has also been seen that successful consultation processes have been shelved because of lack of political will. Last, but not least, a compounding factor concerns the absence of official jurisdiction or legal authority for biosphere reserves; informal structures have to continue over a long period of time to gain recognition, which may lead to the demobilization of local stakeholders as they see no return on their time, energy and monetary investment. Sixth, attempts at mobilizing stakeholders are often very problematic. Most individuals are already engaged in an important number of committees or commissions, and those who have the time and knowledge to engage in consultations are often scarce. This can even lead to an over-representation of certain types of actors in consultation structures because they are available and financially more able to participate. For these reasons, traditional fora and consultations have tended to be perceived as inefficient and even irrelevant.

Innovative consultation

Understanding the necessity for effective participation by local communities, the Nature Centre managers decided to work differently. They decided to use three main tactics, namely: 1. A focus on lower-level consensus-building; 2. The promotion of projects that ensure small-scale gains; 3. The creation of a strong sense of place. Working in this fashion also helped to ward off the kinds of bigger disagreements that often create major drawbacks.

Beyond these tactics, the Nature Centre has developed a broad *modus operandi* to promote the biosphere reserve. The ingredients of this *modus operandi* are three.

The first ingredient consists of gathering significant data and knowledge regarding the biosphere reserve and surrounding territory. Information on land use, biodiversity and pollution is scarce, scattered and it often needed a good deal of analysis in order to be turned into policies or management guidelines.

Fortunately, McGill University owns the core area of the biosphere reserve and has been conducting studies over a 40-year period. McGill University also provided software and geographical information to map the territory. Using these data and GIS information through a project approach, many different issues were documented and presented to stakeholders and to the local population in various forms. For example, a regional forest atlas produced by the Nature Centre in CD format was widely distributed. Many articles were published in local newspapers and summaries of these different knowledge-based projects were presented to different audiences. This transfer of knowledge and information often created possibilities for interactions between stakeholders and helped co-generate more information.

The Mont Saint Hilaire Nature Centre thus became a partner of municipal and county officials and conducted further projects that generated more detailed information on a landscape scale, both local and regional. This solid knowledge base and these interactions made the Nature Centre a key local stakeholder and helped create a biosphere reserve perspective on local issues. Overall, producing and co-generating information represents a strategy to accumulate small gains and to demonstrate that it is possible to move forward in building consensus and addressing issues. Quantifiable data, based on reliable methodology and the participation of local actors in generating the new data sets, help to generate a shared understanding of the territory.

The second ingredient deals with using existing fora. Consultation and fora are often used to come to decisions that address issues related to land use, such as water management, agriculture and biodiversity conservation. Realizing municipal and county officials were increasingly becoming bogged down by these issues and that local controversy was often making their work difficult due to tighter deadlines and increased criticism, the Nature Centre often proposed to map the interests of the various stakeholders to fully involve them in planning and decision-making about the management and use of the territory. This was done without taking away the responsibility of local government. Municipal and county officials have kept the final authority and jurisdiction over these issues.

Local officials were at first reluctant to adopt this approach because of time constraints and because of the difficulty in seeing the benefits of such a participatory approach. At first, the Nature Centre helped them conduct neighbourhood consultations on relatively simple issues to illustrate the added value of consultation and stakeholder participation¹⁸. Over time, issues addressed by the participatory approach and the level of stakeholder engagement have increased and led to several outcomes. One outcome is that, for some municipalities, participation and stakeholder involvement have become routine.

A second outcome has been the development of a local stakeholder engagement ethic to prevent controversy and larger disagreements. A third is the setting up of formal structures, including a Perimeter Committee, an Environment Committee at the municipal level, a Forest Management Committee, and technical committees for public utilities at the county level. Nature Centre representatives were invited to sit on each of these committees.

As the scope of consultations and stakeholder engagement increased among municipal and county officials, biosphere reserve issues could be addressed and the information developed could be used for conservation and sustainable development. It became irrelevant, therefore, to create a biosphere reserve structure to survey the interest of the various stakeholders and to fully involve them in planning and decision-making about biosphere reserve management and use, since these new structures could more efficiently address the issues. The institutional mechanism to manage, coordinate and integrate the biosphere reserve's issues is located at the appropriate jurisdictional level, and representation issues were also addressed by including the full range of interests and a locally significant ethic offering an appropriate place to stakeholders representing civil society, as opposed to private stakeholders.

The third ingredient consisted of developing and promoting a sense of place and a sense of pride. The generation of information and the increased involvement of various stakeholders in the planning and decision-making processes have both made the notion of "biosphere reserve" more concrete for all. This has led to a more concrete understanding of theoretical concepts such as "biodiversity", "local sustainable development", "social responsibility", and the "importance of ecosystems".

This concrete understanding of theoretical concepts contributes to the development of a sense of place, or a sense of belonging to a place, which means addressing issues not just in a "rational" perspective but by linking issues and challenges using a communication media such as art, emotions, story or scientific formats. Communicating in a positive perspective, using relevant channels of communication, and using a message that was relevant to the stakeholders about a given area as demonstrated in this case study is vital to developing a sense of place but, even more importantly, to developing a sense of pride about that place and the preserved quality of that place.

Learning from entrepreneurial activities at the Mont St-Hilaire biosphere reserve

How does all this relate to entrepreneurship? By working differently within the Mont Saint Hilaire biosphere reserve, the Nature Centre staff recognized opportunities for action, used available

¹⁸ UNESCO has produced an interesting guide that helps to better understand the level of participation needed to solve different issues (Bouamrane, 2006).

resources, built strong relationships with the community and envisioned the future of the biosphere reserve—all activities and characteristics attributed to entrepreneurs (Filion, 2009). There was a major need, both social and environmental. Somebody had to do something about it. Like Alexander Graham Bell and Joseph-Armand Bombardier, but on a smaller scale, the directors and other people involved in the management of the Nature Centre decided to roll up their sleeves and act entrepreneurially.

This was an innovative approach to biosphere reserve management. It meant designing and implementing a genuinely entrepreneurial way to deal with sustainable development (Francis 2004). It meant opening up conservation activities to real people and people to conservation. The Nature Centre put forward not only a biosphere reserve management concept but also a spirit of innovation in how that could be done. As some of the managers at the Nature Centre like to say, “We don’t just talk about the biosphere reserve, we do something about it!”

These entrepreneurial activities have not just shaped the landscape, conserved it or promoted its sustainable use; they have also motivated people to get involved in concrete action to make their ecological environment better. They have created a landscape entrepreneurship movement. The power of these entrepreneurial activities can be seen in the number of working relationships with the community and the capacity to build a shared view of the future of the territory involved (Pollock, 2004), the commitment to a high quality environment, and the protection of “place”.

The experience clearly shows that a sense of pride in the landscape has been built. Landscape entrepreneurship becomes a means to an end. If the Nature Centre people did not act entrepreneurially in the first place, if they had not informed and rallied local people around their project, the project would not have endured. By sharing their understanding of how the natural system works in relation to the social system, the Nature Centre people involved the community in a collective commitment to innovate, to protect and to add value to the ecosystem that surrounds them.

4. Lessons for landscape entrepreneurship

This chapter is based on the experience of the Mont Saint Hilaire Nature Centre. The story of the Nature Centre and its activities have led us to introduce an emerging concept, that of landscape entrepreneurship, which is a form of social entrepreneurship. In this chapter, we have described and discussed the case from different perspectives. In this last section, we present and discuss the entrepreneurial aspect of this case in more detail. To help structure the understanding of the complex process that is landscape entrepreneurship, we have identified some of the lessons learned from this case. These lessons could be used by actors in similar situations. The lessons are presented in Table 1 below.

Table 1: Ten lessons for landscape entrepreneurship practice from the Nature Centre Case.

Lesson 1: The intentions and embryonic root definition ¹⁹ of Andrew Hamilton Gault led the way in the preservation and learning process that followed. He must have done a lot of thinking before he decided to give his land to a university that had little to no expertise in the area of land preservation (few people were familiar with the topic in those days). He stipulated that the land was to be protected, and made the gift on condition that it not be sold or used for commercial purposes.

Lesson 2: There was a clear main beneficiary mentioned: the young people of Canada. We can expect that Gault focused on the youth as the main beneficiary of the ecological system he wished to see developed in order to motivate the Mc Gill University management to get involved in the project.
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¹⁹ We suggest Checkland’s definition of an issue based root definition: “A root definition describing a notional system chosen for its relevance to what the investigator and/or people in the problem situation perceive as matters of contention” (Checkland, 1999: 317).

Clearly, however, there are many beneficiaries for this donation, especially the people living near the property, the scientists doing research on site, and the general population.

Lesson 3: The official body that would become responsible for preserving this property and developing it for the purpose of generating knowledge was a well-established university chosen for its reputation for integrity and social development activities. An intention was expressed as a root definition by the initiator sufficiently clearly to help establish guidelines for the design and implementation of a landscape protection system.

Lesson 4: The organization's lack of expertise in this very new field of activity meant that long periods of thought and discussion were needed before activities, decisions and actions were possible. Between 1958 and 1972, few strategic, managerial or entrepreneurial activities took place as people were wondering how to tackle this unusual situation.

Lesson 5: The people who designed the landscape system were acting as representatives of the property owner (the university). Their role was to implement the intention expressed in the root definition. This is where the actors had to become entrepreneurial; they had to be highly resourceful to muddle through a new area of activity. Obtaining Canada's first-ever UNESCO biosphere reserve listing for this project (1978) was a wonderful entrepreneurial achievement.

Lesson 6: The values, intentions and root definitions of founding entrepreneurs often engender effects in organizations that last for decades. Gault's values and goals, and the way those were implemented by management—by Alice Johanssen in particular—had a major impact on the ecological activity system that was designed and implemented over time.

Lesson 7: The survival of any form of social entrepreneurship seems closely bound to its social legitimacy and the public consensus in its support. Landscape entrepreneurship seems to require social mobilization following on from a well-organized communication process about the issue concerned and its evoked relationship with the public good and interest.

Lesson 8: Some forms of social entrepreneurship reflect the commitment of one person; examples include Mother Teresa in India and Abbé Pierre in Paris. However, most forms of social entrepreneurship require the commitment of many people who agree to act as partners entrepreneurially. The stability of the structure created and the non-profit aspect of the phenomenon appear to contribute to the continuity of this type of process.

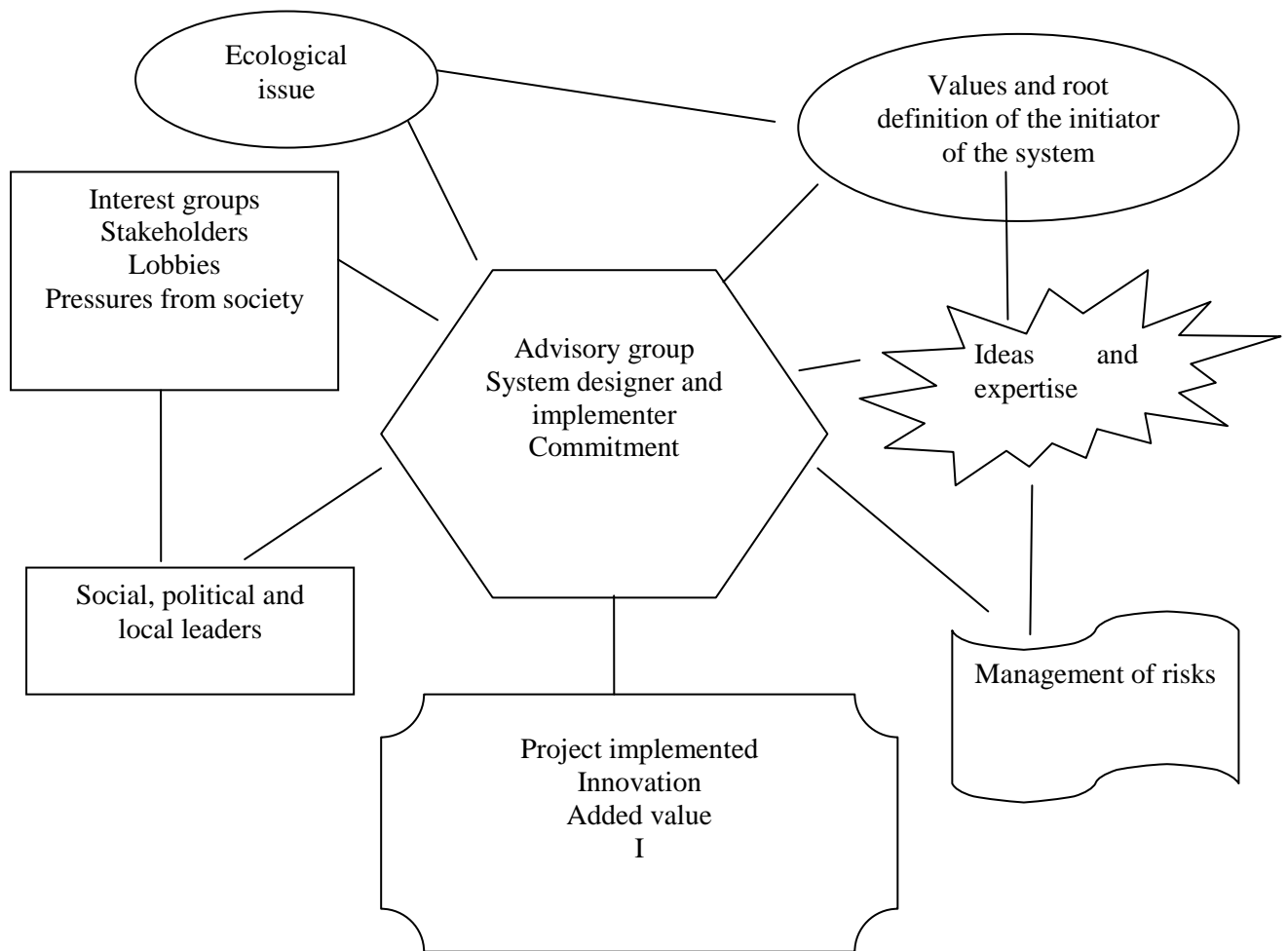
Lesson 9: People involved in landscape and social entrepreneurship seem to get results not because they are skilled managers or because they know the answers, but because they are so committed that they become resourceful. They do a lot of thinking and learning about what needs to be done. They have to define guidelines for action in emerging sectors where there are few reference points. Some people call this creativity. This approach leads them to design visionary entrepreneurial activity systems for the long term that are bound to last.

Lesson 10: Although there are some significant differences between the purpose of a classic entrepreneurial activity system and a social entrepreneurial activity system (see Figure 1), there are also many similarities in terms of process. These include innovation, opportunity identification or fulfillment of a need, action (activity system design and implementation), use of resources and the contribution of added value. One aspect of the process appears to be different, however: the level of risk of the entrepreneurial actors does not appear to be the same. Social entrepreneurs and landscape entrepreneurs appear to deal with a level of risk closer to that of intrapreneurs, since they are not the owners of the property and resources used. Intrapreneurs and social entrepreneurs risk their reputations and their jobs, but not their assets, as is the case for entrepreneurs. On the other hand, they have to deal with more complex social systems that require a much higher level of political ability.

Landscape entrepreneurial system

The Nature Centre case study shows that landscape entrepreneurship can be a lengthy process. Indeed, based on this case, landscape entrepreneurship appears to involve long and complex interactions, going through cycles and involving many stakeholders. The people involved in these projects become entrepreneurial system designers and implementers because they share the basic values of the original social entrepreneur. They use their expertise to advance the cause. Their innovations can be classified as “managerial innovations” rather than product innovations (Hamel, 2007:32). Figure 2 (below) illustrates the concepts, relationships and complex process involved in designing a successful landscape entrepreneurship project.

Figure 2. The design of a landscape entrepreneurial system.



Landscape entrepreneurship seems to present characteristics similar to those of social entrepreneurship (Austin, Stevenson and Wei-Skillern, 2006; Chell, 2007). Most SMEs are short of resources and that seems to be even more true in non-profit sectors. It was and still is the case of the Nature Centre. It could be the case of landscape entrepreneurship when practiced in non-profit activities.

Landscape entrepreneurs develop activity systems that also resemble those of intrapreneurs. Their activities seem to imply capabilities similar to those of intrapreneurs. They have to be innovative, but as non-owners of the property involved negotiating with so many stakeholders, they need good political abilities, as is the case with intrapreneurs (Burns, 2005; Morris and Kuratko, 2002). People

who plan to act entrepreneurially in the public landscape and ecology sector certainly need some expertise in the area but they also need to develop good political skills.

Most of the time, acting as intrapreneurs in a non-profit sector implies working in teams. In this case, we noticed that consensus had to be developed as to which innovations should be implemented. People involved in managing the Nature Centre became social intrapreneurs since they had to become innovative to make their organization achieve its real purpose. They had to share ideas, ways to look at problem situations and ways to solve these problems. They had to share their views and design activity programs that were acceptable to the team. So, in many respects, the management approach of the Nature Centre resembles the kinds of shared entrepreneurial management practices that partners use to develop promising high-tech ventures.

Finally, we compared the non-profit landscape entrepreneurs studied in this case with ecopreneurs, as presented in the research literature. We also tried to classify them among the different types of ecopreneurs in the literature. We suggest that the social intrapreneurs who manage the Nature Centre could be compared to the *visionary champions* suggested by Walley and Taylor (2002) in their typology of ecopreneurs. These people are champions fighting for sustainable development: they want to change the world in a way that will save the planet. These social intrapreneurs could also be classified as *alternative actors* in the typology proposed by Schaltegger (2002). They are the ones who provide fertile ground for other types of ecopreneurs who often operate in profit sectors. If we apply Linnanen's (2002) typology of ecopreneurs, they could be classified as *successful idealists*. Whatever the typology or the category used, these social intrapreneurs could also be labelled as social ecopreneurs since they are acting like ecopreneurs—they espouse the same goals—but in a non-profit and distinctly marginal activity.

Conclusion

Tensions in landscape entrepreneurship

Based on an analysis of the case study and the four perspectives presented above (landscape entrepreneurship as organizational change, as a process of multi-stakeholder engagement, as a process of building social/ecological resilience, and as a process of making it happen on the ground), we have identified four tensions in the process of landscape entrepreneurship.

The first tension concerns the sense of relevance. The experience of the Nature Centre offers an example of tension between two conflicting needs, namely, loyalty to the initial intention of the founder (Gault), expressed more than five decades ago in a specific social, economic and ecological context, and doubts about its relevance in a fast-changing institutional, natural, social and economic regional environment. On the one hand, “sticking” to the initial intention (or being zealously (too) loyal) may simply lead to being irrelevant locally in 2009, which may in turn lead to the eventual demise of the organization. On the other hand, omitting or denying the founder's intention may lead to a disconnected relationship between past, present and future memory and sense of place, which may lead to a much more instrumental approach. Building these bridges between past, present and future, between a founder's intention and the present and future relevance of the project is a significant challenge in the landscape entrepreneurship process. It requires landscape entrepreneurs to be able to constantly reinvent themselves while remaining loyal to an initial intention.

The second tension concerns general principles, illustrated here by the UNESCO sponsored framework for stakeholder engagement with a biosphere reserve, and the challenges of making it happen on the ground in a local/regional terrain. This framework, consisting of the fairly generic Seville principles, and more recently, the guiding principles of “corridors” and “belts”, has the power to simultaneously spark the imagination, mobilize local residents, and draw attention to the key components and connections within the ecological/social system. Whereas traditional or “classic” business entrepreneurs manage to gather clients and mobilize constituencies to a new product with new features, landscape entrepreneurs mobilize stakeholders with a back- and-forth translation of principles into concrete interactions and actions.

The third tension places the need for short-term results against the long-term construction of resilience in the regional social/ economic/ecological system. The experience of the Nature Centre shows that *landscape entrepreneurship* can be a lengthy process. In that respect, it is not dissimilar to more general processes of entrepreneurship and in particular, social entrepreneurship, which seem to be characterized by long and complex trajectories involving numerous stakeholders. These situations appear to go through cycles, initiated when new leaders trigger high-intensity events. Such leaders become entrepreneurial system designers and implementers because they share the basic values of the original social entrepreneur and can use their expertise to advance the cause.

The fourth tension concerns science and practical relevance. Scientific knowledge is the raw material in the process of landscape entrepreneurship; solid research is crucial to keeping local decision-makers informed as to the “right” decisions on local development and zoning plans. The robustness of this data is a necessary condition for inclusion in the decision-making processes. It was certainly necessary to establish the credibility of the Nature Centre as a knowledge centre in the region. At the same time, scientific data needs to be translated into discrete, usable, simple data sets that are relevant and user-friendly for local decision-makers. These two interdependent processes, which involve different skills (scientific rigour and the ability to translate and simplify), are both necessary. Managing them simultaneously is an inherent part of landscape entrepreneurship.

The research in landscape entrepreneurial practice in non-profit sectors shows that landscape entrepreneurship involves a process and a pattern of activities similar to those in entrepreneurship; and this is even more true for social entrepreneurship: the importance of identifying a need (opportunity), commitment, sector expertise, innovation, communication, shared values, risk, wise use of resources, action, and added value.

The implications for theory building lead us to look not only at entrepreneurship, social entrepreneurship (Chell, 2007), ecological entrepreneurship (Schaltegger, 2002; Walley and Taylor, 2002) or even environmental entrepreneurship (Linnanen, 2002), but at other fields such as ecology and system design—fields involving activities that also contribute added value. With landscape entrepreneurship, we are reaching the tipping point of an emerging field of study that is a cross-fertilization of the fields mentioned above and is at the crossroads of these fields. The application of entrepreneurship to conservation and social issues provides an illustration of the very essence of the entrepreneurship process. Where is the innovation and the added value, and how is it generated in ecological and landscape systems? In our view, the Nature Centre case makes a contribution to entrepreneurship and presents an interesting canvas illustrating the design and implementation of landscape and ecological entrepreneurship. Landscape entrepreneurs appear to be part of the family of social entrepreneurs. They want to help improve the human condition in the long term. The Nature Centre case is a clear demonstration that landscape entrepreneurship can be used for the common good, and not only for self interest.

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