Social entrepreneurship and innovation: Self-organization in an indigenous context

Paul Tapsell* and Christine Woods*

*Corresponding author. Email: cr.woods@auckland.ac.nz

This article explores some of the theoretical insights emerging from work in the field of social entrepreneurship and complexity theory. It draws on a neo-Schumpeterian understanding of innovation as self-organization, as it arises in the process of social entrepreneurship. Drawing on complexity theory, we use the lens of self-organization and complex adaptive systems to consider entrepreneurial activity in Maori communities where innovation occurs through the interaction of the young opportunity seeking entrepreneur (potiki) and the elder statesperson (rangatira). The interplay between these two actors in the Maori tribal community illustrates the double spiral (takarangi) dance of innovation (creation) that occurs at and between the edges of chaos and stability. Two theoretical insights emerge from this research. First, we are reminded that tradition and heritage can form the path to innovation while opportunity-seeking adventurers are necessary if steps are to be taken along the path. Second, the historical and cultural context in which innovation occurs is an important consideration for understanding both social and economic entrepreneurship.

Keywords: social entrepreneurship; innovation; complexity; indigenous; self-organization; heritage; Maori; potiki, rangatira; takarangi

1. Introduction

Social entrepreneurship is still emerging as a field of academic enquiry (Austin, Stevenson, and Wei-Skillern 2006; Dorado 2006; Chell 2007; Massetti 2008). With its ‘unreserved and unrestrained enthusiasm’ (Steyaert and Hjorth 2006, 3), academic research and practitioner’s best practice tend to be ‘richer on inspiring examples and anecdotes than it is on theoretical insight and analytical power’ (Swedberg 2006, 21). Thus, one of the key challenges facing this emerging field is to build a stronger theoretical platform. At the same time, researchers in the wider entrepreneurship discipline should also allow for the possibility that theoretical developments in social entrepreneurship and at the nexus between social and economic entrepreneurship may enrich and inform our discussions within the traditional discipline of entrepreneurship (Steyaert and Hjorth 2006).

While social entrepreneurship has drawn on the principles of economic entrepreneurship, the discussion is not well connected or founded on a general theory of entrepreneurship (Roberts and Woods 2005; Austin, Stevenson, and...
Wei-Skillern 2006; Swedberg 2006). To strengthen such a connection, we turn to one of the theoretical forefathers of entrepreneurship study, Joseph Schumpeter. His work has left a valuable legacy in the study of entrepreneurship that is still being explored (Becker and Knudsen 2002, 2003). His understanding of innovation as the introduction of new combinations has contributed much in the area of economic development. Recent translations of his early research suggest that our understanding of social entrepreneurship can also be informed by Schumpeter. The writing of the young Schumpeter (1911) begins to explore how innovation, understood as new combinations, can also be applied to social change (Swedberg 2006).

Drawing on Schumpeter and research in the neo-Schumpeterian tradition offers a possible avenue through which to build a stronger theoretical platform for understanding the dynamics of social entrepreneurship. We consider one potentially fruitful line of research emerging from modern developments in neo-Schumpeterian economics that emphasises the self-organizing aspect of entrepreneurial behaviour (Foster 1997, 2000; Fuller and Morgan 2001). This notion of self-organization is explored in detail by complexity theory which is the study of emerging patterns of order and disorder. We suggest that complexity theory provides a theoretical framework, consistent with a Schumpeterian perspective. Our task then is to examine what theoretical insights can emerge from understanding innovation, understood as self-organization, as it arises in the process of social entrepreneurship. Several guiding propositions are suggested as a result of the theoretical discussion in the first half of the article. We then turn to examine one form of social entrepreneurship in more detail, the indigenous entrepreneur operating from a tribal world view. In particular, we examine Maori entrepreneurship, entrepreneurial activity that is ‘underpinned by social objectives to improve wealth and wellbeing for the community, rather than just the individual’ (Henry 2007, 542). We suggest that by observing interactions in this indigenous tribal group, we can explore where new and unexpected actions (innovations) emerge through self-organization.

This article is structured in three parts. Section 2 explores our definitional understanding of entrepreneurial activity from the perspective of economic, social and indigenous entrepreneurship. Section 3 then considers one strand of neo-Schumpeterian economics, the understanding of innovation as self-organization. Section 4 provides a case study (Figure 1) on Maori tikanga (customary practice). Section 5 returns to the five guiding propositions suggested in the first half of the article. Using the lens of self-organization and complex adaptive systems (CASs) we conclude by suggesting that entrepreneurial activity in Maori communities arises through the interaction of the young opportunity-seeking entrepreneur (potiki) and the elder statesman (rangatira). The interplay between these two actors in the Maori community illustrates the double spiral (Takarangi) of innovation (creation) that occurs at and between the edges of chaos and stability (Tapsell and Woods 2008a).

2. Definitions and propositions

The origins of the word entrepreneurship stem from the French word entreprendre meaning ‘to take into one’s own hands’. The crucial role of the entrepreneur was first recognized by the eighteenth century businessman Richard Cantillon (Hébert and Link 1988, 1989). Cantillon’s ([1755] 1931) research provided the foundation for three major economic traditions: the German tradition built on the research of
Schumpeter (1934) with an emphasis on innovation; the Chicago tradition of Knight (1921) and his studies on risk and the Austrian tradition of Israel Kirzner (1973) and his exploration of ‘alertness to opportunity’ (Hébert and Link 1988; Ripas 1998).

While entrepreneurship has defied consensual definition, there is consensus emerging that opportunity is a key component of the entrepreneurial process (Stevenson 1985; Stevenson and Jarillo 1990; Venkataraman 1997; Shane 2000, 2003; Shane and Venkataraman 2000; Austin, Stevenson, and Wei-Skillern 2006; Chell 2007, 2008). Further to this, the ‘creation of something of value’ describes the goal-oriented behaviour of both the entrepreneur and the entrepreneurial organization (Chell 2007, 6). One of the challenges within theoretical discussions in entrepreneurship theory is that the context in which entrepreneurial activity takes place is often marginalized or ignored completely. Opportunities are discovered, like Everest, without adequate consideration of the historical or cultural context from which they arise (Austin, Stevenson, and Wei-Skillern 2006; Woods 2006; Alvarez and Barney 2007; Endres and Woods 2007). Chell (2000, 2008) suggests that during the entrepreneurial process, the entrepreneur actively ‘shapes and creates’ or constructs opportunities; further to this, ‘the entrepreneur cannot be isolated from context’ (Chell 2000, 66). Another stream of entrepreneurship research argues that a creation theory needs to sit alongside the existing discovery theory of entrepreneurial opportunity (Alvarez and Barney 2007; Zahra 2008). Creation theory suggests that opportunities do not exist independent of entrepreneurs; rather, they are created, endogenously, by the actions of entrepreneurs.1 These views are consistent with a Schumpeterian understanding of entrepreneurship and the need to understand the context from which an entrepreneur constructs opportunities, where construction encompasses the imagination, discovery and creation of opportunities (Woods 2006; Endres and Woods 2007). Building on the three theoretical traditions and more recent discussions, we suggest that entrepreneurship is a process that encompasses the construction, evaluation and exploitation of profitable opportunities to create something of value, taking into account risk, alertness to opportunity and the need for innovation.

Defining social entrepreneurship has proved no easier than defining entrepreneurship (Roberts and Woods 2005; Austin, Stevenson, and Wei-Skillern 2006; Dorado 2006; Chell 2007; Massetti 2008). However, two themes have emerged over

Figure 1. Takarangi–Maori double spiral of creation.
the past two decades: (1) the underlying drive to create social value and (2) activity is characterized by innovation or the creation of something new rather than the replication of existing enterprises or processes (Austin, Stevenson, and Wei-Skillern 2006; Chell 2007). These commonalities are congruent with our understanding of economic entrepreneurship detailed above. Rather than profit or wealth creation, however, the social enterprise seeks to create something of value that is congruent with the social cause and the social community. Central to this social context is the practising social entrepreneur (Roberts and Woods 2005; Chell 2007).

Social entrepreneurship practitioners first provided the impetus for academic perspectives in this field. They include people like Bill Drayton who established Ashoka, a global not-for-profit organization supporting ‘the green beret of social entrepreneurs’ (Roberts and Woods 2005, 47). In ‘How to change the world; social entrepreneurs and the power of new ideas’, Bornstein (2004) chronicles the development of Ashoka, bringing together stories of leading practitioners both living and past. He sees social entrepreneurs as:

...transformative forces: people with new ideas to address major problems, who are relentless in the pursuit of their vision, people who simply will not take no for an answer and who will not give up until they spread their ideas as far as they possibly can. (p. 1)

Practitioner knowledge and understanding, ‘the lay perspective’ is fundamental to the development of social entrepreneurship theory (Roberts and Woods 2005; Chell 2007, 8). The social entrepreneur connects with social and community values to achieve social outcomes; any theoretical development in the field of social entrepreneurship must recognize and acknowledge the socio-economic context (Chell 2007).

To gain an insight then into how this socio-economic context can inform theory, we suggest that indigenous entrepreneurship, with its emphasis on cultural and historical context, can play an important part in the development of the field of economic and social entrepreneurship. As a result of colonization and industrialization, self-reliant and socially cohesive indigenous communities have suffered economic and social dislocation. In particular, colonization is an example of an extreme external shock that has both tangible and intangible effects that need to be considered when exploring indigenous entrepreneurship (Casson 2005). However, there remains a strong desire to use entrepreneurial activity to rebuild communities in such a way that ‘particular histories, cultures and values play a prominent role’ (Anderson, Honig, and Peredo 2006, 56). Indigenous entrepreneurship incorporates both social and economic entrepreneurial activity and explicitly acknowledges the particular historical and cultural context from which they arise. It includes enterprise-related activities of indigenous people in pursuit of social and cultural self-determination as well as their economic goals. Hindle and Lansdowne (2007) provide the following definition:

Indigenous entrepreneurship is the creation, management and development of new ventures by Indigenous people for the benefit of Indigenous people. The organisations thus created can pertain to either the private, public or non-profit sectors. The desired and achieved benefits of venturing can range from the narrow view of economic profit for a single individual to the broad view of multiple, social and economic advantages for entire communities. Outcomes and entitlements derived from Indigenous entrepreneurship may extend to enterprise partners and stake holders who may be non-Indigenous (p. 9).
Indigenous entrepreneurship operates at the intersection of social and economic entrepreneurship (Anderson, Honig, and Peredo 2006, 57). Within the indigenous communities, opportunities are culturally influenced and opportunity construction is culturally determined (Dana 2007, 4).

Table 1 summarizes both the academic and the practitioner perspectives of economic, social and indigenous entrepreneurship.3

Based on the above discussion, we now offer a working definition of social entrepreneurship as follows: *the construction and pursuit of opportunities for transformative social change through innovative activities occurring within or across economic and social communities in a historical and cultural context* (Roberts and Woods 2005; Austin, Stevenson, and Wei-Skillern 2006; Chell 2007). From this definition and the discussion above, we offer two of the five guiding propositions that form the theoretical structure of this article: Guiding Proposition One: *innovation is historically and culturally situated.* Further to this, any discussion of indigenous economic development must also acknowledge the impact of colonization, a significant external shock to which communities have responded with varying success. Thus, Guiding Proposition Two states: *colonization is a critical component of the particular historical context of indigenous entrepreneurship.*

We now turn to explore one specific theoretical strand of entrepreneurial theory in more detail: the Schumpeterian and neo-Schumpeterian inspired perspectives on innovation.

### 3. Theoretical context: Schumpeter and self-organization

While ‘the entrepreneur has worn many faces and played many different roles’ (Hébert and Link 1988, 152), for Schumpeter, the entrepreneur is decidedly cast as the economy’s innovator (Hébert and Link 1988, 2006). More specifically, economic development is the result of innovative actions taken by the entrepreneur in introducing new combinations.

Schumpeter’s theory of entrepreneurship is centred on change; economic development is the result of change that arises from within the economic sphere as compared to the process of adaptation that arises in response to something occurring outside the economic sphere (Swedberg 2006). In The Theory of Economic Development (Schumpeter 1934), economic development is the result of some disturbance to the equilibrium that exists in the circular flow of the economy. To develop his theory Schumpeter states that his position may be characterized by three corresponding pairs of opposites.

First, by the opposition of two real processes: the circular flow or the tendency towards equilibrium on the one hand, a change in the channels of economic routine or a spontaneous change in the economic data arising from within the system on the other. Secondly, by the opposition of two theoretical apparatuses: statics and dynamics. Thirdly, by the opposition of two types of conduct, which, following reality, we can picture as two types of individuals: mere managers and entrepreneurs. (Schumpeter 1934, 82–3)

A model of the economy is constructed where change only occurs as an adjustment to exogenous circumstances. These changes are small variations at the margin. Individuals adapt without really deviating from familiar routines (Schumpeter 1934, 81). For dynamic change to occur and for the economy to
<table>
<thead>
<tr>
<th>Perspectives</th>
<th>Focus</th>
<th>Primary interest</th>
<th>Defining features</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Academic view of ‘Economic’ entrepreneurship</strong></td>
<td>Activity in the economic sphere (Kirzner 1973; Schumpeter 1934)</td>
<td>Focus on profitable opportunities (Kirzner 1973) Innovation (Schumpeter 1934) Risk (Knight 1921)</td>
<td>The construction, evaluation and exploitation of profitable opportunities to create something of value, taking into account risk, alertness to opportunity and the need for innovation (Stevenson and Jarillo 1990; Shane 2003; Shane and Venkataraman 2000; Roberts and Woods 2005)</td>
</tr>
<tr>
<td><strong>Practitioner view of ‘Economic’ entrepreneurship</strong></td>
<td>Activity in the economic sphere</td>
<td>The attributes of the practitioners and the process they follow to exploit opportunities</td>
<td>Narratives of entrepreneurs who are out there ‘doing it’, making a difference in the market</td>
</tr>
<tr>
<td><strong>Academic view of social entrepreneurship</strong></td>
<td>Activity in the social sphere drawing on the principles of economic entrepreneurship</td>
<td>Opportunity for social change Innovation</td>
<td>– The construction, evaluation and pursuit of opportunities for social change (Chell 2007; Roberts and Woods 2005) – Drive to create social value rather than personal and shareholder wealth (Austin, Stevenson, and Wei-Skillern 2006) – Innovation or creation of something new (Austin, Stevenson, and Wei-Skillern 2006; Chell 2007) Working definition: the construction and pursuit of opportunities for transformative social change through innovative activities occurring within or across economic and social communities in a historical and cultural context</td>
</tr>
<tr>
<td><strong>Practitioner view of social entrepreneurship</strong></td>
<td>Activity in the social sphere drawing on actions of practitioners</td>
<td>The attributes of the practitioners and the process they follow to drive social change</td>
<td>Walking anecdotes, people with new ideas to address major problems, who are relentless in the pursuit of their vision, people who simply will not take no for an answer and who will not give up until they spread their ideas as far as they possibly can</td>
</tr>
<tr>
<td><strong>Academic view of indigenous entrepreneurship</strong></td>
<td>Activity in profit, not for profit and public sectors</td>
<td>Social and economic development</td>
<td>Operates at the intersection of social and economic entrepreneurship (Anderson, Honig, and Peredo 2006) Creation, management and development of ventures by indigenous people, for indigenous people (Dana 2007)</td>
</tr>
<tr>
<td><strong>Practitioner view of indigenous entrepreneurship</strong></td>
<td>Continuum of activity ranging from individual to community action</td>
<td>Nation building – economic, social and cultural</td>
<td>Guided by tribal narratives and a tribal world view</td>
</tr>
</tbody>
</table>
evolve, new combinations must be introduced to disrupt the circular flow framework. All disruptions are the results of innovations in the form of new combinations. The willingness to recognize and then exploit newly perceived opportunities (Schumpeter [1928] 2003, 250) is the hallmark of entrepreneurial behaviour. In concrete terms Schumpeter provides a list of the typical opportunities entrepreneurs recognize and then exploit. These new combinations ‘appear discontinuously’ and bring about economic change.\(^4\) Five types of new combinations are given as follows:

1. introducing a new good;
2. introducing a new method of production;
3. opening a new market;
4. conquest of a new source of raw materials; and
5. carrying out a new organization of any industry (establishment or breaking up of a monopoly; Schumpeter 1934, 66).

Implementing these new combinations characterizes enterprise, and the individuals whose function it is to carry them out are defined as entrepreneurs (Schumpeter 1934, 74). The success of the entrepreneur and the delivery of new combinations:

\[\ldots\text{depends upon intuition, the capacity of seeing things in a way which afterwards proves to be true, even though it cannot be established at the moment, and of grasping the essential fact, discarding the unessential, even though one can give no account of the principles by which this is done. (Schumpeter 1934, 85)}\]

Schumpeter emphasises leaps and discontinuities rather than continuous change and his notion of evolution places an emphasis on novelty and change. Entrepreneurial activity takes place within an economy that needs to be understood as a process occurring in historical time. Entrepreneurial activity is socially situated and contingent on the historical context in which it occurs. For this reason, Schumpeter suggested that case histories and biographies of entrepreneurs in social and historical context would provide a useful way forward when studying entrepreneurial activity (Schumpeter [1949a] 1969, [1949b] 1967).

So how does Schumpeter’s understanding of innovation relate to social entrepreneurship? Schumpeter divides people into ‘those who are dynamic and do what is new, and those who are static and only repeat what has already been done’. Social entrepreneurship can therefore ‘be translated into Schumpeterian terminology as a form of dynamic behaviour in one of the non-economic areas of society’ (Swedberg 2006, 33). To understand Schumpeter more clearly on this, we need to return the first edition of The Theory of Economic Development. In this edition, Schumpeter discusses entrepreneurship and how it relates to different forms of economic as well as social change. Schumpeter states that the process of development has ‘remarkable analogies to other sectors of social life. Most importantly, these analogies can contribute to further illuminate our understanding, and to show that existence and activity in these other sectors can be grasped with a perspective parallel to ours’ (Schumpeter [1911] 2002, 422).\(^5\)

Further to this, Becker and Knudsen (2002) argue that, based on Chapter 7 of the first edition of Theory of Economic Development, Schumpeter saw ‘the development of the economy as a whole is a phenomenon emerging on the basis of the interaction among the various parts’ (emphasis added; 396). We argue that this interaction can enable entrepreneurial activity in the form of innovation to emerge in the field of
social entrepreneurship. This assertion forms the basis of our third Guiding Proposition: Entrepreneurship can be understood as dynamic change resulting from innovation which takes the form of the introduction of new combinations.

The introduction of new combinations is a distinctive process requiring explanation. Schumpeter does not explicitly develop a theory to explain the microlevel, behavioural decision process of how entrepreneurs generate change. To explore this process in more detail, we turn to the research of neo-Schumpeterian economics and complexity theory. Following on from Stevenson and Harmeling’s (1990) call for a ‘more chaotic theory’ of entrepreneurship, Foster (1997, 2000) argues that Schumpeter’s understanding of economic evolution offers intuitions and insights compatible with a self-organization approach. Further to this, Schumpeter’s ‘self-organisational intuitions were derived from his extensive and detailed study of economic history’, a point we return to in the third part of this article (Foster 2000, 319). Fuller and Morgan (2001) go on to suggest that Schumpeterian notions of entrepreneurial innovation are consistent with understanding the entrepreneurial organization as a CAS. These writers point us in the direction of complexity science as a means of developing the self-organization approach of Schumpeter and explaining the microlevel aspects of economic and social change.6

Since creation of new economic order in the form of new firms is what entrepreneurs do, complexity science makes much more sense as the preferred kind of science for entrepreneurial research. (McKelvey 2004, 314)

Complexity science is an emerging interdisciplinary field of investigation and has resonance with the human and organizational domains.7 It provides an analogical and metaphorical domain from which to gain insight into the behaviour of organizations. The principles and insights of complexity science and its study of the natural sciences provide a lens through which to observe behaviour and activity in organizations (Cilliers 1998; Stacey, Griffin, and Shaw 2000; Allen 2001). It has particular relevance to us at two levels. First, it provides an opportunity to theoretically connect social entrepreneurship to the theoretical foundations of Schumpeter’s work and second, the notion of change and innovation is inextricably woven within complexity thinking (Fuller and Morgan 2001; Surie and Hazy 2006; Goldstein, Hazy, and Silberstang 2008).

Self-organization is founded on the idea that entrepreneurially driven enterprises are embedded in larger systems; they are complex networks of many independent actors interacting with one another. These interactions give rise to emergent properties different to the properties of individual actors; these properties are the consequence of self-organization. Self-organization is the result of actor’s action on local knowledge, there is neither a central controller to tell actors what to do, nor does any actor have complete knowledge of the circumstances surrounding their actions. The interaction between actors of a system creates novel and unpredictable patterns.

Entrepreneurial acts develop in a spontaneous process. According to Foster (2000, 319), the entrepreneurial desire to discover new and profitable organizational combinations provides what we can now label as a self-organisational impetus within the economic system creating organised complexity. ‘Combination’ implies, not competition, but the deliberate formation and re-formation of cooperating groups engaged in production. The result is an expanding variety in products and processes. (emphasis added)
Accordingly, we would extend Guiding Proposition Three: *Entrepreneurship can be understood as dynamic change resulting from innovation which takes the form of the introduction of new combinations: the formation and reformation of cooperating groups.*

Further, we add Guiding Proposition Four as follows: *Innovation emerges from the novelty-creating, self-organizing acts of entrepreneurs who are part of cooperating groups.*

Complex systems are also adaptive in that actors are able to learn and develop new strategies of action. CASs are a dynamic network of many actors constantly acting and reacting to what other actors are doing (Holland 1995; Fuller and Morgan 2001). The environment is made up of many actors who are all following their own paths of action, thus ‘a highly adapted system is one in which actors adapt to the strategies of each other through competition and cooperation’ (Vaughn 1999, 244). As noted above, a CAS comprises a number of actors who are all pursing their own strategies; the adaptive strategies of some actors open up niches for other actors to discover and exploit. As a result, the system never settles at a determinate equilibrium. CASs evolve through time and consist of rich, dynamic and non-linear interactions between a large numbers of actors (Cilliers 1998; Fuller and Morgan 2001; Stacey 2003; McKelvey 2004; Uhl-Bein, Marion, and McKelvey 2007). These interactions give rise to positive and negative feedback loops. In particular, adaptive actors serve as a metaphorical representation of entrepreneurial behaviour (Fuller and Morgan 2001). Adaptive behaviour means that an actor is able to change what he or she does and the rules they follow. Novelty is generated via opportunities that are constructed and exploited by other actors (Kirzner 1973; Stevenson and Jarillo 1990; Vaughn 1999; Shane 2003; Endres and Woods 2007; Chell 2008).

Organizations are CASs comprising people ‘who experiment, explore, self-organize, learn and adapt’ to their changing environments; to do this, the key self-organizing behaviours include exploration and experimentation (Carlisle and McMillan 2006, 3–4). Emergent possibility or innovation lies between the regions of stability and chaos (Brown and Eisenhardt 1997; Maguire and McKelvey 1999; Carroll and Burton 2000; Carlisle and McMillan 2006). Organizations can be placed along a spectrum: at one end of the spectrum we have random and highly chaotic and at the other we have mechanical and highly ordered. It is between the ‘edge of chaos’ and ‘the edge of stability’ that the CAS operates, and innovation through self-organization occurs in this space. Carlisle and McMillan (2006) label this the zone of emergent complexity and suggest that organizational success and survival requires an organization to operate at both edges and avoid moving out of the zone. Too much chaos and the organization risks disintegration, too much structure and rigidity and ossification occurs. The CAS moves between and on the edges. This leads to the fifth Guiding Proposition: *innovation takes place along a continuum at and between the edges of chaos and stability.*

In summary, we suggest that innovative activity, culturally and historically situated, can emerge as the result of the self-organizing acts of entrepreneurs. The following guiding propositions form a conceptual framework from which to explore the specifics of social entrepreneurship.

**Guiding Proposition One:** *Innovation is historically and culturally situated.*

**Guiding Proposition Two:** *Colonization is a critical component of the particular historical context of indigenous entrepreneurship.*
Guiding Proposition Three: Entrepreneurship can be understood as dynamic change resulting from innovation which takes the form of the introduction of new combinations: the deliberate formation and reformation of cooperating groups.

Guiding Proposition Four: Innovation emerges from the novelty-creating, self-organizing acts of entrepreneurs who are part of cooperating groups.

Guiding Proposition Five: Innovation takes place along a continuum at and between the edges of chaos and stability.

Beginning with our first proposition, we take up Schumpeter’s suggestion that a detailed and extensive study of the histories of entrepreneurs in social and historical contexts can be a useful way forward when studying innovation. In social entrepreneurship we suggest that the historical and cultural context can be explored through the structure of a social community. Specifically, in section 4, we consider Maori, the indigenous people of Aotearoa/New Zealand, as a means of exploring the usefulness and limitations of the guiding propositions given above. We examine the social structure of that society, some of the historical events that have occurred and consider if interactions through the forming and reforming of cooperating groups can encourage innovation.

4. Maori traditional society

Maori first began arriving in Aotearoa/New Zealand from their Polynesian home islands over 1000 years ago from places like Rarotonga, Ra’iatea and Tahiti (Tapsell and Woods 2008b). MacGill (2007) gives an interesting account of three Maori tribal groups before first contact with colonization. He suggests that traditional Maori society was a CAS where the ‘edge of chaos’ dynamics occurred when tribal groups migrated, came in contact with other tribal groups and there were food shortages and other environmental challenges.

For the purposes of this article, we wish to focus on the aspects of CAS that assist our understanding of how innovation can occur as self-organization. We focus on the interactions that occur within the Maori tribal community between the potiki (young opportunity seeker) and the rangatira (elder heritage protector). To do this, we must first briefly describe the cultural context in which the potiki and rangatira are located and consider the social mechanism of Tikanga (customary practice) through which tribal heritage is protected.

Intense interactions between tribal members and the environment enabled the formation and self-organization of tribal identities that operated within self-generated boundaries. Typical of a CAS, Maori society formed into nested self-similar layers (MacGill 2007). However, while society is hierarchically organized with clearly defined roles and practices (tikanga), interactions between all levels of society is significant. Issues are generally discussed by the whole tribe with strong inter-level interaction (MacGill 2007).

The core of these layers is the whanau (extended families), which combined under common ancestors forming the central social, economic and political units of Maori society called hapu (autonomous sub-tribes). In times of life crisis (death of leaders, invasion and resource depletion), hapu often banded together as iwi (tribes) until the external threats to kin survival were ameliorated. Thereafter descendants returned to their respective pa (homeland villages) and marae (ceremonial courtyards or plaza.
surrounded by village dwellings) to resume everyday hapu living (Tapsell 2002a, 2002b).

Traditionally the rangatira (chiefly male and female elders) – specialists at managing physical and meta-physical resources – maintained the social, economic and political well-being of their kins (Kawharu 2002). The Marae is still the focus of hapu well-being, providing the public platform from where the rangatira lead. Central to their duties is balancing the mana (prestige) of the hapu against its ability to provide manaaki (hospitality) (Tapsell 1998). Rangatira are the mandated reflection of both these qualities, embodying hapu history, especially if they were able to demonstrate personal strength (mana) while serving wider kin (manaaki) for cross-generational benefit (Tapsell 2008). Marae remain the quintessential symbol of rangatiratanga (chiefly trusteeship over customary resources of the hapu). During marae rituals of encounter (not least life crises) rangatira reform, amend or reinforce proscribed and prescribed complex boundaries that have dynamically evolved across the generations (Tapsell 2008; Tapsell and Woods 2008a). A central role is to maintain a balance between ancestors and descendants; visitors and hosts; male and female; junior and senior; and young and elder, thus ensuring perpetuation of the kin identity (Tapsell 1998).

In essence, the Maori world is viewed through a genealogical matrix of complementary but different counterpoints – generative dualisms (Tapsell 1995) – which is symbolically summarized by the spiral of creation or Takarangi. This complex double spiral embodies moments in time where two disparate streams intersect to generate a new consciousness. The intersectional moment represents the point of creation where the past continuously meets the future. Interruption, destabilization or transgression of genealogically balanced boundaries within the Maori universe precipitates the chaotic state of a life crisis – a contested moment between past and future – which the rangatira must ultimately ameliorate or resolve before social, economic and political well-being of the hapu can resume. Rangatira are ultimately responsible for ensuring kin survival from one life-crisis to the next, not least the maintenance and development of kin accountable boundaries. They are the kin group’s social accountants and must remember debts owed or owing that may be generations old, but still carry obligations of reciprocity. Customary Maori leadership of the rangatira is predicated on maintaining sanctions, risk management, administering resources, generous hosting of guests, protecting tribal estates and serving the kin group (Tapsell and Woods 2008b).

In contrast, the opportunity-seeking forward-focussed potiki is the complementary counterpoint to the heritage-minded rangatira. Emergent narratives help to create shared understandings of where the social and political boundaries may lie and what is acceptable and expected behaviour. ‘The teachings of many indigenous traditions are rich in stories of brave-hearted, individual men and women in quest of new knowledge, new ways of doing things’ (Hindle and Lansdowne 2007, 18). From an entrepreneurial perspective, the Maori narrative of Maui Potiki is an appropriate example of such a rich story; he was an ancestor hero who saw opportunities and took advantage of them (Keelan and Woods 2006). Maui personifies the potiki status in Maori society: an indulged younger sibling with precocious tendencies, but who was also quick-witted, intelligent, resourceful, cunning and fearless (Walker 1990). Such individual attributes were necessary to kin group well-being, balancing the propensity of his elders’ towards a kin-survival management model. Like Maui,
potiki journeyed through life seeking adventure and opportunity to better their leadership status through meritorious action, but always within a genealogical matrix of group accountability (Tapsell and Woods 2008b). Thus the potiki was recognized as the genealogical embodiment of all the qualities that enabled kin access to new opportunities (Keelan and Woods 2006).

With success, experience and wisdom of age comes increased responsibility. In time, the once-potiki members of a hapu are trusted more and more with life-dependent responsibilities. The burden of wider duties associated with becoming a kin-accountable, heritage-minded rangatira now dominates a new generation of elderly leaders. At the same time, yet another generation of adventurous potiki begin asserting themselves: testing their rangatira (elders) by seeking ever-new and emerging opportunities and so, the cycle continues (Tapsell and Woods 2008b).

So far the discussion has focused on a context where the colonizing influence is not accounted for. As stated above, economic environments are continually subjected to exogenous shocks (Casson 2005). In section 4.1, we discuss how colonization provides an example of an extreme shock and consider how Maoris have responded to this shock.

4.1. Impact of colonization

By the time Cook, Banks and Tupaea arrived on the HMS Endeavour (1679) over 800 tribal descent groups (hapu) independently maintained and defended their exclusive authority over ancestrally associated lands, villages, resources and waterways (Tapsell and Woods 2008b). In 1840, the British Crown treated (Treaty of Waitangi) with the indigenous tribes (hapu) of Niu Tirini (New Zealand), promising to uphold their chiefly trusteeship (Article II: tino rangatiratanga) in exchange for sovereignty (Article I: kawanatanga), pre-emption (Article II: Crown received first right of refusal on any land sales) and British citizenship (Article III: enabling access to international markets). Not so well understood by Maori, however, was the single-mindedness of the incoming colonizers (Tapsell and Woods 2008b). From 1852, successive settler governments created legal mechanisms that ultimately alienated hapu from their economic livelihood (Kawharu 1977).

Unfortunately, the nineteenth century European colonization of New Zealand turned the dynamic duality of rangatira:potiki on its head (Tapsell and Woods 2008b). In the late 1840s, the third Governor, Sir George Grey, collected all the myths and stories of the Maori, in particular the adventures of Maui (Grey 1855). It provided him with a critical understanding of Maori social organization, especially the rangatira:potiki relationship, which from 1769 through to the 1850s entrepreneurially shaped successful tribal-commercial development in New Zealand.9 It appears that Grey successfully identified this dynamic leadership tension by deliberately providing potiki with power, status and opportunity in a context that fell beyond the sanctions of his elders as prescribed by Maui. Through illegal land transactions (outside Article II pre-emption clause, Treaty of Waitangi), armed confiscation of resources (NZ Settlement Act 1863) and finally the Native Land Court system (established in 1865: Walker 1990), tribal estates were wrestled from elders’ control (rangatiratanga) with the assistance of younger individuals aspiring to leadership (potikitanga) in both Maori and Pakeha worlds. This new generation of Maori entrepreneurs were commercially driven and not adverse to converting
kin-associated lands, goods or knowledge into financial self-gain. No longer protected or limited by their rangatira, they exercised their individual rights, seeking new opportunities in the now settler-controlled (and manipulated) commercial market (Tapsell and Woods 2008b).¹⁰

Like elsewhere in the indigenous world (kin-nations within Africa, Arctic, Asia, Latin America, North America and Pacific) the long-term effect of the British Crown’s deliberate dismantling – colonization – of New Zealand’s uniquely Maori tribal leadership (rangatira: potiki) was devastating.¹¹ In almost all cases, the would-be Maori entrepreneur (potiki) soon found that he could not match the political manoeuvring of the succeeding settler government (1952 onwards) and its supporting venture capitalists (Tapsell and Woods 2008b). Maori were eventually rendered destitute at the expense of colonial expansion and exploitation of once Maori-controlled resources (Kawharu 1977; Walker 1990). All kin suffered and although rangatira did their best to pick up their fallen potiki, the ongoing disgrace felt by being denuded of their resources contributed to the escalating indicators of powerlessness, namely poverty, alcohol abuse, violence and high mortality (Reynolds 2005; Tapsell and Woods 2008b). Within 100 years of signing the Treaty of Waitangi in 1840, Maori ‘were bereft of their land, language, culture and mana’ (Henry 2007, 547).

Like generations before, potiki represented the pathway to future opportunity. While rangatira sought to ameliorate the life crisis of colonization and rectify boundary transgressions using the conservative heritage approach of iwi reunification (kotahitanga), their potiki instead continued to focus on emerging opportunities. The crisis of colonization represented new opportunities for the young and courageous to explore and hopefully find a way forward for their kin (Tapsell and Woods 2008b). Over the past 35 years, there has been a resurgence in Maori identity, pride and development. Young Maori entrepreneurs are leading this process, ‘creating and working in businesses, profit and non-profit, that strengthens their whanau, hapu and iwi and creating robust and strategic organisations that can make and are making a profound contribution to Maori development’ (Henry 2007, 547).

5. Discussion: Heritage as a pathway for innovation

We now consider each of the five propositions suggested in the first half on the article in light of the illustrative example of Maori entrepreneurial activity. Guiding Proposition One states that innovation is historically and culturally situated. From a Maori perspective, Tikanga (heritage protection) provides the guiding principles for tribal Maori behaviour encapsulating much of the historical and cultural context. The Maori world view can usefully be understood as generative dualisms, symbolically represented as Takarangi: the spiral of creation. This particular Tikanga is the Maori embodiment of the Third Guiding Proposition: entrepreneurship can be understood as dynamic change resulting from innovation which takes the form of the introduction of new combinations: the deliberate formation and reformation of cooperating groups. The specific cooperating groups are the opportunity-seeking potiki and the Tikanga-guided rangatira. The interplay of these two cooperating groups, their formation and reformation, provide the basis of innovative activity within the Maori society against the backdrop of Tikanga and economic circumstances. More specifically, it is when the opportunity-seeking potiki challenge the established order upheld by the rangatira
that innovative activity occurs. Thus, innovation emerges from the novelty-creating, self-organizing acts of entrepreneurs or potiki who are part of cooperating groups (Guiding Proposition Four).

Perhaps the best example of why Propositions One, Three and Four can provide a useful framework to explore social innovation is found when exploring the impact of colonization. As stated in Guiding Proposition Two, colonization is a critical component of the particular historical context of indigenous entrepreneurship. Colonization provides an example of what Casson (2005) describes as an extreme shock. Further to this, such a shock has both tangible and intangible impacts. The tangible, or physical shock, was that Maori-controlled resources such as land, forestry, fishing and water assets were alienated as a result of colonial expansion (Kawharu 1977; Walker 1990). However, it is perhaps the intangible shock relating to the impact of colonization on ‘the beliefs and values’ of Maori that has been more powerful in its impact on innovative activity (Casson 2005, 333). In particular, the deliberate dismantling of the rangatira, potiki generative dualism was devastating. Such an undermining attack on customary leadership, beliefs and values resulted in the loss of tangible assets. Any discussion of Maori entrepreneurial activity (or lack thereof) must, at the very least, acknowledge the impact of colonization.

Looking forward, if the success of the past 35 years is to continue, then the challenge for Maori and their entrepreneurs is to balance the individual desire to be entrepreneurial (autonomy) with the need and desire to contribute to the enhancement of Maori (connectivity) be it with whanau (family), hapu (subtribe) or iwi (tribe). To ensure that connectivity and avoid the perils of autonomy and the crises of the colonization, Maori entrepreneurial models cannot focus solely on the opportunity-seeking potiki; they must successfully integrate the genealogical check and balance of the potiki, namely the elder rangatira.

Table 2 provides a summary of our discussion of the various Guiding Propositions and our assertion that we can usefully understand innovation as self-organization within an indigenous Maori context. Innovation occurs when the community operates between the edges of stability and chaos, thus supporting Guiding Proposition Five: innovation takes place along a continuum at and between the edges of chaos and stability. The success of Maui and the tribal developments pre-colonization represent two examples of such innovation. Stability is represented by the rangatira and is labelled Heritage; change is represented by the potiki and is labelled Opportunity. Heritage and Opportunity come together in the Spiral of Innovation. The lines around the Spiral of Innovation are deliberately dashed as the boundaries between the categories are permeable (Tapsell and Woods 2008a). We would thus suggest a sixth Guiding Proposition specific to Maori entrepreneurship: innovation is a recurring double spiral, symbolically represented by Takarangi, a double spiral of creation that incorporates opportunity and heritage.

Rangatira and potiki represent two aspects of the CASs. Autonomy and connectivity are vital for the continuation of a CAS. If the autonomy of the individual takes precedence, then the group loses its ability to cooperate and coordinate resources (Guiding Proposition Three). The impact of colonization and the breakage of the rangatira:potiki counterbalance plunged Maori into crisis, where disintegration occurred through poverty, alcohol abuse, violence and high mortality. If on the other hand connectivity becomes paramount, then actors lose their individuality and diversity and the tribal community becomes...
Table 2. Continuum of self-organization.

<table>
<thead>
<tr>
<th>Type of system</th>
<th>Edge of Chaos: autonomy</th>
<th>Edge of Stability: connectivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>System properties</td>
<td>Chaos</td>
<td>Opportunity</td>
</tr>
<tr>
<td>Controlling Mechanisms</td>
<td>None</td>
<td>Strange Attractors</td>
</tr>
<tr>
<td>Nature of relationships between actors</td>
<td>Independent actors – no detectable relationships</td>
<td>Random</td>
</tr>
<tr>
<td>Tribal actors</td>
<td>Opportunity seeking potiki</td>
<td>Interaction of potiki and rangatira. Tikanga changes in response to internal and external change</td>
</tr>
<tr>
<td>Nature of interactions</td>
<td>Random and totally irregular</td>
<td>Some detectable regularities and patterning</td>
</tr>
<tr>
<td>Outcome</td>
<td>Random changes and outcomes. Disintegration certain</td>
<td>Instability – unpredictable changes and outcomes. Disintegration possible</td>
</tr>
</tbody>
</table>

Highly Unstable

Highly Stable
too inflexible (MacGill 2007). The community runs the risk of ossification; an example of this is the alienation experienced by many young, urban Maori who no longer feel connected to what they perceive are the unchanging ways of traditional, tribal communities (Tapsell 2002a; Henry 2007).

The potiki operates at the edge of chaos and autonomy and the rangatira at the edge of stability and connectivity. Self-organization occurs in the Spiral of Innovation where the potiki and rangatira interact within the tribal setting (Guiding Propositions Three and Five). Actions are guided by the principles embodied in the Takarangi spiral which is the dynamic ability to adapt and change in response to internal and external forces. The many stories of Maui provide examples of how innovation can occur when the potiki engages in entrepreneurial activities while respecting Tikanga as exemplified by the rangatira (Guiding Principle Four; Keelan and Woods 2006). The formation and reformation of co-operating sectors of society allow tradition and heritage to frame the path to innovation in which opportunity-seeking adventurers can find the freedom to test boundaries and assist the hapu take the necessary steps along the path of innovation that will ensure continuity of wider kin well-being (Guiding Proposition Three).

6. Concluding comments

The purpose of this article was to examine what theoretical insights can emerge from exploring innovation, understood as self-organization, as it arises in the process of social entrepreneurship. To do this, we provided a definitional understanding of social entrepreneurship that explicitly included the historical and cultural context in which entrepreneurial activity takes place. Our understanding of such activity is focused on opportunity and innovation: the construction and pursuit of opportunities for transformative social change through innovative activities occurring within or across economic and social communities in a historical and cultural context.

The theoretical foundation for our discussion came from Schumpeter and the concept of innovation as new combinations. While incremental change can occur at the margins, the economy develops in leaps and discontinuities where novelty and significant change arise as a result of entrepreneurial activity that is socially situated and contingent on the historical context in which it occurs. While Schumpeter wrote mostly on economic development, his early research does state that any insights arising could also be applied in other sectors of society. However, Schumpeter did not provide a detailed account of microbehavioural aspects of entrepreneurial activity. For this, we drew on neoSchumpeterian economics and complexity theory to explore the self-organizing aspects of entrepreneurial behaviour. New combinations are understood to emerge as the result of the deliberate formation and reformation of cooperating groups; interaction between actors can give rise to both chaotic and stable forms of activity. New and unexpected actions (innovation) emerge through self-organization.

Maori, the indigenous people of New Zealand, provide an illustration of how innovative activity, culturally and historically situated, can emerge as the result of self-organization of a tribal community. Entrepreneurial activity in Maori communities occurs through the interaction of the young opportunity-seeking entrepreneur (potiki) and the elder heritage protector (rangatira). The interplay
between these two actors/groups in the Maori community illustrates innovation occurring at and between the edges of chaos and stability. However, if both partners are not interacting, then there is potential for crisis to emerge as was the case during colonization.

Our study is limited in that no specific example of the current Maori entrepreneurial activity occurring within a tribal setting has been included. Case study examples are necessary to challenge and expand the guiding propositions developed in this article. In particular, we need to explore the microlevel details of the novelty-creating, self-organizing acts of current Maori entrepreneurs in the same way that Keelan and Woods (2006) explored the historical Maui legends from an entrepreneurial perspective. The same level of detail is also required about the specific interactions between rangatira and potiki engaged in economic activity; for example, where along the innovation continuum does economic activity actually occur? Is there anything we can say about what types of interactions are more likely to lead to successful innovation? and What is the range of innovations that are needed by tribal communities? Such research might also cast light on the relevance and appropriateness of current governance structures within Maori tribal activities.

Further to this, it would be useful to extend the discussion to explore the interplay between the Crown and Maori tribes and consider how these two interacting ‘partners’ have formed and reformed as cooperating/non-cooperating groups. Recent Treaty settlements provide one potential line of research in this area. In a similar vein, it would also be useful to examine joint business activities between Maori tribal entities and pakeha commercial ventures. The six Guiding Propositions outlined above could form the basis for a conceptual framework guiding such research.

Our discussion has been generated through the collaboration of two seemingly disparate research fields: anthropology and entrepreneurship. The resulting analysis throws light on a specific indigenous entrepreneurial context. Two questions arise from this research: (1) Do other indigenous communities operate as CASs? and (2) Are similar entrepreneurial responses to colonization occurring elsewhere in the world? While on the face of it the answer appears to be yes, an in-depth comparative analysis of indigenous case studies worldwide could prove beneficial. Such research would assist in revealing further insights and guiding propositions revolving around indigenous entrepreneurship and other forms of social innovation.

In summary, we began this article by stating that social entrepreneurship needs to build a stronger theoretical platform from which to draw theoretical insight. In this article, we have demonstrated that this is possible by following a Schumpeterian inspired line of research. Drawing on complexity theory and the theoretical concepts of self-organization and CASs, we have extended our thinking beyond the static conception of organizations to a view that emphasises the dynamic, non-equilibrium aspects of the environment in which innovation occurs. This view is consistent with an understanding of the entrepreneurial process that pays attention to the context. Further to this, two theoretical insights are of particular interest to us. First, we are reminded that tradition and heritage can form the path to innovation while opportunity-seeking adventurers are necessary if steps are to be taken along the path. Second, while the historical and cultural context in which innovation occurs is important for social entrepreneurship, it may also serve as a valuable component in understanding economic entrepreneurship.
Finally, the case study illustration also reminds us that not only do we need to pay attention to the economic and social value that is created by entrepreneurial action, but we must also pay attention to the consequences (Chell 2007). Indigenous histories are filled with examples of entrepreneurial action that have all but destroyed social communities. Fortunately, indigenous entrepreneurship can provide us with examples of entrepreneurial activity that creates economic and social value by explicitly acknowledging the consequences of innovation through tribal interaction.

Notes
1. This work is consistent with the insights of Buchannen and Vanberg (1991) who suggest that a vision of the market as a creative process may offer more insight and understanding than the alternative of the market as a discovery process. They also suggest that such a vision should draw on seminal complexity writers such as Prigogine and Stengers (1984).
2. Indigenous people are defined as people, 'living on their lands before settlers came from elsewhere; they are the descendants of those who inhabited a country or a geographical region at the time when people of different cultures of ethnic origins arrived, the new arrivals later becoming dominant through conquest, occupation, settlement or other means' (General Assembly of The United Nation 1995, as quoted in Anderson, Honig, and Peredo 2006, 59).
3. This table is adapted from Roberts and Woods (2005, 48).
4. The concept of disruptive innovation is more fully developed by Christensen (2003) and Tidd, Bessant, and Pavitt (2005).
5. This quote is taken from Chapter 7 of the first edition (Schumpeter [1911] 2002). This chapter was totally eliminated from the 1934 English translation.
6. McKelvey (2004) notes that Schumpeter highlighted other key principles of complexity theory such as phase transitions and punctuated equilibrium, well before, leading complexity theorists like Prigogine and Muruyama.
7. Complexity science embodies a set of ideas that have emerged over the last 40 or so years from several disciplines including computer science, information theory, evolutionary biology and cognitive psychology (Cilliers 1998; Gleick 1987; Lichtenstein 2000; McKelvey 2004; Prigogine and Stengers 1984; Stacey 2003; Stacey, Griffen, and Shaw 2000; Vaughn 1999).
8. For a more comprehensive discussion on Maori cultural practice, see Grey (1855), Kawharu (1977) and Tapsell (2003).
9. See Petrie (2006) for case study examples of Maori-led commercial activities over this period.
10. See Kawharu (1977) for full discussion on the mechanisms of colonization.
11. For wider international case studies of colonization, see the IWGIA website, documents, newsletters, serials and year book publications: http://www.iwgia.org/sw151.asp (IWGIA 2008).
12. Table 2 is adapted from Carlisle and MacMillan (2006, p.4) and Tapsell and Woods (2008a, 31).
13. For some preliminary research in this area, see Tapsell and Woods (2008a).

References


Grey, G. 1855. Polynesian mythology and ancient traditional history of the New Zealand race, as furnished by their priests and chiefs. London: John Murray.


