

# CHAPTER 10

## THE COMPLEXITY OF SOCIAL ENTREPRENEURSHIP SYSTEMS: SOCIAL CHANGE BY THE COLLECTIVE

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There is a growing effort in associating the concepts of traditional economic entrepreneurial frameworks with the need for social system's problem solving. The scope of this effort is expanded in this paper by incorporating a broader understanding of social "entrepreneurship" as a complex, emergent, and sustainable mode of continuous change. The purpose of this paper is to put forth an argument that the dynamic human actions within a social entrepreneurship system can best be explained using the concepts and characteristics of complex adaptive systems. In support of our argument we develop premises around three interrelated characteristics of complex adaptive systems: (1) Non-Linear Interactions, (2) Emergence/ Self-Generation, and (3) Schemata. Couched in these premises, and used as concrete pragmatic examples, we discuss the issues of multiplicity of stakeholders, "sustainable" social entrepreneurship, and the power of competing social values in developing adaptive tensions. In order to contribute beyond only theoretical explanations, each premise identifies researchable propositions that we hope will encourage additional multi-level theory development and empirical research.

*To my mind the whole push and thrust and development of the world is towards the more complex, the flexible, the open-minded, the ability to entertain many ideas, sometimes contradictory ones, in one's mind at the same time.*

—Doris Lessing (1987)

### Introduction

In an attempt to redirect successful business processes and their focus on "profit only" to an orientation of "profit and social development", there is a growing interest in associating the concepts of traditional economic entrepreneurial frameworks (Kirzner, 1997; Knight, 1921; Schumpeter, 1942) with the need for social system's problem-solving (Dees, 2001). The application of these concepts results in individual actions that are referred to as being "social entrepreneurial". However, maintaining the focus of interest only at the individual level of analysis, limits the scope and potential leveraging that can come

from a broader understanding of social “entrepreneurship” as a complex, emergent, and sustainable mode of continuous change (Hall & Vredenburg, 2003; Peredo & Chrisman, 2006; Peredo & McLean, 2006).

An underlying assumption of the traditional entrepreneurial perspective is that economic forces (e.g. the free market), in conjunction with the heroic actions of a few individuals (entrepreneurs), will adjust human conditions to gain economically, and that the social problems will work themselves out. This idea of “market forces” is, of course, based on human rationality and not human behavior (Ariely, 2008). The social entrepreneur variation on this perspective, although still reliant on the individual level of analysis, stresses the replacement of the economic entrepreneur’s “profit motive” with a “social value motive”. It adopts the characteristics and traits associated with the individual business entrepreneur (Dees, 2001). However, it lowers the expectations for profit as an outcome of the actions. In its place, the entrepreneur’s motivation is now to reach a new “economic or environmental equilibrium point” that will solve social problems through social and economic change (Martin & Osberg, 2007). The social entrepreneur becomes a “silent change agent” by adopting a mission to create and sustain social value (Drayton, 2007). The actions of social entrepreneurs still reflect those of business entrepreneurs in that they recognize and relentlessly pursue new opportunities to serve their mission; they engage in a process of continuous innovation; they act boldly; they exhibit heightened accountability to the constituencies served and for the outcomes created (Dees, 2001); and they have strong network embeddedness (Shaw & Carter, 2007).

These variations in the roles and motivations of the social entrepreneur have led to a broader conceptualization of the social entrepreneurship processes (Guclu, Dees & Anderson, 2002) in Community-Based Enterprises (Peredo & Chrisman, 2006). In addition to the previous perspectives, this conceptualization considers social entrepreneurship as a more complex process by including collective initiatives and interactions, multiple levels of analysis and causation, and concepts of social capital and cultural dynamics. There is an assumption that social problems are non-linear in nature, and that complexity emerges from the incorporation of multiple stakeholders (government, not-for-profit, and for-profit) in an attempt to create sustained public benefit. Although the field of social entrepreneurship has described the outcomes of these types of actions (Dees, 2001; Guclu *et al.*, 2002; Martin & Osberg, 2007), little theoretical attention has been given to the dynamic interactions associated with social entrepreneurs.

The purpose of this paper is to put forth an argument that the dynamic human actions within a social entrepreneurship system can best be explained using the concepts and characteristics of complex adaptive systems. This type of argument is reminiscent of another conversation that has been occurring between the leadership and complex adaptive systems communities (Hazy, Goldstein & Lichtenstein, 2007; Uhl-Bien & Marion, 2007). The introduction of complex adaptive systems concepts has moved the discussion from one focused on the traits and attributes of the person in the role of leader to one that is more inclusive of the dynamics of human interactions and systems perspectives

of social functions, conditions, and outcomes (Schwandt, 2007). Just as those conversations are in the process of transitioning the concepts of “leader to leadership”, we hope to contribute to the dialog that will transition “social entrepreneur” to “social entrepreneurship.” By adding the suffix “ship” to this concept we are expanding the theoretical construct to include a connotation of “state” and/or “conditions” (OED, 1991) that are inclusive of the social entrepreneur’s actions as well as those of the collective in their pursuit of social change.

In support of our argument we will develop premises around three inter-related characteristics of complex adaptive systems: (1) Non-Linear Interactions, (2) Emergence/ Self-Generation, and (3) Schemata. Couched in these premises, and used as concrete pragmatic examples, we discuss the issues of multiplicity of stakeholders, “sustainable” social entrepreneurship, and the power of competing social values in developing adaptive tensions. In order to contribute not only to theoretical explanations, each premise will lead to researchable propositions that we hope will encourage additional multi-level theory development and empirical research. Before proceeding with the development of our premises, we will first provide an expanded definition of social entrepreneurship, and then turn to a brief explanation of the nature of complex adaptive systems, as it relates to social systems and social problems.

## Defining Social Entrepreneurship

**T**he traditional definitions of entrepreneur have focused on human attributes and actions. The outcomes of these actions have customarily been new products, processes, ventures, and entry into different markets (McMullen & Shepherd, 2006). The attributes are associated with entrepreneur’s ability to recognize opportunity and then act on that opportunity with risk taking, personal fortitude and perseverance, creativity, innovativeness, and intelligence. These attributes are important because they are necessary for overcoming the uncertainty associated with entrepreneurial endeavors. McMullen and Shepherd (2006) expand on this by arguing that, “... the willingness to bear the perceived uncertainty associated with an entrepreneurial act is representative of a belief-desire configuration, in which belief of what to do is a function of knowledge and the desire of why to do it is a function of motivation” (p.148). These attributes, characteristics, and affect (Baron, 2008) of the entrepreneurial process have contributed to the formulation of a definition that has been used in identifying, selecting and developing individuals to operationalize Schumpeter’s (1942) “economic entrepreneur spirit” in the business world.

The concept of “social entrepreneurship” is not simply the application of Schumpeter’s (1942) economic hero framework to social problems (Shaw & Carter, 2007). Dees (2001) sees the social entrepreneur as only one species of the genus entrepreneur. The social entrepreneur not only invokes similar person-centered attributes such as inspiration, action orientation, innovativeness, courage, creativeness, fortitude, but also directs these actions toward the pursuit of change in the human conditions of the marginalized, disadvantaged,

and disenfranchised (Drayton, 2007)<sup>1</sup>. In introducing a social “mission” to the definition of the social entrepreneur, the complexity of the interactions and the critical nature of the emerging outcomes draw a stark difference between itself and those of the business entrepreneur definitions.

This evolution from business to social issues has encouraged the incorporation of additional social aspects, conditions, and contexts of the actions into definitions of social entrepreneurs. The entrepreneurial actions are seen as only one of three general elements of a “social entrepreneurship process” that also includes context and outcomes (Guclu *et al.*, 2002; Martin & Osberg, 2007). The outcomes are no longer defined in terms of just economic profit, but in terms of the establishment of, “...new equilibriums that quickly become self-sustaining” (Martin & Osberg, 2007: 34). At the 2008 World Economic Forum in Davos, Switzerland, Bill Gates issued a challenge for the creation of a “kinder capitalism” by saying “If we can spend the early decades of the 21st century finding approaches that meet the needs of the poor and ways to generate profits for business, we will have found a sustainable way to reduce poverty in the world” (Guth, 2008). He sees companies asking their innovative thinkers to think about the neediest populations, even if there are no market gains. However, this challenge may succumb to the realities of the inability of even large poverty populations to generate profits because the transactions are so small it is not worth it for private concerns to devote their efforts toward social problem solving (Easterly, 2006).

The transition from an individual “trait” based definition to the broader social system dynamic based conceptualization highlights the “social value creation” orientation of the social entrepreneurship concept. Peredo and McLean (2006) have formulated social entrepreneurship not only as human actions and interactions, but also as a “state” of the social system:

*Social entrepreneurship is exercised where some person or persons aim either exclusively or in some prominent way to create social value of some kind, and pursue that goal through some combination of (1) recognizing and exploiting opportunities to create this value, (2) employing innovation, (3) tolerating risk and (4), brushing aside limitations and available resources (p. 13).*

This definition does not de-value the importance of individual entrepreneur actions, but emphasizes the existence and co-evolutionary aspects of the multiple levels of the social system. In addition, it provides an emphasis on the actions of the individual and how they impact the collective (e.g., employing innovation), and in turn the collective’s efforts as they impact the individual (community tolerance for risk).

Multiple dimensions of social complexity become apparent as we further define the concept of social entrepreneurship at a community level of analy-

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1. Among the more noted efforts are those of Muhammad Yunus in creating the Grameen Bank in Bangladesh and Ann Cotton who began the Campaign for Female Education in Africa. These entrepreneurial actions are advanced through support from various foundations and institutes such as Ashoka, the Kauffman Foundation, and Skoll.

sis. Peredo and Chrisman (2006) theoretically explore the conditions of threat, novelty, and other tensions on community actions and interactions in their theoretical formulation of Community-Based Enterprises (CBE). They define these as, “a community acting corporately as both entrepreneur and enterprise in pursuit of the common good” (p. 315). This approach places an emphasis on non-linear collaborations within the community, and the employment of social capital in the pursuit of sustainable social change that provides an excellent opportunity to integrate the concepts of complex adaptive systems to further our understanding of social problems and their solutions.

## Complex Adaptive Systems

**T**he first serious recognition of the complexity of social systems (Buckley, 1968) challenged the usefulness and applicability of both the traditional equilibrium model (used by organizational theorist for analysis of change) and the organismic homeostasis models of sociological theory (used to understand dynamic changes in societies). Social systems were considered not only open and negentropic, but also, they “are open ‘internally’ as well as externally in that the interchanges among their components may result in significant changes in the nature of the components themselves with important consequences for the system as a whole” (Buckley, 1968: 490).

This initial morphogenic conceptualization of social complexities’ relationship to the dynamic interactions of agents and their inherent attempt to make meaning of their context has evolved to a concern with social ordering as “chaos” (Thietart & Forgues, 1995; Von Krogh & Roos, 1994). This approach abandons the traditional notion that the collective in their pursuit of survival should be seeking equilibrium positions to stabilize their relationships with their environment(s). Multiple disciplines (Lichtenstein, 2007) have joined in the exploration of the relationship of agent’s actions to the emergence of structure (Goldstein, 2007).

Complex adaptive systems theory remains committed to the collective being comprised of agents that are self-referential and reflexive and are responsive to relating with each other in often radical and unpredictable manners (Stacey, Griffin, & Shaw, 2000). The social system coevolves through emergent social phenomena that allow it to regenerate and self-organize agents’ knowledge schemes and social structures for potential next interactions (Dooley & Van de Ven, 1999). In order to portray the social entrepreneurship system as a complex adaptive system, we will focus on three characteristics that are indicative of this dynamic nature.

- *Nonlinearity* refers to multiple causations over time and space from human interactions that reflect both non-additive and non-proportional attributes of the system. It is our assumption that human poverty and poor health represent social problems at multiple levels of analysis concerning complex and non-linear human actions.

- *Emergence and self-generation*, means that over time and space, novel social patterns manifest themselves at higher levels of abstraction (or analysis), but are related to repeated and reciprocating non-linear human interactions. “That is each new level of complexity would exhibit the construction of new structures with new properties that transcend lower-level characteristics and dynamics.” (Goldstein, 2007: 70). An example of this can be seen in the use of all the trees on Easter Island to provide shelter (homes) for the inhabitants, which resulted in patterns of deforestation, land erosion, and finally the collapse of the society (Diamond, 2005).
- *Schemata, or schema*, provide cognitive and emotional guidance for agents and the collective in their social interactions. They are comprised of sets of simple “rules” for sensemaking and are indicative of a “...cognitive structure that determines what action the agent takes at time  $t$ , given its perception of the environment at  $t-1$ ” (Anderson, 1999: 219).

The application of these characteristics of nonlinearity, emergence/self-generation, and schemata to the human condition has necessitated the addition of the uniquely human characteristic of “tension” or “latent social strain” (Parsons & Smelser, 1956). These latent forces are derived from situations in which existing schemata may not provide sufficient guidance for interaction. McKelvey (2002) sees these adaptive tensions manifested in language as a process of self-organizing of the social system, “Simultaneously, they (1) define appropriate efficaciously adaptive directions and (2) deal with what economists call ‘agency problems’ by focusing agent’s attention on relevant technologies, markets, products, etc.” (p. 12). The next section will discuss the use of complex adaptive systems concepts to further our understanding of these interactions in a social entrepreneurship system.

## **The Argument: Social Entrepreneurship Systems are Complex Adaptive Systems**

**S**pecifically, our argument is that the solution of social problems ultimately lies within the social “community” and their dynamic capacity to sustain patterns of interaction that engage emergent anticipated and unanticipated consequences. The term “dynamic” here refers to the powerful, ongoing “actions and interactions” of the individual and collectives that contribute to the emergence of new knowledge and social structures. Further, we argue that a more fruitful way of examining these dynamics is through the lens of complex adaptive systems (and associated sociological theories) rather than that of the rational cause-effect model posed by traditional individual, trait-based entrepreneur models (Cornwall, 1998; Onyx & Bullen, 2000).

For the purposes of this argument we will operationalize social entrepreneurship as a “state of the social system” that reflects the dynamic and continuously emerging social patterns of agent and collective actions. The patterns are characterized by a common set of values (Pruzan, 2001) and knowledge that relate community goals to the means and conditions associated with collective

problems (Schwandt, 2007). Inherent in this operationalization is a variance in the “nature” of the collective that is based on the extent of social integration, acceptance of common values, participation in the knowledge creation process, and the severity of the felt conditions. Although the social system construct can refer to any level of the social system, such as societies or industries (Abrahamson & Fombrun, 1994; Astley, 1984; Astley & Van de Ven, 1983), the major focus of the present argument will be limited to the micro-meso level of the social system (Schwandt, 2007).

To support our contentions and the applications of complexity characteristics to social entrepreneurship, we offer three interrelated premises that have their origin in the conditions that influence the emergence of community-based enterprises (Peredo & Chrisman, 2006). These conditions include agent interactions that are characterized by multiple skills and active participation by the stakeholders; emergence of tensions associated with social alienation, environmental degradation, etc.; emergent knowledge as a product of incremental learning; and, a multiplicity of goal orientations. In developing each of the following premises to our argument, we present the basic *theoretical considerations* underpinning our premise both at the micro (individual) level of actions and their structural relation to the actions of the collective as a complex adaptive system. In each discussion of the premise, we embed *propositions* that we hope will encourage further theorizing and empirical research.

### Emergence of Novel Social Solutions

**First Premise:** *Novel solutions to social problems are an outcome of the complex interactions of multiple levels of the social system that contribute varying patterns of skills, knowledge, and history.*

The complexity of human systems is derived from their continuously coevolving interactions. These interactions are not only between individuals, but also among groups, organizations, and societies all having different and unique cultures, contexts, constraints, capabilities, goals, means, and desires. Social entrepreneurship systems “... are profoundly affected by the ability of the community to combine and adapt in an innovative way a variety of ancestral and new skills, experiences, cooperative practices, and values” (Peredo & Chrisman, 2006: 319). These interactions are non-linear and reciprocating (Gouldner, 1960) and can lead to novel solutions to social problems, or they can simply reinforce current conditions.

Within the social entrepreneurship system individuals are also considered an independent complex adaptive system (micro), socially learning and changing through interactions with other independent agents. Simultaneously, these continuous reciprocating interactions are the elements of an emergent social system (meso) with a structure, order, and meaning. Meso-system structures emerge in response to the need for social integration and reduction of equivocality, and influence the range and goals of future structuring actions of the individual agents. Micro-individual interactions are simultaneously “structured by” and “are structuring” the meso-collective. These reciprocating inter-

actions can be characterized as both learning by the individual (Bandura, 1999) and collective learning at the meso level of analysis (Schwandt & Marquardt, 2000)<sup>2</sup>. As micro double-interacts (Weick, 1979) occur within the social entrepreneurship system, collective structures emerge as outcomes, or mechanisms (Holland, 1998), in the form of potentially new norms, rules, structures, cultures and identities that can become the basis for community-based enterprises and novel solutions to social problems. It is this coevolution that leads to our first proposition:

**Proposition I:** *Social entrepreneurship systems' interactions restructure their problems (changing norms, values, and networks), which results in the redefinition of the problem and a maximization of existing resources and knowledge.*

Giddens's (1979) theory of structuration, or duality of structure, provides a meso/macro theoretical explanation for this dynamic of complex relationships between the structure provided by the collective and the interactions of the agents involved in social change. However, his macro, or societal level of analysis, hampers its operationalization at the meso/micro level. A more concrete portrayal of Giddens's work is developed by Stones (2005) as strong structuration theory, "... even traditionally conceived social structures don't work by themselves; they work on a basis of agents acting *in situ*, drawing upon and being influenced by interpretive schemes, conceptions of values and norms, and power resources" (p. 52).

As the social system coevolves with its environment, agent interactions both create and are influenced by mechanisms (Holland, 1998) that both Stones (2005) and Giddens (1979) define as functional norms and rules or three "modalities of structuration": signification, legitimation, and domination. The rules of *signification* enable and guide meaningful communication and sensemaking among the agents. It provides structure to clarify information and knowledge for the agents, in the context of the collective. Norms of *legitimation* provide the collective with the ability to morally sanction specific actions and reject others. They provide the rules of inclusion within the cultural boundaries of the collective. The modality of *domination* addresses the functions of command, power, and authority over people and resources. "The actors use appropriate 'rules and resources' (structures) to give 'form' to situations of action by interlacing ... meaning, normative elements and power" (Parker, 2000: 57). These mechanisms are useful to the community and set limits on actions, provide focus for collective goals, and guide the nature of interaction.

When strong structuration mechanisms are considered in the context of coevolving agent interactions, we are more able to operationalize complexity in the explanation of social entrepreneurship systems, or community-based enterprises. It allows us to emphasize the cognitive and emotional capacities, not only of the social "entrepreneur", but also of the members of the social entrepre-

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2. For a complete development of this reciprocating relationship between micro and meso levels, and the invariance of the complexity characteristics of schemata, nonlinearity and emergence across levels of analysis see Schwandt 2007.

neurship system as dynamic components in the collective's capacity to produce and sustain solutions to their problems. During these reciprocating interactions, agents are assumed to be free to make "informed choices" concerning their actions, but are influenced by their constraints, norms or effects of the pending social dilemma. This produces a nonlinear aspect of "choice" that emerges in the form of novelty. However, it is difficult to predict with any certainty, the specific nature of the novel outcome(s) because of the potential self-serving orientation of actors within the system. This may or may not result in the adoption of new ideas as opposed to simply accepting current values, norms and other schema (Schwandt, 2007). These interactions and their outcomes become less certain as to the cause-effect relationships as the frequency and number of interactions increase.

### **Sustaining Social Entrepreneurship Actions**

**Second Premise:** *Continuous emergence and self-generation of patterns of social entrepreneurship is the essence of the community-based enterprises' sustainability.*

Solutions to social problems and adding value to society are the missions of the social entrepreneurial system. These missions are quite different from the goals associated with economic entrepreneurs. The cost of failure (risk) is not always measured in monetary terms of profit and loss, but are many times measured in loss of life or environmental hazard. Each emergent solution interacts with other emergent phenomena forming interactions at higher levels of abstraction from the initial micro interactions.

*Persistent patterns at one level of observation can become building blocks for persistent patterns at still more complex levels. At each level of observation, the persistent combinations of the previous level may constrain what emerges at the next level (Holland, 1998: 7).*

The mission of social entrepreneurship systems is not simply a matter of reaching a new social equilibrium point (which may solve the immediate problem), but rather it must account for future problem solving directed at unanticipated outcomes of the interaction of emergent phenomena. The emergence of successful community-based enterprises is not simply adaptation, it involves an elevated awareness of their learning capacity (Bateson, 1972). This "capacity" is emergent and becomes the foundation of sustainability.

*In every waking moment, the complete balance of the organism and its environment is constantly interfered with and is constantly restored ... life is interruptions and recoveries ... at these moments of a shifting in activity, conscious feelings and thought arise and are accentuated (Dewey, 1922: 178-179).*

Social entrepreneurship systems must rely on their capacity as a complex adaptive system to continuously self-generate solutions to social emergent change.

The concept of emergence refers to properties of the collective as a system of “elements” that cannot be explained simply in terms of their “elements.” (Holland, 1998) In other words, the social system has the ability to manifest phenomena that are observable (or felt), but not clear as to the causal variables that contribute to the phenomena (Schwandt, 2007). This emergent dynamic has been discussed quite adequately in the sociological literature concerning the social construction of reality (Berger & Luckmann, 1966), the managerial literature in the discussion of sensemaking (Weick, 1995), and the cultural discussion of habitus (Bourdieu, 1977). Taylor and Van Every (2000) also argue that the continuous structuring of the collective emerges from conversations, language, and other behaviors of the members of the collective.

To understand the emergence of knowledge from both the social entrepreneur’s and collective’s interactions with their environments, it is important to provide a logical argument that captures the reciprocal nature of coevolution that reflects both the micro and meso levels of the “social entrepreneurship” system. As agents interact with each other, or with the information they obtain from their environments, each interaction potentially changes both the context and content of the proceeding actions by cognitively and emotionally altering the assumptions (structures) of the actions of the agents and the collective. This necessitates a minimal level of congruency between values and norms across levels of analysis, and leads to our second proposition:

**Proposition II:** *Emergent mechanisms within the social entrepreneurship system must be isomorphic across levels of analysis (the micro-individual and meso-collective levels) to achieve sustainability*

Discussions in the complexity literature favor the concept of “emergence of order” rather than “self-organizing” to characterize the output of agent interactions. The basic argument concerning the use of the term emergence or self-organizing appears to be one concerning the origins and relative spontaneity of the new patterns of order at higher levels of abstraction. Goldstein (2007) argues that the emergent new pattern is a reconstruction of existing configurations:

*Likewise, what is being proposed here is that the key to understanding emergent order is not to assume an emergent straightaway out of disorder, but rather to ask a series of questions about the transformation of order from disorder: How do novel emergent patterns relate to previous patterns in the system? How exactly are these extant patterns transformed? What in the new patterns is novel and what is carryover from earlier states of the system? What processes and operations are utilized to build up toward complex order? (p. 67)*

Although these differing positions question the process and origin of “emergent order” or “self-organizing order”, the basic concept of new or novel

social patterns (order) emerging from interactions is common to both. The debate may be directed at the relative ability of humans to predict and/or control the outcomes of their actions. This uncertainty, and nonlinearity of the complex adaptive social system, may impact the collective's ability to systematically integrate and self-generate its social patterns with environmental conditions and objects. Both actions of dissolution and/or creation of related conditions, processes, and knowledge schemata may occur for effective coevolution of the collective in their problem solving. Dissolution actions break the symmetry of current collective and individual knowledge structures (schemata), thus increasing the degrees of freedom available to the collective that in turn encourages learning (exploration). On the other hand, creation includes actions of experimentation and alignment with deep collective social patterns that are irreversible (exploitation) (Jantsch, 1981). Actions of both dissolution and creation can be present simultaneously, and lead to the paradoxical and complex social conditions related to exploratory and exploitative collective learning (March, 1991).

These new patterns of social interaction that emerge offer a new dynamic structural relationship within the social entrepreneur system. If the outcome is the solution of social problems, then the question of sustaining these patterns is important. Thus we propose:

**Proposition III:** *Social entrepreneurship systems constitute and manifest patterns of interaction that are both destructive and constructive.*

It is not difficult to pragmatically apply the complex adaptive system's concept of emergence to social entrepreneurial actions. The popular literature has many examples of individuals that, through their actions and interactions, have been responsible for emergent solutions to social problems (Dees, 2001; Drayton, 2007). Many of these individuals have established social entrepreneurship systems that appear to be self-generating or sustainable (e.g., Muhammad Yunus's Grameen Bank). In these cases, they approximate complex adaptive systems and are becoming community-based enterprises:

*The community-based enterprises are new in the sense that emerging conditions—economic, environmental, and social stress; a sense of local vulnerability; and the forces of economic and social globalization—seem to have called for an innovative entrepreneurial response. But its roots in culture and tradition make this response more an evolutionary step than a surprising novelty (Peredo & Chrisman, 2006: 322).*

Stakeholders are defined as any group, or individual, who can affect, or are affected by, the achievement of a social purpose (Freeman, 1984). There are three important aspects of their involvement, 1) to what extent do they affect and are affected by a particular action or set of conditions, 2) their ability to influence or provide resources and/or power, and 3) what is expected of, and the form the interactions take (Savage *et al.*, 1991). All three of these aspects contribute to and define “motive” of the multiple stakeholder interactions and have

implications for the emergence of domination, legitimation, and signification in the structuring of the interaction (Mitchell, Agle & Wood, 1997; Stones, 2005). In considering solutions to social problems and adding social value to the community it is obvious that the first two aspects single out who becomes a stakeholder and who is part of the “social public” (Wilson, 2005).

The third aspect of stakeholder involvement speaks directly to the patterns of complexity and the nature of the interactions. Stakeholder patterns of interactions can be described as offensive, beneficial engagements (e.g., sharing important knowledge for innovation or avoiding risks), or as defensive, tactics aimed at the mitigation of current threats (Friedman & Miles, 2006). Both of these patterns can lead to unanticipated consequences in the power structures of social entrepreneurship systems (Stones, 2005) and community-based enterprises (Peredo & McLean, 2006).

The nature of the stakeholders’ involvement must be based on motives that are driven by mutual “need” for social solution, and not just an act of philanthropy. The “stake” reflects a valuing of potential emergent outcomes. However, as we will see in the next premise, the convergence on values concerning “means” usually occurs before a common valuing of “ends” (Weick, 1979). The human valuing process coevolves with the emergence of tensions that are yet to be explained.

### **System Tensions and Social Entrepreneurship**

**Third Premise:** *Adaptive tensions emerging from competing schemata provide opportunity for both the creation of change capacity and conflict within social entrepreneurship systems.*

The last premise of our argument is the most difficult to articulate, but yet it is the most important (and powerful) characteristic of a complex adaptive systems theory. It involves the analysis of the contribution of collective and individual values to the social entrepreneurial system of interactions. Social and cultural basic assumptions are latent (not visible) and influential mechanisms of the social action theory (Parsons & Smelser, 1956). The social sciences, including those with interests in complexity, see these mechanisms as “rules” for agents to follow and adapt, others see them as patterns of schemata that represent the underlying social/cultural basic assumptions of the community and individual that influence choices in norms, beliefs, and ultimately “actions”. Communities and cultures have schemata that represent the integration of these mechanisms and convey information across and within the collective.

As we have stated above, a major difference between social entrepreneurs and economic entrepreneurs is that the former’s motivation is based on the solving of social systems problems rather than only economic gains. It is this shift in mission that is manifested in the differences of schemata employed that may lead to conflict, overestimation of expected outcomes, emergence of adaptive tensions, and raises the stakes of failure of the social entrepreneurship system.

Schemata can provide great efficiencies by reinforcing useful social routines. However, they can also reinforce harmful routines that lead to emergent social problems. In these instances the schemata do not provide sufficient guidance. In these, the individual and the collective are confronted with paradoxes and dilemmas that lead to conditions and information of equal plausibility. Thus they must develop new schemata to guide their actions or suffer the consequences of their conditions.

The community's capacity to change schemata and restructure their norms or values (in nonlinear processes) portrays the social entrepreneurship system as *coevolving* not just evolving. Coevolution is the recurring interactions that "consider" changes in the social environment through a process of acting-learning-acting. Complex adaptive systems theory "... asks how changes in the agent's decision rules, the interconnections among agents, or the fitness function that agents employ produce different aggregate outcomes" (Anderson, 1999: 220). In social entrepreneurship systems, outcomes are dependent on the cognitive capacity of the agent and the emergence of novelty from their interactions.

In these situations agents must reflect on their actions and invoke interactions dependent on emergent social capital (Larson & Starr, 1993) to resolve dilemmas:

*The elements typically identified in the notion of social capital include densely interlined networks of voluntary relationships, a high degree of reciprocity in which short-term sacrifices are made with the implicit understanding that they will be repaid over time, trust, or a willingness to take risks with the conviction that others will respond cooperatively, and broad agreement on social norms (Peredo & Chrisman, 2006: 314).*

Social coevolution is nonlinear because of the agent's capacity for free choice, multiple levels of stakeholders, and adaptive tensions that emerge from an alteration, or replacement, of existing schemata. This in turn influences social relationships and capital.

**Proposition IV:** *Social entrepreneurship systems emergent sustainability is directly related to the social capital (Oh et al., 2006) at their disposal (Peredo & Chrisman, 2006: 315).*

Participating in the social entrepreneurship system necessitates the transfer of large portions of order over one's individual actions to the needs, norms and values of the collective. This is not a complete capitulation by the agent. They are simply attempting to gain personal utility by making the unilateral transfer to the will of the collective. Individuals do make informed choices concerning their commitment to the collective and its values; the choice may be to not act in accordance with the collective rules (Coleman, 1990). This may begin a change in collective norms and the adaptive tensions that can lead to conflict:

*[M]ost conflict situations are essentially bargaining situations. They are situations in which the ability of one participant to gain his ends is dependent to an important degree on the choices or decisions that the other participants will make. The bargaining may be explicit, as when one offers a concession; or it may be by tacit maneuver, as when one occupies or evacuates strategic territory. It may, as in the ordinary haggling of the marketplace, take the status quo as its zero point and seek arrangements that yield positive gains to both sides; or it may involve threats of damage, including mutual damage, as in a strike, boycott, or price war, or an extortion (Schelling, 1960: 5).*

This adaptive tension within the social entrepreneurship system of interactions provides the motivational energy for the community to learn through a continuous juxtaposition of values (and related norms) that can result in social change.

To this point of the discussion we have assumed the existence of knowledge, but what if there is none, or no solutions that can be effectively transferred to the existing social problem? In this situation, the learning requires “meaning making”. The agent’s awareness of the “lack of knowledge” must trigger enhanced interactions that allow for novel solutions to existing social problems and will lead to a sustained learning process. The community must keep a continuous vigil for the adaptive sensemaking tensions that signal dissatisfaction, a lack of knowledge, or simply a sense of “not knowing”.

The adaptive sensemaking tensions are latent and have no prescribed content or structure. Once satisfied or resolved, they can go dormant. They will arise again if the condition of social entrepreneurship that emerged is lost, or if the situation context changes. Adaptive sensemaking tensions are also spawned by conflicts between the collective norms, conditions of the context, and agent values (Parsons, 1937).

As is the case with other forms of contradictions, the tensions that emerge can be triggers for positively exploring, accepting, or confronting the issues associated with contradiction and paradoxes (Lewis, 2000), or they can contribute to the avoidance of disorienting cues, or produce a social dampening of critical inquiry processes (Schwandt, 2005). Adaptive tensions (Buckley, 1968) should constantly exist between and among the agents of the collective based on the variation in their personal schema and potential misalignment with shared schemata.

The relationship between the agent and the collective is dependent on the informed actor making choices of behaviors that continue to enhance or sustain the cognitive resolution of the adaptive sensemaking tensions in specific situations. To reduce tensions the agent must understand the values and assumptions of the collective that influence their interactions with organization (Schwandt, 2007).

Reducing the adaptive sensemaking tension is not only dependent on the community deciding on one of the extremes in the tension, but also on how it chooses to maintain over time the commitment of the collective to useful interactions (sustainability). Polanyi (1966) saw the growth of knowledge depending on complex sets of social relations based on a largely institutionalized

reciprocity of trust. The trust–commitment relationship is a good example of the non-linear nature of the social entrepreneurship system. The tension arises from the need to maintain the independent nature of the agent’s cognitive and emotional capabilities while also allowing the collective to legitimate itself through the use of conformity and internal equity and the need for exchange with external environments (markets) (Douglas, 1981; Stones, 2005). These dilemmas that result from adaptive sensemaking tensions should be expected due to the coexistence of a variety of worldviews (signification), competing values (domination), and personal efficacies (legitimation) relative to both agent and collective goals. Therefore, our fifth proposition captures this structuring relationship:

**Proposition V:** *Adaptive tension is an emergent quality of the collective interactions associated with legitimacy, signification, and domination.*

These non-linear differences provide variance and novelty within the collective that encourages the production of alternate paths for coevolution of the social entrepreneurship system.

*The main point is that a major impetus for the development of community-based enterprises appears to be a thread that either causes communities to perceive a major disequilibrium in their way of life or an equilibrium condition that is so far below the former equilibrium condition that a search for opportunities and new resource combinations with both economic and social value is undertaken (Peredo & Chrisman, 2006: 317).*

This variance is necessary in the production of alternatives, but may produce conflict that can be judged divisive by the agents. On the other hand, complete social and cognitive alignment discourages variety and may act to dampen critical inquiry in the name of collective solidarity. This somewhat philosophical dilemma is not uncommon when societies attempt to pragmatically change well-engrained schemata, and results in our sixth proposition:

**Proposition VI:** *Tensions and conflict are a necessary, but not sufficient, condition for social entrepreneurship systems to enact social change.*

Pragmatic examples of adaptive tensions are difficult to identify. The tensions are present and felt, but not always evident, nor discussed. For example, in a recent Wall Street Journal report on the businesses’ progress toward “Green”, the lead paragraph and the final sentences respectively were “Job One for a CEO: Exploit the opportunities and shift the costs to someone else.” and “Winners and losers. Opportunities and risks. The fault lines in this new-energy landscape are only just emerging.” (Ball, 2008: R1) These statements were in an article reporting “progress” towards business accepting social responsibility for their actions, yet the language used reinforced the values and basic assumptions of economic gain at any cost. Thus the tensions, in this situation, have become evident through the language employed.

Other actions have been directed towards changing the basic assumptions of business through changing expectations and standards for judging success. Elkington (1997) calls on business leaders to think about new types of issues, asking them to consider how sustainable development strategies and social entrepreneurship can contribute to the economic bottom line. A “Triple Bottom Line” means the measurement of success in terms of social impact, environmental impact, and economic impact (Elkington, 1997). Traditionally, success has been measured only in terms of the single bottom line of economics (Ghoshal, 2005). The importance of social value leads to the final proposition:

**Proposition VII:** *Social entrepreneurship systems must maintain values that reinforce “mission” achievement and social value creation.*

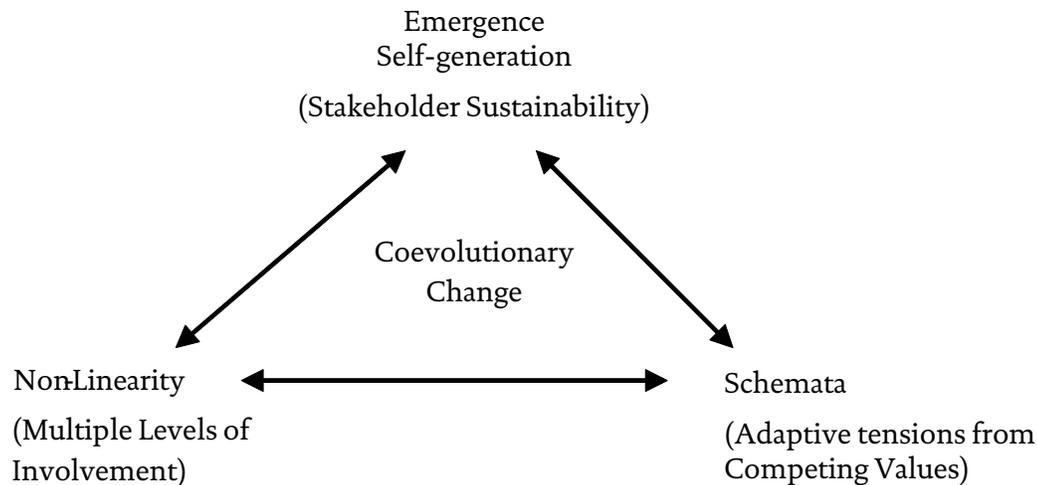
## Conclusions

When we first made the connection between the concepts of social entrepreneurship and complex adaptive systems we were very skeptical concerning their relative usefulness to each other. Most of this was due to the level of analysis problem. The social entrepreneur literature appeared to focus on the individual, much like the economic entrepreneur in the business world. However, as we applied complex adaptive systems concepts to the study of social entrepreneurship we concluded that three critical characteristics of nonlinearity, self-generation or emergent capacity, and schemata (schema) did have value in understanding the concept more in the “community-based enterprise” sense. As we developed our premises, we found that these three characteristics and their mutual coevolution explain (not justify) the social values nature of human interactions and unanticipated changes that occur while striving for social solutions. Figure 1 illustrates the interconnected nature of the characteristics and their relationship to the pragmatic considerations of the social entrepreneurship (multiple stakeholders, sustainability, and adaptive tensions from competing schemata).

We have argued in this paper that complex adaptive systems theory provides an integrating theoretical perspective that allows the introduction of a more dynamic interaction framework and draws attention to the role of cultural values in social entrepreneurship systems.

*People’s ability to deliberate on the past and future, combined with the capacity to form a sense of self and social identity, enables them to select and shape the environments they encounter, develop skills to meet future challenges, pursue personal aims, and thereby function as causal agents* (Cervone, Artistic & Berry, 2006: 170).

This approach may be counter to present considerations that focus on the individual level of analysis. Although one can make an argument for the social entrepreneur acting in a complex environment as a trigger, it is more feasible to consider the process as complex and a result of multiple levels of involvement



**Figure 1** *Interconnected Nature of Non-Linearity, Emergence and Schemata*

for sustainability of the social change process. Social problems are nested in complex ways within the social system. Therefore, invoking the concept of requisite variety (Ashby, 1956) we should expect the emergence of complex and nested solutions. Complex adaptive systems provide a lens to explore between and among these nested levels.

In the quest for social change, the state of social entrepreneurship provides the conditions for the interactions of not only “the entrepreneur”, but also the community to change social structures to provide for problem solving and new endeavors that create social values. Of course, these same dynamics can destroy social values or inhibit its realization through a collective silence (McKelvey, 2002; Morrison & Milliken, 2000). The use of complex adaptive systems as a lens of analysis draws our attention to the non-linear aspects of emergent solutions and their temporal and spatial limitations while working against reductive temptations that oversimplify social change. It also provides a platform for understanding the importance of the emergent mechanisms (Holland, 1998) as they pertain to power dominance, signification, and legitimation.

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