Sustainable Communities in Brazil and Japan: Building a Social Business Model for Sustainable Societies Part I

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Abstract

This is the first of a two-part article. The article argues that both environmental and social problems may be improved by rethinking how productive activities in society are carried out. It proposes an exploratory framework that allows productive actors in society to better adjust their operations to the collective well-being of the relevant community involved. It argues that productive actors following this framework will unambiguously contribute to moving society towards sustainability. Finally, using field data collected in selected communities in Brazil and Japan, the article will test the usefulness of the framework. This first part discusses the major challenges faced by society today concerning sustainability, and provides an initial explanation of the proposed framework.

Introduction

This paper has its origins in the discussions of the lessons extracted from social movements and community initiatives in Brazil and Japan. The initial objective was to write a paper focusing on rural communities and how they provided lessons for society to move towards sustainability by preserving nature and learning from it. As work progressed, it became clear that there was the lack of an appropriate framework to analyze the path towards sustainability by these communities, and work focused on deriving an appropriate framework to understand the process of change towards sustainability. The paper, therefore, proposes an initial framework, called a *social business model for sustainable societies* (SBMSS) as an instrument to help guide relevant actors towards sustainability. As the name hints, the SBMSS is a framework to help organize productive activities in a socially responsible way. It can be, therefore, applied to firms, communities, or social movements that are involved with productive activities. The framework is an attempt to derive a model that, while relying on the virtues of the market based productive system, adds elements that guarantee that the actions taken by these actors will have benefits that reach beyond the individual satisfaction of consumers.

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Section 1 provides a brief description of the environmental and social crises that represent the backdrop against which society currently lives. Section 2 discusses the problem with a focus on the search for possible solutions. Section 3 describes the general features of the "social business model for sustainable societies" proposed in this paper.

1. The Environmental and Social Crises

1.1. The Environmental Crisis

In the environmental front, the pursuit of a more sustainable world is facing tough challenges and difficult choices. During the negotiations leading to the Kyoto Protocol, developing countries rightly argued that they should not be burdened with goals to reduce greenhouse gas emissions. They argued that the reduction should be the responsibility of the advanced countries that have emitted the bulk of the existing greenhouse gases. The difficult international negotiations almost floundered, but a last minute decision by President Putin to support the 1997 Kyoto Protocol has led the Russian Parliament to approve the ratification of the Kyoto Protocol on October 22, 2004.[2] However, even if the Kyoto Protocol is implemented, it will only represent the attempt to reduce the emission of six greenhouse gases (CO_2, CH_4, N_2O, HFC, PFC, and SF_6) in 5% by 2008-2012 from the 1990 levels of participating countries. Still, among the participating countries, notable absences are the United States and Australia, two of the largest producers of greenhouse gases in the world. Reversing a growing trend in emissions would be a major achievement, but even such a valiant international effort may come up short of halting global warming. According to von Weizsacker and associates (1998: 228), "[t]he international climatological consensus seems to suggest that to stabilize our climate would require reductions of greenhouse gas emissions by some 60% worldwide."

With regard to the environmental consequences of the current economic system, there is still the added problem of the systematic destruction of the ecosystems and the heavy toll that current technologies of production impose on natural resources. In order to measure the impact of such activities, Mathis Wackernagel and William Rees created the concept of "ecological footprint," which measures the impact of an individual or community on the biological resources of Earth.[3] The *Ecological Footprint of Nations 2004*, published by Redefining Progress (Venetoulis, Chazan, and Gaudet 2004) notes that in the late 1970s humanity's collective footprint surpassed sustainability levels for the first time. Further, data from 2000 show that the collective footprint has further grown to surpass Earth's biological capacity in 20%. In a path breaking study published in Nature on December 2, 2004, Stott, Stone and Allen concluded that "it seems likely that past human influence has more than doubled the risk of European mean summer temperatures as hot as 2003, and with

2 United Nations Framework Convention on Climate Change - Secretariat, Press Release, September 30, 2004. Retrieved on October 15, 2004 from http://unfccc.int/files/press/news_room/press_releases_and_advisories/application/pdf/pr040930.pdf. See also article entitled "UN Secretary-General Receives Russia's Kyoto Protocol Ratification" at http://unfccc.int/press/interviews_and_statements/items/3290.php.

the likelihood of such events projected to increase 100-fold over the next four decades, it is difficult to avoid conclusion that potentially dangerous anthropogenic interference in the climate system is already underway." (Stott, Stone and Allen 2004).

The industrial system of production, in addition to environmental pollution and global warming, brings another element of risk that is intrinsic to the way civilization chose to progress by replacing the natural processes by man-controlled artificial processes. James L. Watson mentioned in a recent interview how even 30 years ago the diversity of hogs in the pig farms of the United States was enormous. With such diversity, it was unconceivable to think that one breed could be wiped out by any disease. "Now you have factories essentially for the production of pork flesh. Companies provide everything from the semen to the final slaughtering. ... It is as close to cloning as is possible..." With such an extreme absence of diversity, pigs become highly susceptible to diseases. (Lumenello 2004: 3).

1.2. The Social Crisis

In the social front, the significant gap that persists between poor and rich in most countries are a sign that fundamentally different approaches need to be developed to enable a better world for all. The challenge is far from small an often cited indicator in recent years shows that "[a]t the turn of the millennium more than 1.2 billion people were struggling to survive on less than $1 a day." (UNDP 2003: 41). While this number may give some measure of the pressing needs faced by the poor, their plight is much more serious than this income earning capacity statistics alone can reflect. The poor are afflicted by diseases, humiliation, discrimination, violence, and lack of opportunity to a much higher degree than those better off.

The tension between poor and the rich is probably the most familiar to the reader because it is one of the main themes highlighted by the media on a daily basis. The news pieces suggest that these poorer people are dangerous, and that governments, or international organizations should do something about them. Due to the natural limitation resulting from the absence of the poor among media editors, the broadcasts are colored by the perception of those who belong to the wealthier segments of society. In spite of the significant level of professionalism of those working in this area, and the perceivable effort to produce news as objectively as possible, in wealthy countries like Japan,

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3 William Rees, from the University of British Columbia, and one of the co-creators of the concept defines ecological footprint as "... the corresponding area of productive land and aquatic ecosystems required to produce the resources used, and to assimilate the wastes produced, by a defined population at a specified material standard of living, wherever on Earth that land may be located." (Wackernagel and Rees 1996). Marty Kraft in "Is Your Neighborhood Sustainable?" provides additional information as follows: "[A]n ecological footprint includes the land used to supply all our energy needs, the land used by all the roads, buildings, parking lots, etc. that we depend on, the land used to grow our food, the forest land providing us with wood and paper and the land necessary to dispose of our waste." Retrieved on October 15, 2004 from http://www.allspecies.org/neigh/nbrfootp.htm

the underlying message is that the government should either clamp down on illegal immigrants, or strengthen the police, or improve the country's defense system. In such a context, the security industry booms with large sales of mobile alarms or GPS devices for young children, unbreakable door locks for residences, video security system for residences and apartment buildings, etc. Even in a place like Japan, considered extremely safe by any country's standards, the number of prisons has to be increased, and Tokyo will soon have a brand new prison even in the exclusive Harajuku district. In newly industrializing countries such as Brazil, but facing problems common to developing countries, the new market for security products is also booming. Product lines cover bulletproof cars—representing a fleet of about 15,000 cars in November 2002, and growing at an annual rate of 6,000[4] —cellular phone triggered remote car disabling systems—to disable cars remotely if they are stolen—and plans to move toward biometric bank identification systems.[5] While the largest losses to society come from the big thieves such as the former CEOs of Enron, Kenneth Lay and Jeffrey Skilling (Fusaro and Miller 2002: 115), to mention just a better known recent case, society tends to treat the small thieves much more harshly.

Moving from the urban setting to the rural one, the fertile stretches of land in the countryside of many countries—where the bounty of nature could provide for the poor—have been appropriated by large landowners, and large scale machinery-based and chemically intensive agricultural production have taken the land without providing jobs to the people. Actually, in many such places, small or subsistence farmers have been evicted from their ancestral land, partly lured by the attraction of cash and false promises that the city offered better opportunities, and partly threatened by various means to sell the land at cheap prices. In Brazil, due to many of the reasons listed above, "[a] bout 4.2 million people left the countryside between 1996 and 1999."(Branford and Rocha 2002: 184).

Simmering under the surface, the interests of entrepreneurs for appropriating additional extensions of land either for the production of currently high-priced soybeans for exports, or for securing profitable contracts for managed exploitation of the prime woods in the virgin forest, or to secure sources of fresh water for commercialization are some of the threats faced not only by the environment, but also the indigenous and traditional communities living in these areas. Governments of countries with large indigenous communities, such as Brazil, have demarcated huge areas for the aboriginal communities, but recent economic pressures are making many state governments to try to renegotiate terms with the aboriginal populations. In the Brazilian state of Roraima, which is poor but resource rich, the economic frontiers will probably be pushed into the aboriginal reservations further reducing the size of the demarcated aboriginal areas. (Baumer 2003).

4 Retrieved on November 25, 2004 from carsale.uol.com.br/parceiros/blindados/faq.shtml.
5 Retrieved on November 25, 2004 from www.jseg.net/notas77.htm.

The challenge faced by humanity is hard to fathom. There is the need for a huge effort at the global scale just for providing a decent and humane condition to those marginalized in the current world. It is also necessary to recover their self-esteem, reclaim their place as full members of civil society, and create a new system in which their knowledge and their traditional cultural assets can become an instrument for their equal participation in modern civilization.

Reclaiming back their righteous place in society will require bringing their income generating capacity to a minimally decent level. In a world economy of about 37 trillion dollars,[6] an equitable division of such wealth among the world population of 6 billion would result in about 6 thousand dollars per person. Due to a highly skewed distribution of income among the people in the world, any improvement to the lives of the poor would require either that the poor radically improve their income earning capacity relative to the rest of the population or that the way in which incomes are earned and distributed are changed radically.

Unfortunately, the main dominant model by which productive activities are organized today assumes a certain form of firm as its standard, without regard to its social consequences. This dominant model of the firm has an effect on humans similar to the more familiar effect that people experience when taking the driver's seat in a car. The car somehow has this power to transform otherwise gentle people into aggressive beings once they take the driver's seat. From this moment on, the driver sees cyclists, pedestrians, and other cars as either annoyances or disturbances on his/her way to reach the destination.

Similarly, while in private life people tend to treat friends with respect and are often generous to other people, in business life people adopt different values epitomized by the saying "business is business," where soft feelings should not affect a person's capacity to make the "right" decisions for the profitability and success of the firm.

At least, in the top business schools, such attitudes are not discouraged, and they may even reward the person if (or because) he/she clearly voices opinions devoid of concern to other human beings. For instance, during a case discussion at Harvard Business School, when asked what a company should do if it knew its product may harm or even kill someone using it, Jeffrey Skilling[7] replied that: "I'd keep making and selling the product. My job as a businessman is to be a profit center and to maximize return to the shareholders. It's the government's job to step in if a product is dangerous." Skilling went on to graduate as a Baker scholar, an honor reserved only to the top 5%

6 According to World Development Indicators database from the World Bank (as of September 2004), the World Gross Domestic Product in 2003 was US$ 36,356,240 million. Retrieved on November 15, 2004 from http://www.worldbank.org/data/quickreference/quickref.html

7 Jeffrey Skilling was the former CEO of ENRON, protagonist of the most spectacular bankruptcy in US history. See Fusaro and Miller for further details.

of students in each class at Harvard Business School.

Whatever the causes of such unencumbered selfishness, the above situations illustrate how little social concerns matter in the places where people earn their incomes. Some people, in spite of working as hard as anybody else, are unable to get a job and earn income. To compensate for such collateral effects of this dominant model, governments establish welfare systems, and wealthy philanthropists set up charitable foundations. While charitable acts are honorable acts, these philanthropists for the most part are accepting that the way business is currently done is just fine. However, the careful observer may see that "an edifice which produces beggars needs restructuring,"[8] and may agree that more inclusive ways by which people can earn income needs to be developed.

If social concerns do not become an objective to the firm equally important as profits, shrewdness and intellectual ability alone will only bring scandals such as the ENRON case, and sustainable society[9] will not stand even a remote chance of success. As the most dominant actors in the productive system, firms may also profit by examining how the new criteria of decision making and governance proposed in this framework may help them lead society and the world towards sustainability.

2. The Search for Solutions

Should society distribute to the poor all the property rights to the massive capital infrastructure available in the world, so that they can also earn larger incomes? Because the value of such assets depend heavily on the intellectual capital of the people working in the organization, such radical solutions are more likely to make the wealth disappear all together and leave everyone worse off.

On the other hand, to hope that the poor will by some magic—or through the totally mistaken notion that they just need to overcome their laziness—be able to improve their income earning capacity relative to the rest of the wealthier population is to expect the impossible. It is impossible because income-earning opportunities are highly correlated to educational levels and other characteristics that the poor do not possess, or have access. It is true that there will always be success stories of people who prevailed even though they did not have much education, or started from very poor childhoods. These, however, are exceptional cases and cannot be relied upon as a means for improving the lot of the average poor person.

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8 Martin Luther King's online speech on "Beyond Vietnam—A Time to Break Silence" (Riverside Church, New York City) on April 4, 1976 .

9 The term society in "sustainable society" means, for the purposes of this paper, any collective group of people acting together to achieve a common objective. As a result, depending on the context, it will refer to groups of people, communities, a firm, or larger groups.

As discussed before, any improvement to the lives of the poor would require either that the poor radically improve their income earning capacity relative to the rest of the population—which is an unlikely proposition—or that the way in which incomes are earned and distributed are changed radically.

This paper explores possibilities in this second realm, where society creates a new alternative and more cooperative way of earning incomes, a new way that produces less exclusion than the current economic system. Such new ways of earning income, shall depend not only on economic decisions—as mentioned by Schumacher (1989: 54) in his classic work more than 30 years ago—but also on meta-economic and metaphysical decisions. As we explore new possibilities for organizing the productive activities by including meta-economic standards, it is important to keep in mind that a more democratic governance of productive activities should be achieved without destroying the virtues of the decentralized market system that, albeit its well-known limitations, is far more efficient in organizing production and distribution than centralized bureaucratic schemes. Also, as discussed earlier, just achieving an environmentally benign productive sector is already a huge challenge, but the size of the challenge should not cloud one's view that society also needs to solve the pressing problem of ensuring a decent standard of living to all people on earth.

The paper shows that some social movements and community initiatives in Brazil and Japan represent a new way of earning income, where productive actors produce much more than consumer goods, such as environmental benefit, community revitalization, and other benefits to the public and society in general.

3. Proposing a Social Business Model for Sustainable Societies

When talking about a new way of organizing productive activities it is instructive to start out with a brief discussion of business models that are used by firms in general. The business model is the principal means by which firms earn profits and money. A schematic and brief idea of a business model can be obtained from Figure 1 below.

As discussion of the Social Business Model for Sustainable Societies (SBMSS) proposed in this paper proceeds, SBMSS will be explained in contrast to the typical business model. For a productive unit, adopting a SBMSS means that its productive activities are carried out in such a way that the increase in the production of goods occurs without the increase in the production of undesirable sub products such as pollution that lowers the quality of living for all members of a community or society. As a result, firms and other forms of output producing organizations that fully utilize this SBMSS would unambiguously contribute to the improvement of the sustainability of the whole world.

3.1. An Instrumental Definition of Sustainable Society

Although the word sustainability has been used loosely so far, this paper defines "sustainable society" to be a social unit that is effectively improving the environment and the quality of living for its members and the community. This is equivalent to saying in a somewhat more technical manner that "sustainable societies" are communities[10] in which human action enhances the availability of either private or public goods (See discussion in Box 1) without reducing the availability of the other. So, if you ask, "are specific productive activities from within or without this community contributing to build a sustainable society?" one may answer yes, only if such activities are increasing the level of either the private goods or the public goods in this community, without reducing the availability of the other.

Box .1—Public Goods

Public goods, from an economic point of view, are all goods that, "once produced no one can be excluded from benefiting from its availability." (Nicholson, 709). For obvious reasons, the more public goods (which by definition can be consumed for free) are available in a certain community, the better it is for the poorest member of this community. Some examples of public goods in a community would be pure air, pure water, fish from a clean river, shade from trees, native fruit trees, native plants, traditional knowledge, etc. Other public goods such as safety to walk around the city late at night, or honest retail transaction environment are rare in developing countries, but plentiful in few advanced countries such as Japan. Public bads, on the other hand, are everything that destroy public goods or diminish their availability.

Some additional examples of public goods are:

1. Healthy natural ecosystems—Characterized by the existence of ecosystems that can purify air, water, decompose wastes, and keep stable natural cycles amenable to human life on earth, free from any charge.

2. Public transportation routes—Characterized by free access to transportation such as roads and waterways.

3. Public health—Characterized by a network of services that ensures reduction of exposure to toxic or otherwise unknown harmful materials, treats basic known diseases, and prevents endemic or epidemic outbreaks from happening.

4. Knowledge and wisdom accumulated by past and present generations—Characterized by the accumulated scientific and non-scientific knowledge which the present generation can rely on.

5. Security—Characterized by being free from physical threats to the safety of the community and their people.

10 Refer to footnote 9 for usage of "society" in this text.

The choice of a definition that is different from the more conventional and perhaps established ones has an important meaning. The most widely disseminated definition of sustainability is based on the concept of intergenerational equity, meaning that people from this generation should not destroy the environment so that future generations can also enjoy the functions of healthy ecosystems. This definition, however, fails to address the issue of unfairness in the present generation, represented most strikingly by the tremendous gap between the poor and the rich. One may argue that there is already a major drive to help the poor, to eradicate extreme poverty and hunger, as set in the first of the Millennium Development Goals,[11] which is supported by the 189 countries that adopted the UN Millennium Declaration in September 2000. (United Nations 2000). Notwithstanding, the current life style geared to unbridled production and consumption does not take sufficiently into account major direct or indirect consequences such as environmental destruction and poverty, and does not lead to sustainable societies.

3.2. Bottom up: The Way to True Sustainability

There should be no need to add that the process of building a sustainable society requires a strong connection with the grassroots. As mentioned above, a sustainable society should have public goods, such as freedom to make decisions, to breathe air, and to drink clean water from the streams, widely available to the public. When productive activities are conducted with the participation of the humblest members of the community (however indirect may this participation be) their strong need to preserve public goods will be reflected in these productive activities, and a more viable condition for sustainability will be in place.

Remitting to Ivan Illich's profound wisdom about convivial tools,[12] the choice of this definition of sustainable society should not be an abstract concept that is hard to grasp, but it should be in the form of practical tools that "give each person who uses them the greatest opportunity to enrich the environment with the fruits of his or her vision." (Illich 1973: paragraph 98).

Now, the next step is to bring this still abstract notion of how to start moving towards sustainability to a palpable and more concrete level. With this purpose, this section provides a practical framework that has the ability to guide productive activities in ways that enhance the human aspects of those involved in such activities. If this can be done, and groups or organizations in society can do it in ways that are originated from the grassroots, the necessary conditions for a path to true sustainability would have been secured.

Actually, such a bottom up movement has already started in some areas, particularly in the

11 The eight millennium development goals are available online at http://www.un.org/millenniumgoals/

12 For Illich "convivial society would be the result of social arrangements that guarantee for each member the most ample and free access to the tools of the community and limit this freedom only in favor of another member's equal freedom." (Illich, 1973, paragraph 72).

Third sector. David Bornstein in *How to Change the World* lists a number of successful social initiatives of Ashoka[13] fellows that have spread around the world in recent years. Although Bornstein focuses on the entrepreneurial ability of these fellows, which is an important factor, his accounts show how these leaders focused on enhancing simultaneously the availability of public and private goods. Hopefully, the tool proposed here may develop into something that can help future "Ashoka fellows" in every corner of the world to start changing their societies into sustainable societies.

3.3. The SBMSS Model

As a first step in the process of proposing a new way of conducting the productive activities of a society we will discuss how firms—the most widely used form of organization for such activities - do this.

For a typical private company, the business model is a framework for making money (Afuah 2004: 2). It is also "[a] unique configuration of elements comprising the organization's goals, strategies, processes, technologies, and structure, conceived to create value for customers and thus compete successfully in a particular market." (Ehiraj, Guler, and Singh 2000: 2). Such desired outcomes of making money and profits for a private company can be achieved through the interaction of the following components: i) industry factors; ii) resources; iii) activities; iv) positions; and v) costs. (See Fig. 1).

The productive actor using a social business model for sustainable societies (SBMSS) will not only pursue profitability, but also avoidance of any increase in public bads, such as environmental pollution, or inhumane labor conditions.

Furthermore, through the new features incorporated in the SBMSS (See Fig. 2), firms, NGOs, social movements, and communities will be able to start shaping the future image of new path-breaking productive actors. For the firms, the earlier they decide to adopt this new model, the faster they will position themselves at the forefront of the more socially aware future consumer markets. Likewise, the social movements and communities, by adopting these modes of production, will be able to find a new insertion path to the mainstream of a wider society, which as of now still remains divided. This framework should become the basis for the movement of convergence between firms and social movements, where success and failure do not necessarily separate people into two radically different worlds. A world in which success breeds success and failure breeds failure. Instead, success and failure will be seen only as different stages of continuous cycles of successes and failures that steadily generate an upward or forward movement for all. If society can evolve such a new environment of shared values, then both success and failure will be seen as beneficial stages

13 Ashoka, short for *Ashoka: Innovators for the Public*, is a non-profit organization operating in forty-six countries and supporting 1,400 so-called social entrepreneurs. (Bornstein, 2004, 11).

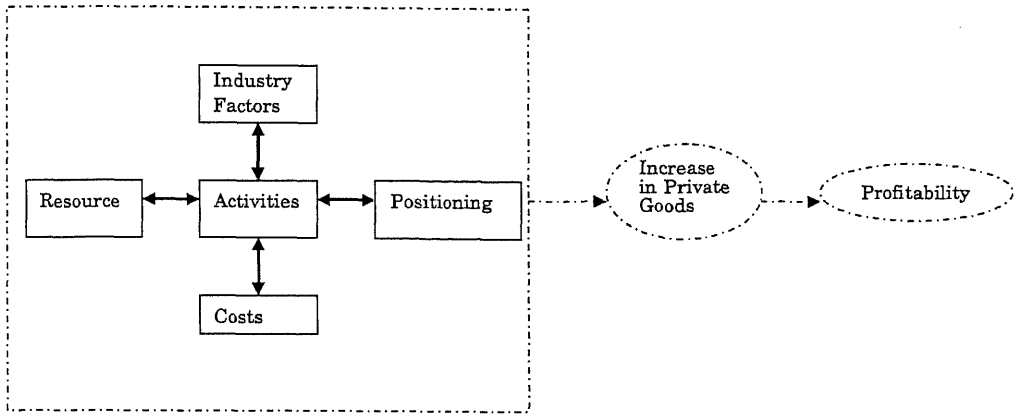

Figure 1: Components of a Business Model
Source: Modified from Afuah Figure 1.2, p.10.

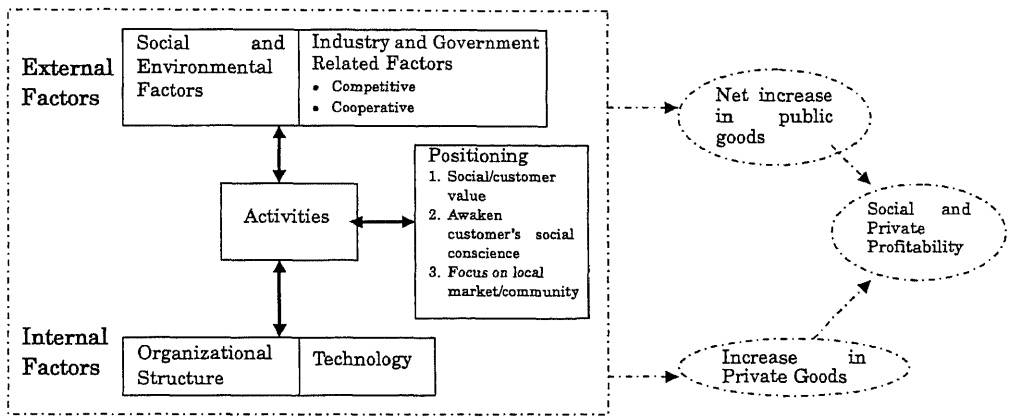

Figure 2: Components of an SBMSS

for firms and humans to learn and improve themselves. Success will be a just reward for creativity, diligence, ability to perceive economic, social and human needs, and plain good fortune. Failure will be a needed stage to maintain humility and to understand that failing is an unavoidable chapter in life. Furthermore, as the cycles repeat, and success and failure become part of collective values, participants in this collective will become more compassionate as they see success through the lenses of failure, and failure through the lenses of success.

The paper will now discuss the initial outline of an instrument that would help create a hybrid entity able to fulfill simultaneously social and market functions in a sustainable way. The relevant components of such an SBMSS are four: activities, positioning, external factors, and internal factors. These four components interact with each other to produce private and public goods, and through them bring a new form of profitability to the firm: social and private profitability. That is to say that

it is a profitability that benefits private and public stakeholders of the firm.[14] The three components around activities are the major factors determining how the firm acts (activities).

The first of these are the external factors represented in Figure 2 as social, environmental, and industry and government related factors. The second component is the internal factors[15], and it is comprised of two elements that are central to enable typical Business Models to transition to an SBMSS: technology and the organizational structure of the firm.[16] The third component is the positioning of the product in the market in a more socially relevant way.

3.3.1. Factors External to The Firm: Social, Environmental and Industry and Government Related Factors

As it can be seen in Figure 2, an SBMSS shall take into account social and environmental factors as much as industry and government related factors. An SBMSS shall strive to understand what aspects specific to social, environmental and industry "sectors" affect the profitability of the firm. How are the social parameters of the local community affected by the operations of the firm? What different strategies are available due to the characteristics of the specific community that they interact with, the natural environment that they access or use, and the industrial sector in which they are inserted? What is the speed of technological changes in the industry? What is the speed of change of values or customs in the community? How does the firm affect the local culture and values? How does the firm affect the natural environment? What is the level of social and cultural diversity in the community?

These are some of the factors that should be taken into account when defining what types of actions the firm will take, and how these actions will be carried out.

3.3.2. Factors Internal to the Firm

A profitable business model is one that can successfully connect activities to produce value to customers. Such a sequence of activities known as *business system* can be divided into three groups according to the interdependence of their activities, which varies between industries and firms. They are called value chain, value network, and value shop. (Afuah 2004: 84-87).

A value chain is generally applied to manufacturing activities where each link in the chain add value to the product, they have a sequential dependence, and the more downstream the chain is located, more value has been added to the product. In a value network the value is added by

14 In order to avoid the cumbersome way of using terms such as "hybrid entity" or the more general "productive actors," the term "firm" will be utilized henceforth in this session to mean all productive actors.

15 Note that Afuah in Figure 1 does not make a distinction of whether these are internal or external factors. The distinction has been added by the author.

16 Afuah also discusses these two elements, but from a different perspective and approach.

mediating between parties, by bringing them together to fulfill their needs. In a value shop, value is added by identifying the needs of the person and providing one of the several services available in the shop. A typical example is a hospital, where patients do not necessarily know what they need, except that they feel ill. The patient will go through several stations being examined, diagnosed, performing clinical tests, and being treated if necessary. Therefore, depending on the sector of activity being analyzed, recognizing which kind of value system the firm should adopt will improve their ability to organize their activities in an effective manner.

A typical firm is interested in maximizing the value of its product to the customer; this involves, among other things, the choice of organizational structure and the choice of technology to implement the business systems. It is important to note that this paper has chosen these two components among many others that are discussed in a typical business model, because these are the elements that require the largest changes for a firm transitioning from a typical business model to an SBMSS.

On the surface, various organizational structures can be adopted, such as the functional structure, the project structure, the matrix structure, and the network structure. (Afuah 2004: 130-9). Each of these structures has advantages and disadvantages depending on the "rate of change of technology ..., the duration of the project, and the amount of interrelatedness of the different components ... of the product being developed..." (Afuah 2004: 137). Deep down, and closer to the core, organizational structures are affected by the principles, values and beliefs held by its members. Table 1, in the lower left cell, shows which kinds of values and managerial principles are important in an SBMSS firm.

Often, costs are very much related to the technological options elected by the firm. In a very simplistic way, labor saving technology can save costs, make quality more predictable, and improve efficiency. An SBMSS firm would carefully analyze the impact of the technological choices available, analyze how it affects its human resources, and make choices that would balance the needed capacity to produce quality outputs with the need to preserve the role of every willing soul within the organization. An SBMSS firm would not necessarily become a place in which people can never be dismissed. Such a state would produce an undesirable disincentive to perform, and would not provide the opportunity of learning the lessons that only failure can teach. An SBMSS firm needs to ensure that there is a network with other SBMSS firms that will allow dropouts in one place to find useful work opportunities in other SBMSS firms. The network of SBMSS firms would work together to provide new and different opportunities to those who for some reason could not find a place in other SBMSS firms. This does not mean that the firm would take over the redistributional function of governments, but rather that firms would not bail themselves out from phenomena that arise as a direct consequence of business activities in general.

With specific regard to technology, the role of the productive actor is to understand how much a specific technology empowers human beings involved in the local community. What is the purpose

Table 1 Comparison Between SBMSS and BM: Technology and Organizational Structure.

	SBMSS	Business Model
Technology	• technology that regenerates the environment	• technology that best controls desired features of output
	• technology that enhances human contribution to output, rather than replacing it • technology that "maximizes" employment • technology that serves as a tool for conviviality	• technology that "maximizes" profit
	• non-proprietary technology, and dissemination is encouraged • traditional knowledge is shared	• proprietary technology that cannot be copied by competitors
	• technology that makes local production feasible	• production of certain components outsourced
Organizational Structure	• Takes different forms depending on the local resources available.	• Take different forms depending on the rate of change of technology and project duration: functional structure, matrix organization or project structure.
	• Non-hierarchical and mostly functional	• Hierarchical
	• Network of partners with different functions • Everyone participates in executive activities for learning, and the wisest are placed at the top • Structure reflects the purpose of providing learning opportunities for all members of the community	• The best performers at the top
	• Structure requires and enables bottom up flow of information for decision-making.	• Generally top-down flow of information and decision-making
	• Members have self-generated motivation due to shared sense of mission	• Motivational tools (company retreats, "coaching," etc.) have to be used for keeping morale high
	• Balanced gender relationship	• Male dominated in most sectors
	• Listens to clients and creates partnership to better fulfill social needs of the local community	• Listen to clients, but only to those who have purchasing power.

of developing a new technology? It is often discussed with some truth that good or bad outcomes from a certain technology depend a great deal on the user. I.e., if the user has bad intentions, the outcomes will be bad, and if the user has good intentions the outcome will be good. While, this is true, if technology is developed jointly with its users, and technological devices can be used to reduce the possibilities of bad use, it could provide a new beginning for a more beneficial technological development. As Altieri (2001: 4) shows, many instances of technological innovations in agriculture have had the objective of maximizing profits rather than increasing productivity.

Monsanto, for instance, developed a genetically modified soybean resistant to its own Roundup herbicide. This makes farmers to become dependent on Roundup, consequently allowing Monsanto to expand the market-share of this product. Monsanto also developed the so-called Bt crops, which produce their own insecticide. This invention damages farmers as it replaces a natural pest management product—the Bt-based microbial insecticide—and makes them more dependent on this proprietary product. Mittal and Rosset (2003: 173-4) describe how Monsanto sparked a series of protests in India in 1998 with the Terminator Technology developed by its subsidiary Delta & Pine Land Co. and the US Department of Agriculture[17]. This technology "permits its owners and licensees to create sterile seed by cleverly and selectively programming a plant's DNA to kill its own embryos." (Shiva 2001: 81). Such a technology challenges an essential feature of nature's gift, and the proliferation of such technologies may threaten the existence of human beings on earth. What is the purpose of inserting in nature processes that block natural cycles beneficial to all human beings? While this paper has no intention to single out Monsanto, the company has become so notorious for its actions that an additional example might be warranted.

In 1983 Monsanto bought the rights to commercialize Posilac from Genentec (Eaton 2004: 70).[18] Posilac is a genetically modified bovine growth hormone that, according to tests, gave dairy cows injected with it a twenty percent increase in milk production. American consumers wanted labeling of the product, but Monsanto, claiming that it would give the false impression that the product was not as good as milk produced by non-Posilac treated cows, implemented a multi-year marketing campaign, hired two large law firms to monitor "misleading" labels by distributors, sued distributors, offered US$150 vouchers for farmers to consult veterinarians for better understanding proper use of Posilac, and offered US$100 to farmers introducing other farmers to use Posilac. Some farmers wondered why there was the need to produce twenty percent more milk if there was no shortage of milk in the market. (Eaton 2004: 73).

When actors like Monsanto choose which kind of technology they want to develop, the options do not simply come from neutral scientific pursuit. There are several options, some allowing better ways to appropriate the returns through patenting, some building on the traditional skills and life style of peasants, some much less destructive of the biodiversity, some that allows the recovery of the soil's fertility, some that increase the risk to consumers, or to life on earth in general, and so on. The examples above show technologies that are not contributing to the public, but clearly reducing or jeopardizing the public welfare. In Part 2, this paper shows that there are other technological choices that improve the fertility of the soil, that benefit the public welfare, that work with and benefit the biodiversity, reduce the risks to consumers, and revitalize the community.

17 See also Shiva 2001: 81.

18 Information described in this paragraph is taken from Eaton 2004: 70-83.

The data from field studies in Brazil and Japan show that a different and better world is possible, and suggests that the transition from typical business models to SBMSSs has the potential to positively impact the world.

3.3.3. Positioning

When positioning itself for achieving the highest value to the customer or clients, an SBMSS will see the surrounding geographic area, the local community as an important market. This contrasts with a regular business model that would be indifferent between local or the export market, choosing the alternative that brings higher returns in the foreseeable planning horizon. An SBMSS would give priority to the local market because this choice has positive externalities such as saving fuel and reducing environmental pollution, or contributing to the revitalization of the local community by providing more work for local businesses.

Positioning for an SBMSS also means identifying people (customers) who can perceive the value of the product and pay for it. Actually, firms adopting an SBMSS will have to be active in the process of "educating" the consumers about the social (and environmental) relevance of their products. While the typical firm (particularly corporations) today is focused on marketing to make consumers buy their products, and the typical social movement (and activists) is focused on highlighting the wrongs (harm to the public welfare) committed by the corporations, the new SBMSS firm will attempt to incorporate these two facets and become a hybrid of the positive qualities of the two. The SBMSS firm will be a firm producing products that contribute to the public good (or at least does not harm the public good), while simultaneously working to improve consumer awareness by "educating" them about the benefits the products bring to society in the form of a healthier environment, increased biodiversity, inclusive labor arrangements, safer technology choices, and the like.

How to assure that such conscientious marketing would be different from the superficial "politically correct" advertising by firms claiming to be "socially responsible corporations" is a question that is not amenable to easy answers. Hopefully, however, as the truly socially responsible SBMSS firms set a new standard of reporting and disclosure and the awareness of consumers concomitantly rises, capable managers and stakeholders of "mainstream" firms will see the need as well as the advantages of adhering to the new standards and will follow suit.

3.4. The Major Challenge for an SBMSS

When trying to move towards sustainability, one of the major challenges for an SBMSS firm is how to avoid being the only one to bear the higher costs of operating more responsibly, by producing with less pollution, by providing better conditions for its personnel, and by making technological and organizational choices that further conviviality? If the firm is the only one bearing higher costs, no matter how admirable the firm is, it may soon fail.

Regulatory action by the government tightening up environmental standards, for instance, can create a level playing field for well-intentioned firms to act, without running the risk of bearing higher costs than the competition.

However, even where there is no proper regulation, a company guided by an SBMSS should invest in social mobilizations, network building, and events that can raise the level of awareness of society and attract customers who will actually become partners through shared value or through the discovery of an ethical reason to engage in a cause and support the firm. Therefore, a core group of customers of sustainable firms will be people who find a shared meaning and enter into a symbiotic relation with the sustainable firm. A viable SBMSS will have to have the ability to convince customers that, when all things are considered, the SBMSS produced good is a superior choice to customers and society.

If this SBMSS can serve as a gentle push to the large wave taking shape in the non-profit, non-governmental (Third) sector,[19] the days in which a new form of socially responsible firms will become the norm may not be so far away into the future.

In Part 2 or this article, we will apply the framework to the communities from Brazil and Japan, and verify the extent of its organizing power.

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19 For instance, Bornstein (5) cites that "[i]n New York City, during the 1990s, while overall employment grew by only 4 percent, employment in the citizen sector grew by 25 percent." He also mentions that "a Johns Hopkins University study of eight developed countries found that, between 1990 and 1995, employment in this sector grew two a d half times faster than for the overall economy."

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