Sustainable enterprises: Addressing management challenges in the 21st Century

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ABSTRACT

Our world in the 21st Century is one of a "crisis society". That is, we have reached a state where most of our major systems – economic, environmental, social – in are crisis and in need of restructuring. We can see this play out in the global financial, climate, social and identity crises we face. The underlying causes of these crises are our current systems of production and consumption. We suggest the solution lies in moving beyond addressing the crises individually and symptomatically towards developing sustainable enterprises, sustainable communities and sustainable lifestyles. From these perspectives, we can begin understand better the interrelationships creating this crisis society and more holistically address and repair the damage we done to the Earth and ourselves. We conclude by identifying areas of future research needed to facilitate this movement towards a sustainable society.

Key words: crisis, sustainability, sustainable enterprise, community, climate change

"There are many things we do not know about the future. But one thing we do know is that business as usual will not continue for much longer. Massive change is inevitable. Will the change come because we move quickly to restructure the economy or because we fail to act and civilization begins to unravel?" (Brown, 2008: 265)

Lester Brown's point that the time for "business as usual" is over comes at a very appropriate time. As we embark on the 21st century, the world faces challenges that are truly epic in size and scope. Business managers and management educators need to understand what is so different about the coming century from the previous one. Why is business as usual not adequate? Why are massive changes inevitable? Is the choice really between restructuring the economy and societal unraveling?

One way of examining business challenges of the 21st century is to understand the socio-ecological context in which business enterprise operate. By looking at the big picture of how the world is shaping up around us, we can identify many issues with which businesses need to be concerned. In this paper, we approach this task by focusing on the many crises facing the world. These crises in the economic, social, political and ecological spheres are persistent, repetitive, and ubiquitous. We suggest we are living in a "crisis society" in which most major global systems are in crisis and in need of restructuring. These crisis conditions are rooted in our current systems of production, consumption, and wealth creation. Crises are an unintended side effect of these systems. As we discuss below, our crisis society manifests itself through global environmental, financial, social, and identity crises facing our world today.

Yet, when addressing these crises we find national and international governments are incapable of resolving them alone. Economically, most governments at national, state and local levels run on deficit financing. They lack the resources needed to cover the costs of services expected by the public. Many of these services involve dealing with "externalities" of production. That is the negative environmental and social impacts that accompany the industrial production of goods and services. These include but are not limited to pollution, waste, unemployment, or harm from product usage.

Deficit financing is also requiring governments to cut back on social services involving health care, education, defense security, social security, etc. Politically, liberal democracies in Western industrial nations seem to be stuck in inter-party gridlock with conservatives and liberals increasingly at loggerheads over every major policy issue. There is rarely consensus over any major concerns, which simultaneously even the processes and mechanisms for building consensus seem to be eroding. This leaves countries largely incapable of making necessary dramatic changes for the future. This loss of governmental political power coincides with the rise of political power among global Multinational Enterprises. The outcome is that governments are no likely longer the most powerful institutions in the world. Through direct lobbying, industry groups, campaign contributions, personal favors, etc., businesses have often shown themselves to be both more powerful and more astute at wielding political power than governments. We can infer this in part from the United Nations' various calls over the past few decades for cross-sectoral collaboration and business involvement in addressing environmental issues (e.g., 1972 Stockholm Conference on the Human Environment; 1992 Rio Summit on Environment and Development). More explicitly, we can see this in the primacy of business interests in recent national and international attempts at reform including current US healthcare reform efforts and preparations for the UN's 2009 Copenhagen Conference on Climate Change. In short, governments alone lack the knowledge, political will, or resources needed to bring about necessary regulatory and structural changes to address our crisis society (Brown, 2008; Stern, 2006).

Existing management approaches have not alleviated these crises, rather they have likely exacerbated them. Managers often appreciate neither the scope and scale of these crises nor their own impact on promulgating them. Some are simply ignorant, not having read the emerging science of climate change, ecological degradation, and social and economic decline. Most likely know something of these concerns yet simply lack to time in their hyper-busy schedules to keep up to date and address these issues strategically (Mintzberg, 1975). Those who do take the time to learn of emerging social and

ecological problems are often not compelled to act given the uncertainty of how to address such issues through corporate action, ideological convictions impeding meaningful action, or simply organizational inertia.

More insidiously, traditionally uni-dimensional profit-driven management approaches reward narrow sets of behaviors and perspectives. This orientation becomes more corrosive when individual managers are more motivated by personal gain and profit than organizational and community interests - as evidenced in the mortgage finance and investment banking sectors during the global financial crisis. Some progressive companies have taken a more enlightened approach pursuing "stakeholder goals", though even then the primacy of corporate profitability often remains unquestioned. Truly integrative corporate social responsibility often plays only a secondary role here. Such internal organizational structures and reward systems encourage maximizing short-term profit over long-term health of either the organization or its broader stakeholders in a number of ways. Lucent's total fixation on quarterly revenue targets eventually brought itself down and also much of the telecom industry (Burrows, 2003; Endlich, 2004). Enron, Anderson, and WorldCom showed outright malfeasance and fraud by taking such profit obsessions too far (Eichenwald, 2005; Jeter, 2004; McLean & Elkind, 2004). General Electric's 30-year battle to avoid cleaning up pollutants it dumped into the Hudson River (NRDC, 2007) shows an aggressive fight over having to re-internalize previously externalized environmental and social costs, rather than addressing these broader issues head on.

Confounding these points is the perspective of most managers that the natural environment is just another set of "resources" or "assets" that can be bought and sold as commodities. Such commoditization places no value on the holistic integrity of natural ecosystems themselves. Rather, individual resources are chopped up, used, and discarded in service to organizational goals. Climate science research, though, shows natural ecosystems as highly interdependent complex and subtle systems, with only finite capacity to regenerate naturally. Once exploited beyond their natural carrying

capacities, natural ecosystems will collapse. Examples of commercial overfishing provide just one example of natural ecosystems collapsing (Economist, 2009).

Returning to Brown's opening comment, this is the "business as usual" attitude which is out-dated. The managerial approaches valorizing short-term profits over longer-term, broader, and more integrated social, ecological, and economic performance measures encourages individual greed over community welfare, commoditizes nature, and ignores the multiple interdependencies connecting these issues. If we are to create the necessary and meaningful changes needed for our collective future we need to change this perspective and, more fundamentally, we need to develop new models for business success.

We propose that to tackle this crisis society, we need to move beyond addressing the 'symptoms' of any individual crisis (fiscal, environmental, social) and towards addressing their underlying and interrelated root causes. We need to develop sustainable enterprises that seek long-term prosperity for their investors *plus* other stakeholders, including the natural environment. Such organizations will create economically viable strategies which successfully balance short-term profits with long-term sustainability of the organization, its communities, and our global eco-system. These organizations will have socially and ecologically sensitive visions, inputs, throughput systems, and outputs. In visioning a sustainable enterprise, we must also rethink our current ideas of personal development, and individual identity creation; and encourage the building and rebuilding of the interconnections of individuals with themselves, their families, local communities, and to global society.

This paper continues as follows. First, we describe the four key crises – environmental, societal, economic, and personal – which together create our crisis society. Second, we discuss the necessity of adapting to the impacts of these crises while at the same time seeking to build new social systems to alleviate some aspects of our crisis society. Third, we propose the sustainable enterprise as an ideal-type organization, one involving a more robust approach to conceiving of and successfully managing for the

future. We then conclude with some research directions around how to better understand and support sustainable action and develop sustainable enterprises.

THE EMERGING CRISIS SOCIETY

The Earth – this third rock from the sun we call home with its natural ecosystems and resources – and our world – the sum total of our individual societies and the global society in which they exist – are both in crisis. This situation is not new. It has been brewing over the past century of industrial development. The many early warning signs (e.g., smaller, more localized economic, political and social crises) have been interpreted as local anomalies or minor disasters (Hoffman & Ocasio, 2001). In our view these signals are symbolic of more global and systemic crisis problems (Shrivastava, 1996). The effect is the Earth and our world are today in a systemic crisis. We are living in an emerging crisis society. Crisis here means a condition where systems that produce value breakdown in structure and process; and are accompanied by large damages and harm to stakeholders. It is a time for making critical strategic decisions and for restructuring. Below we touch on four major crises - environmental, economic, societal, and individual - currently manifest in our crisis society.

Before doing so, we note much work has been done discussing the need for sustainable development to balance environmental, economic, and societal needs (Adams, 2006; Brown, 2008; Marcus & Fremeth, 2009; World Commission on Environment and Development, 1987). While we agree with this work, that each of these areas are in crisis suggests at least two points. First, that each of these pillars of sustainable development are in crisis shows how far removed actual business practices are from 'sustainable' business practices – or what is necessary for our long-term societal health. Second, the traditional western paradigm of industrialization, competitive capitalism, cost externalization, etc. has created and exacerbated our current economic, environmental, and societal crises. As well, they have impacted and uprooted the individuals which make up our societies. This individual perspective,

what we propose is an individual / development crisis of its own, also needs to be explored and understood as we continue to develop ideas and practices around sustainability.

Environmental Crisis

Resource Crisis. Though some may dicker over the minutiae of particular calculations or findings, the science is clear and overwhelming – we are using our Earth's renewable resources faster than the Earth can replenish them; and we have almost exhausted many of our Earth's non-renewable resources. Increased environmental regulation and enforcement has slowed the pace of our renewable resource exploitations. Yet many renewable resources - fisheries, forests, potable water, arable land, etc. - are nearly exhausted in many parts of the world. The continued loss of arable land (land which can be productively used for agriculture) combined with current population projections, suggests per capita arable land will fall from 0.23 hectares in 1950 to 0.07 hectares in 2050 (Brown, 2006). In other words, between 1950 and 2050, the average amount of land available to support the food needs of a human being will shrink from around 2/5's of a soccer field to an area the size of the penalty box.

The situation for key non-renewable resources is similarly bleak. As Brown stated in summarizing work of the U.S. Geological Survey, "Assuming an annual two percent growth in extraction… current economically recoverable reserves show the world has 18 years of reserves remaining for lead, 20 years for tin, 25 years for copper, 64 years for iron ore, and 69 years for bauxite" (2006: 109). Oil, a uniquely critical resource for our everyday industrial-urbanized lives, is no exception. While the politics of oil is a complex topic of its own, it is clear that we are exhausting economically feasible oil reserves globally; and that it is only through government subsidization that many of us are not more aware of our current overuse of oil in everyday life (Brown, 2008; ICTA, 1998).

Climate Crisis. Accumulation of carbon in earth's atmosphere has grown rapidly since the beginning of the industrial revolution. Currently, the level of carbon in the Earth's atmosphere is 389

parts per million (ppm) and rising. Climate science projections suggest that continuing on our current path of industrial development will increase carbon levels to 475 - 500 ppm over the next century (IPCC, 2007). Climate research suggests atmospheric carbon levels in excess of 400 ppm are highly risky for stability of the planet's climate. Carbon in the atmosphere acts as a heat trap and is the cause of global warming. This, in turn leads to melting of arctic ice, rising of sea levels, and biological and agricultural dislocations. As Lord Stern summarized in his ubiquitous 'Stern Report', "the scientific evidence is now overwhelming: climate change presents very serious global risks, and it demands an urgent global response" (2006: i). Among other points, Stern concluded the Earth's average global temperature will likely rise two to three degrees Centigrade by mid-century. Yet, this seemingly simple global measure does not manifest itself uniformly or calmly. Rather, it comes in the form of traumatic localized and regional weather and climate upheavals. We have already seen many such changes - desertification of formerly arable land; severe and longstanding droughts; frequent and severe flooding; increasingly intense coastal storms – and can expect to see more frequent and intense examples of such localized upheavals in the future.

Societal Crisis

As of 2006, global population was estimated at 6.7 billion – or 6,700 million – and projected to rise to over nine (9) billion by mid-century (Brown, 2006). This growth is not uniformly distributed. In recent decades, population growth in poor and developing economies has outpaced industrialized economies – which, in some countries, have even stagnated. By 2025, the UN's World Commission on Environment and Development estimates global population to be 1.4 billion people in industrialized economies and 6.8 billion in developing ones (1987). However, individuals in industrialized societies continue to live longer and healthier lives than those in the poorest societies. Currently, two-thirds of the world live in poverty, with 20% living in deep poverty (defined as $1 per day or less). The poorest

10% of the global population consume 2.5% of annual global GDP, while the richest 10% consume 29.8%. In the USA and 8 largest industrial economies 10% of the population holds 50% to 71% of wealth. This widening schism between the poorest and richest populations can be seen in differences in life expectancy, educational levels, rate and treatment of infectious disease (e.g., malaria, tuberculosis, AIDS), and nutrition (c.f., Brown, 2008; Stern, 2006; World Commission on Environment and Development, 1987 for more detail). These disparities are increasingly seen as socially unjust and are becoming a source of social and political unrest. The extremely poor are susceptible to ideological manipulation around these disparities and being inducted into violent means for capturing basic resources. Political upheavals, revolutions and terrorism can emerge out of these unjust and extreme conditions of poverty as ideologues are able recruit the poor to their causes. We have seen elements of this in the Maoist guerillas' take-over in Nepal, Naxalite movements in Western India, rise of Al-Qaeda fundamentalism in the Middle East and Southeast Asia (Pape, 2006).

Economic Crisis

As of 2009, the collapse of the real estate bubble in the US, UK, and elsewhere has led us into arguably most serious global economic crisis since the Great Depression. The US government initiated several costly bailout and stimulus programs attempting to mitigate the worst impacts of this collapse (e.g., the $700 billion Trouble Asset Relief Program (TARP); $94 billion in direct taxpayer stimulus checks; 'Clash for Clunkers'; homebuyer tax credits). Finance ministers and central bankers in many others countries have likewise initiated stimulus programs attempting to mitigate the worst of the economic crisis in their respective countries. To understand this situation, we need to know something of the underlying actions and influences leading to the crisis – namely over-leveraging in the banking industry and reduced regulatory oversight from government agencies. With these changes, lenders introduced new types of mortgage products where individuals – who traditionally required 20-30% down payments

for house purchases - could buy homes with little / no down payment. This left many new homeowners with little or no financial stake in their homes. Meanwhile, lenders aggregated and securitized these mortgages into new types of investments for sale. Thus, the lenders had no stake in these properties either. As well, decreased regulatory oversight allowed US banks to increase their leverage (a ratio of assets borrowed to assets owned) - from historical levels of 12:1 to over 30:1 (Sirota, 2009). The result was, as housing prices began falling in 2006, many owners found themselves with houses worth less than their mortgages and simply forfeited their homes to the banks. The banks meanwhile, having increased their leverage (or rather decreased the proportion of assets they actually owned) could not absorb the losses from these forfeited mortgages and properties. The result was the halting of the global credit market, severely hampering the ability of individual businesses and economies to function; hence the need for several governments to engage in economic stimulus programs.

Individual Crisis

With the above discussed population increases, we are becoming more crowded – both physically and psychically. Technological innovations allow us to travel and communicate more frequently with greater ease and to more diverse places than ever before (Friedman, 2008; Gergen, 1991). The resulting information bounty means access to a greater volume and diversity of information than ever before. Our world is figuratively shrinking or 'flattening' (Friedman, 2008). Paradoxically, for many, our increasingly information-based world has eroded more traditional forms of social support – family, church, community organizations, nearby family (Putnam, 2000). Traditional 'Western' economic development (e.g., mainstream capitalism) has exasperated these changes, further eroding traditional values and societal structures in which individuals live (Neef, 1992). With the increased mobility of the 'professional class' (one far reaching effect of Western economic development), individual identities become more fractured, multifaceted, and difficult to manage as individuals are stretched farther afield

in their personal and professional lives (Gergen, 1991; Kegan, 1994). Without these traditional values and social anchors mooring ones' values and norms, individuals are often left more overwhelmed and isolated than in previous generations (Gergen, 1991; Kegan, 1994; Putnam, 2000).

That said, many have argued that the benefits of economic development – rising standards of living, increased opportunity, poverty reduction, etc. - outweigh the social, environmental, and individual costs discussed here. As well, prior work in areas of micro-finance, social entrepreneurship, bottom of the pyramid, etc. make strong cases for ways to approach economic development which creates wealth by supporting economic self-sufficiency in ways which complement existing community structures and values. We find some hope in these approaches as we feel it a moral obligation to enhance individual and community-level economic self-sufficiency in these more integrative manners. At the same time, we are also weary of the potentially detrimental changing values and perspectives which may occur as a result of more traditional Western capitalism. While traditional management approaches focus on the supremacy of individual wealth creation over environmental, social, or individual concerns; research suggests that - after meeting basic food, shelter, and health needs – increased wealth does not translate to increased happiness or emotional well-being (Kahneman, Krueger, Schkade, Schwarz, & Stone, 2006; Lane, 2001). Even more concerning is related work showing that individuals with materialistic aspirations and values tend to be less satisfied with their lives (Nickerson, Schwarz, Diener, & Kahneman, 2003) and more prone to mental disorders (Cohen & Cohen, 1995) over time than those with non-materialistic values and aspirations for their lives.

ADAPTING TO A CRISIS SOCIETY

We are living in a ***crisis society***. That is, globally we face multiple interrelated types of crises in all spheres of life. Individual manifestations of these crises may be localized, but their impacts ripple at regional and global levels. More formally, we consider the crisis society we live in to be global, where

currently we are in a time and place where every major system is one-step away from crisis. Many of the Earth's natural resources are harvested at or beyond capacity. The disparities among the industrialized and developing economies are widening and increasingly contentious as developing countries demand change. While the phenomenon of families living 'paycheck to paycheck' is not new, this recession has shown that many businesses and even governments have also been operating in this short-sighted manner. As uncertainty mounts for individuals around their personal and professional lives and the future state of our world, they are increasing left to manage these stressors alone, often without the community and family support structures available to previous generations.

Theses crises are 'man-made'. Our reason for discussing them is simple: the traditional western paradigm of industrialization – competitive capitalism, resource exploitation, cost externalization, etc. - has created and exacerbated these crises and risks collapsing under our feet. Most existing organizations and institutions do not have the resilience or capacity for dealing with theses crises. They are surviving on their last innovation, rather than seeking their next one. Whenever that runs out, or becomes obsolete, they will be in crisis as well. As business scholars, we need to move beyond the traditional paradigm of western capitalism, become more than mere catalogers of business action. We need to become engaged in improving our global society through helping businesses understand, adapt and eventually prosper under the new resource-constrained, carbon-constrained world we have entered. Business, for its part, needs to acknowledge its responsibility in creating these crises. Then, it needs to get to work fixing them.

Part of 'stepping up' requires business adapt to a new paradigm of economic development that honestly addresses and internalizes the full costs of its impacts on the environment, including climate change. The global climate crisis is not simply an 'academic' concern for scientists – it is real and has already negatively affected the lives of millions globally. Current science suggests mitigation to avert climate change is no longer an option - we have waited too long. Future managers will likely not succeed

with uni-dimensional profit orientations which ignore the necessary full-cost accounting of human action. Businesses and their leaders need to see more clearly the relationship between their local actions and broader and more complex global context (Hoffman & Ocasio, 2001; Sharma, 2000; Shrivastava, 1995). As scholars, we also need to change our perceptions of business to be more attuned to, and more strategically engaged with, the changing world around us.

The bright side, for both managers and scholars, are the opportunities arising from crisis. While traditional models of economic development may no longer be viable for the future, new models are emerging. Recent work involving multi-sector partnerships between for-profit firms, NGO's, and government agencies (Austin, 2000; Steger, Ionescu-Somers, Salzmann, & Mansourian, 2009), hybrid organizations (Boyd, Henning, Reyna, Wang, & Welch, 2009), social enterprises (Borzaga & Defourny, 2001), etc., suggest just a few ways in which organizations are creating environmental and social, as well as economic benefit. Another, perhaps more clearly defined opportunity involves the emerging anticipated $500 billion USD annual market around climate adaptation. This will affect many, if not all, business sectors and offer great opportunity for those poised to take advantage of it (Stern, 2006).

VISIONING SUSTAINABLE ENTERPRISES

In 1996, I (the first author) concluded my book *Greening Business* with a discussion of an organizational ideal-type – BioCorp. I envisioned BioCorp as "an ecologically stable entity" which would "maintain the ecological balance within its bioregion…preserv[e] eco-resources and socioeconomic security… contribute to socially equitable improvements in the quality of life" (Shrivastava, 1996: 225-6). We propose the sustainable enterprise as an extension of BioCorp - one integrating the maturation of thought and research on sustainability in the intervening years. We define a *sustainable enterprise* as an organization able to account for and transcend the surface-level contradictions of reducing

environmental impact, creating social benefit, and competitively creating economic value. Whether technically for-profit, not-for-profit, or some other configuration, a sustainable enterprise embraces an integrative vision of its engagement with and impact on its surrounding societal and natural environments (Wirtenberg, Lipsky, & Russell, 2008). Such a perspective is uni-dimensionally profit-driven but takes the triple-bottom line approach of integrating economic, environmental, and social value into its measures of success (Elkington, 1999).

The oft-used phrase 'doing well, by doing good' encapsulates this key perspective of sustainable enterprise. Sustainable enterprises begin with a vision that goes beyond producing profits for investors to creating economic, social and cultural value for wider community of stakeholders. They do not treat inputs (energy, natural resources, people) as commodities to be bought, converted and used. Instead, they take a cradle-to-cradle view of resources and production (McDonough & Braungart, 2002). They seek to minimize the use of virgin resources, minimize their resource footprint and restore resource ecosystems to their natural regenerative capacities. They design products, operations and logistical systems to scale and efficiency most consistent with their ecological context (McDonough & Braungart, 2002). In this way, sustainable enterprises are eco-centric and maximise their ecological efficiency in all aspects of organizing.

Recent work on environmental management and corporate social responsibility show how this idea of sustainable enterprise is not only economically viable, it can be competitively superior to traditional business practices (King & Lenox, 2002; Sharma & Vredenburg, 1998; Waddock & Graves, 1997). The competitive advantages here accrue in planned and unplanned ways as firms engaging a broader sustainability perspective increase their ability to 'see' new ways to create new value through previously un-/ under- valued organizational practices or resources (Baker & Nelson, 2005; Paquin, 2008; Sharma & Vredenburg, 1998). However, we also believe meaningful change requires moving beyond the 'doing well by doing good' perspective. Below we use some recent examples of business

activities to articulate some of the ways sustainable enterprise can competitively differentiate itself from a more traditional business.

Full Accounting of Business Impacts

A sustainable enterprise should have a full and honest accounting of the impacts of its actions – economically, environmentally, and socially (Brown, 2008; Shrivastava, 1996). Over the past decade, increased interest in developing accounting-style metrics for non-financial business impacts has led to the development triple-bottom line accounting (Elkington, 1999), social and environmental accounting and reporting (Deegan, 2002; Hopwood, 2009), the Global Reporting Initiative, as well as several other approaches to capture these impacts. Various stakeholders – institutional investors, individual shareholders, insurers, NGO's, etc. – have led these efforts by demanding more non-financial information directly from firms, or indirectly through the development socially responsible investment funds and public firm rankings based on environmental and social performance (e.g., FT4Good Index). These demands have led to an increasing number of firms publishing environmental and social metrics. One clear signal of the increased attention paid to such metrics was the June 2009 launch of Deutsche Bank's carbon counter (Deutsche Bank, 2009). Placed near Penn Station in New York City, this counter displays cumulative global carbon emissions into the atmosphere.

Such activities are clear signs of progress in developing more robust accounting systems for business. Yet, at the same time, it is just a start. Unlike traditional financial measures, there are no GAAP-like standards for measuring and tracking environmental and social impacts. Despite the increasing number of 'CSR' and 'sustainability' reports coming from businesses the widely varied approaches – from detailed quantitative metrics to anecdotal cases to vague rhetoric – makes objective interpretation and analysis difficult. Such vagaries also provide ample cover for firms to engage in greenwashing, or decoupling their environmental and social rhetoric from their actions. One notable

example is British Petroleum (BP) whose 'Beyond Petroleum' tagline and strong pro-environment message helped it cultivate relatively positive reputation in recent years. However, a comparison of BP's 2005 CSR report with the firm actions as reported by news outlets shows a wide discrepancy between what the firm actually did and what it reported in its CSR report (Ruffing, 2007).

Second, and more important, is our systemic lack of an 'honest accounting' of firm impacts (Brown, 2008). That is we know of no firm that has yet created a full and complete accounting of the full costs – economic, environmental, social – its activities. Considering the 'full-cost' of oil is instructive here (ICTA, 1998). In 1998, the retail price of gasoline for the US consumer was roughly $1 USD per gallon. Yet, this retail price hid the myriad additional costs of securing, refining, providing, and using gasoline – including government subsidies to oil firms to extract and provide the product; military, diplomatic, and security costs of protecting US oil interests around the world; environmental, health, and societal costs through pollution, land degradation, auto infrastructures, lifestyle changes, etc. If these costs were transparently calculated and directly incorporated into the price of gasoline, retail gasoline in 1998 would have cost somewhere between $5.60 to $15.14 USD per gallon (ICTA, 1998). Yet even as of 2007, only in a handful of countries was the retail price for gasoline $5 USD per gallon or more; and US consumers paid on average only $3.10 per gallon (de Sousa, 2007).

Organizing for positive change

Entrepreneurship is a key aspect of capitalism, one involving the ability to create value through new opportunities others have not seen (Aldrich & Fiol, 1994; Baker & Nelson, 2005; Hughes, 1979). A sustainable enterprise should embrace an ethos of social and eco-entrepreneurship, seeking out new opportunities for creating economic value while simultaneously creating environmental and societal value. One way to approach this is for sustainable enterprises and their leaders to pursue investments in renewable energy, waste management, clean technology, eco design, and eco-niches in many

conventional industries. The can also embrace opportunities provided by constrained global resources and population growth. The "fortune at the bottom of the pyramid" (Prahalad, 2007) is spawning business opportunities to fulfill needs of historically underserved populations. There is also opportunity for value creation through personal development and / or social change; increasing living standards among the world's poorest without increasing environmental burdens; value creation which complements rather than competes with local communities and economies; etc.

Though not mutually exclusive, another approach would be to explore deeper level questions around organizing for the future. How do we design business to create long-term value in ways that restore the health of the earth and the ecosystem (McDonough, 1995)? How do we build it to simultaneously support itself, our ecological communities, and our employees (Shrivastava, 1996)? How can we engage in business competition in ways that improve our natural and societal ecosystems? How do we build business in ways that can create economic value and environmental value (Hawken, 1993)? How do we use business support the sustainability of our societies so that they may flourish, potentially forever (Ehrenfeld, 2008)?

Embracing these types of questions within an organization, would direct attention away from a more uni-dimensional short-term profit orientation to one focused on the long-term health of, and impact on, the communities and natural ecosystems with which the organization resides. This broader perspective is not just about finding ways to create 'green' value (Marcus & Fremeth, 2009; Siegel, 2009), though green value is clearly an aspect of this perspective. Rather, this is a broader view of sustainable value creation. Our view of sustainable value creation is one involving continual engagement with, and efforts to improve, an organization's ecosystem – which includes, but is not limited to its communities, employees, customers, other stakeholders, and the natural environment (Shrivastava, 1996; Torbert & Associates, 2004).

RESEARCH DIRECTIONS

Embracing sustainable enterprise as a future model of sustainable organizing and value creation suggests a number of interesting questions for future research and exploration. For simplicity, we close this piece exploring two areas of interest. First, how can we more fully account for and track the impact of firms' actions on societies, economies, natural ecosystems, and ourselves? Second, how might we organize sustainable enterprise for long-term health and success?

Accounting for the full impact of business activity

Many scholars cite innovation – creating value by integrating and recombining existing knowledge in novel ways to create value – as a key aspect of developing more sustainable practices (Hart, 1997; McDonough & Braungart, 2002; Prahalad, 2006). This perspective mirrors that of strategy and innovation scholars more broadly for developing competitive advantage (Hargadon & Sutton, 1997; Obstfeld, 2005; Porter & van der Linde, 1995). Building from here, the argument that firms can create lasting value through more strategic attention to their environmental and social impacts is also well-established (Berchicci & King, 2007; Porter & van der Linde, 1999; Sharma & Vredenburg, 1998; Shrivastava, 1996; Waddock & Graves, 1997). Despite this, businesses do not account for nor track the full impacts of their actions (Brown, 2008; Gore, 2006; Stern, 2006).

As discussed above, there are a number of avenues scholars and practitioners are pursuing to develop more robust measures of impact including – the social and environmental accounting discipline; increased CSR, environmental and social reporting among firms; developing reporting standards through the Global Reporting Initiative, etc. Each of these approaches is moving business towards a more robust triple bottom line approach of measuring firm performance on economic, environmental, and social measures (Elkington, 1999). Yet, such ideas are still little more than lip service in most businesses. Even

among leaders wishing to understand the true costs of their business, such information is difficult to come by.

Given some of the gaps in what information firms and investors use, how they use such information to guide their firms towards more positive impacts, and the relative incompleteness of the non-financial data currently collected, there are a number of interesting questions to consider. For one, how can we instigate firms to develop a level of standardization of metrics and measurements across environmental and societal levels similar to economic levels? While it may be too much to consider regulatory changes to existing GAAP standards, prior work on industry self-regulation and adoption of new standards and practices may lend some insight into how broad-based changes occur through industry (Guler, Guillen, & Macpherson, 2002; Howard-Grenville, 2002; King, Lenox, & Terlaak, 2005; Terlaak & King, 2006). With this, there is also the question of how firms and investors would use this additional data. While the above work on industry self-regulation primarily focuses on environmental practices, this work suggests that firms are more likely to engage in these activities when (a) external forces, such as industry associations or primary customers, demand it and / or (b) when firms are attempting to rebuild their reputations from previously detrimental actions.

This situation provides another conundrum in need of further exploration. As discussed above, one strand of research suggests that firms who strategically engage in environmentally and socially responsible actions can develop long-term competitive advantage over firms who do not. Another strand suggests firms engaging in overt actions here – e.g., adopting industry-level certifications, publishing social and environmental reports, etc. – are not necessarily developing increased environmental or social benefits and may simply be decoupling their sustainability rhetoric from their actions (e.g., greenwashing). This situation suggests that at least certain firms are actively acquiring and interrogating environmental and societal information to create value. Thus, future work here might invert the question of what should we hold firms accountable to (e.g., triple bottom line perspective);

and instead ask what types of information are most beneficial to firms seeking to develop competitively viable sustainable practices over time. How do leaders in these organizations and use and integrate the knowledge generated from such information into their decision-making, strategic planning, and daily operations in ways that create long-term value and positive environmental and societal impact?

Last, while environmental and climate change scientists have long stated businesses and consumers pay only a fraction of the full cost of their activities (Brown, 2008; Gore, 2006; Stern, 2006), most businesses have yet to fundamentally restructure their approaches or their strategies here. One likely reason for businesses not integrating more accurate environmental and societal costs is the structure of our international markets, which discounts the price of many production inputs through direct or indirect government subsidies, including never accounting for the full impact of extracting natural resources from their natural ecosystem in the first place. Yet, these costs are not unknowable. Research from disciplines such as materials engineering, environmental and physical sciences, sociology, etc. have provided much insight into the often externalized costs of business - those costs which business scholars and practitioners have so often systematically ignored. Given prior work suggesting that firms who strategically address environmental and societal issues can develop long-term competitive advantage over their peers, there are a number of questions to consider. Why are more firms not engaging in such action? How can firms re-organize /re-structure themselves to become more sustainably focused while also remaining economically competitive? How can firms more quickly move from managing pollution (e.g., meeting regulatory requirements) to becoming environmental and social stewards (Hart, 1997) – that is being on the leading edge of developing new organizational processes and practices which actually benefit and support environmental and societal restoration (Hawken, 1993)?

New ways of organizing

Embracing this additional level of information will likely require firms to go beyond questions of developing local opportunities and product extensions of existing products to fundamentally rethinking how they engage in their activities and with their customers, employees, and broader communities. This level of change likely requires firms to restructure themselves to address these issues more fully. Work on stakeholder management and engagement (Freeman, 1984; Hart & Sharma, 2004; Post, Preston, & Sachs, 2002; Sharma & Henriques, 2005) has long provided guidance on how firms can engage with their various stakeholders and communities to competitively improve their actions over time. More recently, positive organizational scholarship (Cameron, Dutton, & Quinn, 2003) has studied how organizations engage in organizational and community-level activities which positively support the organization, its employees and its community.

As primarily firm-centric perspectives, stakeholder management and positive organizational scholarship are not well suited to addressing many of the more complex and pressing issues facing many societies – e.g., community erosion, environmental degradation, poverty, health care, etc. Addressing issues of this complexity requires rethinking not just the organization but the limits and boundaries of organizations as individual entities within broader social and environmental contexts. For this, we need to explore more recent areas of research which focus more directly on the inter-organizational environments in which these issues might be more effectively addressed. Two interesting areas of research here include cross-sector partnerships and hybrid organizations. Cross-sector partnerships are partnerships between some combination of private, public / NGO, and governmental actors formed to explicitly address key social or environmental concerns which the individual actors could not successfully address on their own (Austin, 2000; Steger et al., 2009). Research here has shown that firms can be both economically successful while also engaging in supporting community and environmental development overtime. Work on bottom of the pyramid issues also provides insight into potential opportunities, as well as pitfalls, of integrating social and environmental goals with economic ones in developing

economies (Hart & London, 2005; Prahalad, 2006). More recently, work on hybrid organizations - organizations who govern themselves and who define success by explicitly integrating environmental and / or societal value creation with economic value creation – provides some insight into alternative business models for the future (Boyd et al., 2009).

In all four of these areas – stakeholder management, positive organizational scholarship, cross-sector partnerships, hybrid organizations – research has moved beyond traditional firm-centric economic value creation perspectives offering us glimpses of what the future business may indeed look like. What are successful business models for sustainable enterprises and how can they successfully develop competitive advantage to support long-term economic, environmental, individual, and societal value creation? How do such organizations integrate and align their cultures, operation and production activities, managerial incentives, etc. to support long-term health and success at this level?

CONCLUSION

As we have discussed here, our world is one of a "crisis society". We have reached a state where most of our major systems – economic, environmental, societal – in are crisis and in need of restructuring. Our current approaches to consumption and production – which are embedded in and supported by our current business practices - have led us to this point. One outcome of past business success here is that business has become one of the world's most powerful institutions and has facilitated the increasingly blind acceptance of a uni-dimensional economically driven measure of success in our societies, economies, and among ourselves as individuals. Yet, as the detrimental impact of this approach – economically, environmentally, socially, and individually – has become clearer, it has become more pressing that we as business scholars and practitioners find new ways of practicing business. We need to find ways to structure business and conceive of business activity to support the long-term health and success of our economic, environmental, and community systems. As one way to

do this, we propose the idea of a sustainable enterprise as an organization which is economically competitive and also environmental and socially beneficial; and suggest avenues for future research towards this end.

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