Ethics and Economic Success

Creating Sustainable Value through Entrepreneurial and Stakeholder Inclusive Responses to Climate Change: An Historical-Institutional Perspective

David Wheeler*, Jacqueline Medalye** and Michelle Adams***

I have been impressed with the urgency of doing.
Knowing is not enough; we must apply.
Leonardo da Vinci

Introduction

The collapse of the United Nations Framework Convention on Climate Change (COP 15/Copenhagen) process into very limited commitments by Western Government-led national groupings and the emergence of a Chinese Government-led veto on multilateral action resulted in a collective note of despair among business and civil society organisations. The failure of Copenhagen was manifested quite rapidly in a number of tangible ways. Within two months of the summit there was the relaxation of agreed deadlines by the United Nations itself (Harvey and Fifield, 2010). There was decreased faith in the US political process to deliver a federal Climate Bill with a meaningful hard cap and trade system, partly because of the Obama Administration's loss of a Senate "super majority" (Szabo, 2010). There was the beginning of serious resistance by European business organisations to the EU cap and trade system. There was evidence that the declining interest of banks to lend to carbon offsetting projects, coupled with post-Copenhagen political uncertainty, had started to harm the price of carbon credits (*Economist*, 2010). And a conference of clean technology investors in San Francisco concluded "the UNFCCC process, in its current form, ha[s] run its course […] the UNFCCC has proven itself increasingly irrelevant to the cleantech sector" (Kachan, 2010). While many may have hoped that international momentum might be reestablished during 2010, these signals provided clear evidence of a diminishing

* Dean of Business, Plymouth Business School, University of Plymouth.
** York University, Canada.
*** Dalhousie University, Canada.

international political appetite for multilateral action and exposed the increasing inadequacy of current international governance arrangements on climate change.

Can Liberal Democracies and International Bureaucracies Solve Climate Change?

At a more fundamental level, the failure of the bureaucratic/liberal-democratic model to deliver such an urgent and important public policy imperative calls into question the relevance of well-intentioned but essentially impotent multilateral approaches that in any case have traditionally neglected the voices of Asia, Africa and Latin America. Of course the reluctance of the Chinese government to encourage international multilateral action on climate change has not prevented that country's industrial sector from positioning itself aggressively for competitive advantage in the sustainable energy industry. China plans to generate 15 percent of its energy from renewable sources by 2020, and intends to become the world's leading exporter of clean energy technologies. According to an editorial in the *New York Times* on January 23rd 2010: "Five years ago, [China] had no presence at all in the wind manufacturing industry; today it has 70 manufacturers. It is rapidly becoming a world leader in solar power, with one-third of the world's manufacturing capacity".

Many theorists believe that Western notions of liberal democracy will be the final outcome of current geopolitical economic and political rivalries (Fukuyama, 1987). Meanwhile, the emergence of strong non-Western models of governance, inspired by Confucian or Islamic principles, means that such convergence is by no means guaranteed in the short term (Fukuyama, 2010; Huntington, 1997). These more sanguine commentaries are doubtless spurred by a growing Western preoccupation with the rise of China as an economic and political force, and the fear of global threats to security arising within authoritarian regimes, most especially in the Middle East. Of course it may be argued that these perspectives are the echoes of philosophical and political struggles that have persisted for at least a thousand years. Certainly, the struggle for intellectual and economic power and influence between East and West has been a source of contention throughout recorded history[1]. However, faced with the urgency of delivering effective international responses to climate change, the short term policy implications of these economic and cultural rivalries may be of fundamental importance.

Many scholars have addressed questions of governance from an historical perspective (Valaskakis, 2001). An examination of recent history allows us to observe that most major revolutions have combined aspects of political, economic, social, technological and ecological change. The revolution that will need to occur in the organization of the global economy in response to climate change will be no different. However, revolutions have typically not been preceded by liberal democratic argument and rational legal or regulatory reform. Rather such *post hoc* rationalization and the attendant legal and administrative reforms have typically captured the spirit and nature of revolutions in a somewhat delayed fashion[2].

In fact, it has been technological change, coupled with direct action by various communities of interest and entrepreneurial behaviours, that has invariably been the catalyst for radical change in social and political relations and consequently in economic outcomes. For example, it was the advent of the printing press that precipitated new opportunities in education, communication and public debate in 16th century Europe and which evoked countervailing attempts at censorship and control by conservative forces. It was the scientific method in agriculture, reinforced by the distribution of political and economic power among landowners which ended pastoralism and first commodified human and ecological resources in a systematic way. It was the harnessing of steam power, coupled with the transition from mercantile to free trade which allowed the coal, iron and textile industries to further subjugate human and ecological resources to dominant, mostly European, economic and political forces, thereby ushering in the first one hundred years of the industrial revolution. And it was the advent of mass mechanisation, readily available electrical power, and the development of the internal combustion engine which drove the second one hundred years of the industrial revolution, with North American, Asian and European economies competing for the political, social and economic pay offs (Wheeler and Sillanpää, 1997). In each case laws, bureaucratic controls and emergent social norms eventually captured such developments, but they largely followed them. Today, the same may be noted of the impact of the internet, which remains a largely unregulated phenomenon.

It has been argued (Michalski *et al.*, 2001; Tarschys, 2001) that we are now entering a new era of capitalist organization with new and radically different demands on our governance arrangements. The world has effectively entered a post-industrial form of human and economic development, where new technologies e.g. information technology, biotechnology and nanotechnology will dictate the nature of society and the way institutions, including civil society, business and governments respond and evolve. Given the nature of globalization and the absence of effective national or international liberal democratic fora or institutions with a mandate, still less a capability for controlling the impacts of these technologies, this is a difficult argument to refute. The question must then be posed: what institutions and governance systems are "fit for purpose" in a world dealing with climate change, terrorism, chronic poverty and other such complex challenges? This paper seeks to address this question by exploring the history of institutional legitimacy and authority. We draw particularly on the thinking of Montesquieu, Weber and Schumpeter to make the case for new approaches to policy and action on climate change and other pressing global problems, with modified roles and conceptualizations for contemporary institutions, and a much greater emphasis on entrepreneurship, community organization, and the sustainable creation of wealth.

Governance and Institutional Power as an Historically Negotiated Process

In addressing the role of institutions in climate change mitigation and adaptation, our starting point is to note the historically *negotiated* nature of outcomes of all revolutionary change for dominant institutions. In Europe, through the early and middle centuries of the second Christian millenium, the monarch, the land-owning aristocracy, the Church, the merchants and the guilds were impacted by change. Although they usually retained much of their existing power, they eventually evolved to reflect new political realities.

The phenomenon of evolving balances between established institutions was observed by 18th century "political scientists" such as Charles-Louis de Secondat, Baron de La Brède et de Montesquieu (1748) and Thomas Paine (1791). In his *On The Spirit of the Laws* (1748), Montesquieu described three classes of French governance, the so-called *Trias Politica* of the monarchy, the aristocracy and the commons, and two types of governmental power: the administrative and the sovereign. Montesquieu's enthusiasm for republican government through the elected will of the people impacted revolutionaries in both France and the nascent United States of America during a period when intellectuals were united in their disdain for what they perceived to be the monarchial, despotic and imperial powers of both France and Great Britain. Of course, breaking existing laws was no impediment to Bostonians not wishing to pay their taxes on imports of tea; nor indeed for the revolutionary "*sans culottes*" wishing to guillotine large numbers of the French aristocracy. Montesquieu argued for an administrative structure that would comprise the legislature, the judiciary and the executive, a structure that was formalized in due course very effectively by the "Founding Fathers" of the US Constitution. He also effectively ruled out the Church from a formalized role.

Thus, during the 19th and 20th centuries, in Europe and North America, monarchs, despots, aristocrats and churches were progressively displaced by elected governments, bureaucracies, professions and industrial interests, for the most part positivist and centralizing in their orientation. Similar processes occurred in Latin America, Africa and Central Asia with varying outcomes. Later still, self-organising civil society and non-governmental organizations (CSOs or NGOs) emerged as legitimate, respected and therefore influential actors. Firstly, trade unions and mutual societies, then consumer groups and professional societies, and later environmental and social groups filled an increasing void left by the Church, and in the latter part of the 20th century, the State itself. Meanwhile, at the international level, we witnessed the construction of the United Nations and the Bretton Woods institutions, designed as multi-lateral administrative agencies to manage the world's desire to live in peace and economic prosperity.

Max Weber (1947; 2002) is the sociologist most associated with describing the role of idealized administrative or bureaucratic governance. Like Montesquieu, Weber observed the historical manifestation of several forms of authority: *charismatic* (individually dominated), *traditional* (based on accepted norms) and *rational legal authority* (based on agreed codes)[3]. Weber is sometimes wrongly associated with advocacy for bureaucracy; in reality he was a social evolutionist and anti-positivist who saw certain historical, rational inevitabilities with respect to the role of administrators and the law. He also believed that rational bureaucracy could lead to efficiency and positive social justice outcomes based on meritocratic and technocratic factors. But it is important to note that Weber was acutely aware of the dangers of unaccountable bureaucracy. Indeed, Weber explicitly acknowledged the dangers of bureaucracies failing to address wealth-creation and action and referred to one potential outcome as the "polar night of icy darkness". During the 20th Century this theme was taken up by many other authors who also feared the growth of self-serving and self-perpetuating bureaucratic elites, for example Crozier (1964). To the growing general concern about unaccountable and ineffective bureaucracy has been added serious critiques of international economic development bureaucracies by Hancock (1989) and Easterly (2007).

We now wish to introduce and integrate some key ideas on the question of entrepreneurship, community organisation and wealth creation as we believe these phenomena provide key constructs for future opportunities to address climate change. We will also describe the institutions involved and build a model of contemporary institutions that may better help us understand how progress on issues like climate change may be secured in the future.

Entrepreneurship and Wealth Creation

Historically, in business and trade, the tendency of entrepreneurs to create wealth has invariably been supported by powerful institutions that seen to appropriate and accumulate that wealth. The exploits of adventurers such as Columbus, Cortes, da Gama, de Champlain, Drake, Pizzaro, and Raleigh were all sponsored by monarchs to a greater or lesser extent in order to secure trade and territorial advantage in the Americas and Asia. The creation of mercantile enterprises such Hudson's Bay, Royal Africa and the English and Dutch East India companies united the interests of merchants with other powerful institutions such as the monarchy or the Church, invariably backed by force of arms and the availability of finance (North and Thomas, 1973). The Medici dynasty of Florence invented trade finance and loans to monarchs to fight mercantile wars in the 14th and 15th centuries (Ferguson, 2008). Holland's merchants bankrolled Dutch exploration in Asia, and "New France" was established across much of North America by a combination of fur trading companies e.g. the North West and Mackinaw companies and Jesuitical interests.

Today, opponents of globalised trade observe similar convergences of interests to appropriate wealth – usually between multinational companies and particular institutions: the White House, Wall Street, the City of London, the G8, the WTO, the World Bank, international financial institutions and so on (Korten, 1995; Klein, 2000; Shiva, 2006). Economic historians have also described these institutional factors in best-selling books and indeed in popular television series (Galbraith, 1977; Ferguson, 2008). Recent turmoil in the capital markets and the multiple failures of corporate and financial regulatory oversight have given greater impetus to debates about the role of large corporations in global society. But it would be a mistake to confuse entrepreneurship with corporate investment and wealth appropriation. Left to themselves, large corporations tend to oligopoly and behave more like wealth-accumulating technocracies or bureaucracies than entrepreneurial enterprises. This is why governments must constantly review and apply anti-trust legislation to prevent market domination and monopoly.

So, we need to explore the concept of entrepreneurship and wealth creation and the institutions and individuals that pursue them if we are to fully understand the potential for creating social, environmental and economic value, and attempt to mitigate and adapt to climate change and other pressing global problems. We will examine two forms of entrepreneurship: business entrepreneurship and social entrepreneurship, and seek to establish an understanding of both. We will also introduce the role of advocacy and community-based organizations as another important component of our contemporary institutional landscape.

Business Entrepreneurs

Joseph Schumpeter's major contributions to the theory of entrepreneurship are included in his book *The Theory of Economic Development* (1934), first published in 1911. Schumpeter argued that innovation meant doing more with the same amount of resources. He believed that although both the capitalist and entrepreneur take risks, the individuals who undertake risk in the form of a business solely for profit are capitalists. On the other hand, those individuals who undertake risks for the sake of innovation are entrepreneurs. According to Schumpeter, the process of discovery and innovation modifies the past and creates new opportunities for the creation of wealth in the future. Moreover, "the function of the entrepreneur is to reform or revolutionize the pattern of production by exploiting an innovation or, more generally, an untried technological possibility for producing a new commodity or producing an old one in a new way, by opening up a new source of supply of materials or a new outlet for products, by reorganizing an industry [...]". Thus the Schumpeterian entrepreneur is motivated by innovation, and profitable outcomes are a by-product of entrepreneurial ventures. Schumpeter also argued that entrepreneurship is not confined to the management of the firm. Rather, the entrepreneur is responsible for the continuous improvement of the economic system by his or her unique ability to innovate. Innovation by the entrepreneur does not require invention, rather the entrepreneur applies inventions in new ways for application to the market.

Schumpeter described five areas in which entrepreneurship or innovation may occur, subsequently called Schumpeter's 5 factor model. These areas were: i) the introduction of a new good; ii) the introduction of a new technology; iii) the introduction of new inputs to create a new or old good; iv) creating new economic organization or combinations; or v) the opening of a new market.

Schumpeter recognized that a narrow interpretation of entrepreneurship would not lead to an understanding of economic development. In *Capitalism, Socialism and Democracy* (1942), Schumpeter coined the term *creative destruction* to describe the role of entrepreneurial innovation in the process of economic development. *Creative destruction* is "the process of industrial mutation that incessantly revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one […] and the process of creative destruction is the essential fact of capitalism". In Schumpeter's view, capitalism is an evolutionary process in which economic change can never remain stationary so long as there is innovation. Schumpeter rejected the widely accepted view of the market as a perfectly competitive construct. Instead, he viewed it as a dynamic environment driven by creative destruction: "It must be seen in its role in the perennial gale of creative destruction; it cannot be understood irrespective of it".

Schumpeter linked the market process of creative destruction, which he associated with *new combinations*, and therefore economic development and progress, to innovation and recognized the entrepreneur as the prime innovator. The essence of entrepreneurship is the ability to break away from routine, to destroy existing structures, to move the system away from equilibrium. The innovative entrepreneur drives economic development forward, creating a state of disequilibrium in the market which leads to growth, as production functions and production possibility boundaries are pushed forward.

Whether they realize it or not, "clean technology" entrepreneurs are invariably behaving in neo-Schumpeterian ways. And as a result they are attracting increasing investor interest (including the interest of corporate investors). According to leading clean technology investment analysts, CleanTech Network LLC, before the financial crisis of 2008 the clean technology sector was experiencing 50% investment growth per annum[4]. By 2008 the CleanTech Network contained "over 8,000 investors, 6,000 companies and 3,500 professional services organizations that specialize in CleanTech globally". By 2010, CleanTech was noting that far from stalling during the financial crisis, corporate engagement in the field was increasing rapidly and that "cleantech doubled its share of overall global M&A in 2009" (Kachan, 2010).

Clearly, the solar photovoltaic entrepreneur – who depends on a complex framework of early stage investment from individual investors and corporate players, who in turn draw down government subsidies and sponsorships, market based financial incentives, and small scale commercial applications – understands that the solar power business is not competitive and scalable today in the conventional sense. But the same entrepreneur knows that the world will need solar voltaic energy in vast quantities at some point in the future and that the challenge is to take sufficient risk on research and development and early stage deployment in order to be positioned optimally for future pay-offs. It is also true that it is usually much easier for an entrepreneur to establish this position through a disruptive innovation launched from a smaller business than through a large corporation. In that sense, the entrepreneurial start-up has a competitive advantage (Christenson, 1997; Christenson and Raynor, 2003).

The important thing to note here is that the drive for innovation and achievement remains largely individually driven. However, the conditions for that success are often dependent on other actors in the entrepreneur's network who can provide early financing, preferred access to markets and other services to support the "new combinations" of goods and services that are being promoted by the entrepreneur, including governments and large corporations.

Social Entrepreneurs

Social entrepreneurship, although a relatively new term, is not a new phenomenon. Social entrepreneurship has been characterized in various ways (Spear, 2006; Nicholls, 2008) and it is still a somewhat contested term (Roper, 2005; Thompson, 2002; 2008), and therefore there are significant challenges in researching the phenomenon (Haugh, 2005). For the purposes of this paper it will be defined as the combination of a social vision with a business-like organization for the purpose of innovation. The key difference between business entrepreneurs and social entrepreneurs appears to be that social entrepreneurs seek explicitly to integrate a social purpose into their operations whereas typically business entrepreneurs primarily view profit as the desired outcome of their innovation.

The rise of social entrepreneurship has blurred sector boundaries leading to organizations which are motivated to find innovative solutions to social problems in both the profit and not-for profit sectors. Social entrepreneurship has been the subject of many contemporary studies. Leadbeater (1997) defined social entrepreneurs as people who: i) identify a needs gap and a related opportunity which they understand; ii) inject imagination and vision into their answers; iii) recruit and motivate others to the cause in question and build essential networks; iv) secure the resources that are needed; v) overcome obstacles and challenges and handle inherent risks; and vi) introduce proper systems for controlling the venture.

Dees (1998) asserted that social entrepreneurs play a key role for change in the following ways: i) adopting a mission to create and sustain social value, not just private wealth; ii) recognizing and relentlessly pursuing new opportunities to serve that mission; iii) engaging in activities of continuous innovation, adaptation, and learning; iv) acting boldly without being limited by resources currently in hand, and v) exhibiting a heightened sense of accountability to the constituencies served and for the outcomes creates. According to Dees, social entrepreneurs act as reformers and revolutionaries (as described by Schumpeter), but instead of an economic mission, they pursue a social mission. These entrepreneurs seek ways to fundamentally change how activities are accomplished, how needs are met, how inventions reach markets, and how partnerships and networks are organized. Most importantly, social entrepreneurs are concerned and act on the underlying causes of social problems rather than just treating the symptoms. Research suggests that although they tend to act locally, their actions have the potential to stimulate global improvements in their chosen areas, whether in education, health care, environmental improvement, or economic development.

The central differentiation of social entrepreneurs from business entrepreneurs appears to be that for social entrepreneurs the social mission is fundamental. For social entrepreneurs, profitability, wealth creation, and serving the desires of customers can be part of the strategic model, but these are the means to a social end and are not the end in itself[5]. As noted above, Schumpeterian innovation can take many forms, and does not necessarily involve a technological invention *per se*. Thus, the Schumpeterian social entrepreneur can simply apply an existing idea in a new way or to a new situation. In the Schumpeterian framework the key to entrepreneurship is the creative application of what others have invented. This can include the application of scientific inventions but can also include inventions in economic, social or institutional spheres.

A common example of social entrepreneurship which does not include scientific invention, is the phenomenon of microfinance, whereby lending occurs in new ways, according to new criteria, and within in a novel institutional, social and economic context. The success of microfinance as a development tool has been popularised by Nobel Prize Winner Muhammad Yunus (2003; 2008). Dees (1998) found that rather than giving up when obstacles are encountered, social entrepreneurs, as exemplified by Yunus, are like their business counterparts, in that the ask: "How can we surmount this obstacle? How can we make this work?" We might argue that this phenomenon contains much relevance for institutions working to address climate change.

Thus we may assert that social entrepreneurs are no different from business entrepreneurs in terms of *modus operandi*, and that the main or only real difference is their definition of rewards and pay-offs: mostly social or environmental *versus* mostly economic. Clearly business and social entrepreneurs do not easily fit into the categories of traditional institutions that have been described earlier in this paper. They are not corporate, administrative or governmental. They do not usually come with a positivist economic, moral or religious orientation. If anything, they are unreasonable, anti-administrative and anti-corporate, sometimes behaving more like advocacy groups in their passion for their product or cause (Elkington and Hartigan, 2008). They are action-based, innovative, dependent on experience for their learning, and they are deeply connected to the social structures that help them define what is valuable and why.

Contemporary Civil Society and Advocacy Organizations and the Distribution of Wealth

In the last decades of the 20th century there has been massive growth in the numbers of nonprofit civil society organizations (CSOs) operating outside and between the spaces between government, administration, corporate business and the religious sector that either distribute wealth directly or advocate for how wealth should be distributed (Hall, 2001). As Korten (1990) has described, nonprofits typically have one of four strategies:

- Providing relief and welfare, or the direct delivery of services to meet immediate deficiency;
- Developing local self -reliance, or the development of the capacities of people to better meet their own needs;
- Creating sustainable development systems, or involvement in the policy formulation process of governments and multilateral organizations;
- Political advocacy and campaigning in order to support people's movements and promote a broader social vision.

Thus, at least in western societies CSOs are concerned both with both positivist and constructivist activities. Just as in former centuries the role of caring for the poor and disadvantaged was played by religious and self-help organisations such as mutual organisations and guilds, today there are many CSOs that have taken on the role of the state in offering support services to groups in need. We often refer to these organizations as charities or community organisations. However, just like the role of the established church in many cultures, more advocacy-based CSOs have developed an ambivalent and sometimes conflicting role with the state and other powerful institutions (e.g. the monarchy in former times or business today) in attempting to define the laws and norms that should govern society and the economic and social relations that would emerge as a result. Thus, it is our belief that it is confusing to treat CSOs as a homogeneous institutional category. Rather, we believe that they should be defined, like all institutions, in relation to the activities they undertake with respect to society and the economy. In this sense, it may be more helpful to distinguish between charities with a social purpose that distribute wealth and advocacy groups with a normative or positivist perspective that advocate for particular definitions and approaches to the distribution of wealth.

Institutions and the Wealth Creation and Distribution Process

Based on the foregoing analysis, we may conclude that controlling wealth creation, and distribution, prescribing and regulating the manner in which society works, has always been a politically negotiated process involving powerful institutional forces. Meanwhile the weak or the opposed have typically been marginalized. Moreover, there have always been positivist actors that want more control, and more rules and norms, and those anti-positivist, social constructivist organisations that wanted more experimentation and more freedom to act (Habermas, 1985). Clearly, what has united some of the more positivist forces has been a desire for control and order (literally "civilisation") – especially during periods of significant political, economic, environmental, technological and social disruption. Thus it in times of warfare and external threat, the powerful organs of the state – government, corporate business and (historically) the established Church – have come together. However, there has always been a countervailing tendency in society: the need to challenge and disrupt power and wealth in a corporate sense and to innovate, experiment and explore in order to leave a mark in an individual sense – what many would describe as entrepreneurial behaviours. Typically those involved in entrepreneurship of the social or business variety take a social constructivist "freedom to act" approach in that they want to be involved in creative acts and new combinations leading to new outcomes for themselves and their stakeholders. Similarly we can observe that there have always been individuals and organizations who simply wish to care for the people or the causes they believe in from largely altruistic motives, community-based benevolent organizations or charities.

We now wish to describe what we see as two important dividing lines between societal institutions: their orientation with respect to wealth (creation *versus* distribution), and their orientation with respect to social control versus freedom of action (positivism *versus* anti-positivism or constructivism). From this perspective, we can begin to construct an historically grounded mental model of where different actors may sit with respect to i) orientation to wealth creation *versus* distribution; and ii) orientation to positivism *versus* social constructivism. And we can begin to discern how these actors may orientate themselves toward issues such as climate change mitigation and adaptation.

Our model incorporates five "principal actors":

- *Advocates*: Generally positivist institutions oriented to providing order or civilisation in societies by advocating the control of human behaviour with essentially normative prescriptions. Historically associated with wealthy and well-appointed institutions such as religious bodies, today many advocates focus on corporate accountability and regulatory approaches to corporate social responsibility. This category would include the Churches and the international environmental NGOs and anti-poverty NGOs. In the realm of climate change policy we see strong positions adopted by many large advocacy organisations.
- *Corporations*: Generally positivist institutions that command power and influence and seek to control economic wealth and markets e.g. large businesses, financial institutions and the professions. Historically this is where we would have placed the monarchy and the aristocracy. Today corporations vary significantly in their orientation towards climate change, with more progressive companies seeing climate change as both a threat and an opportunity and less progressive companies seeing carbon pricing and cap and trade schemes entirely as a threat to business as usual. The smartest corporations are the cleantech opportunists, absorbing the entrepreneurial clean energy start ups as soon as they approach commercial viability.
- *Charities*: Generally anti-positivist, socially constructivist institutions, community organisations and individuals that believe in the freedom to do good even in the absence of a normative prescription for society, for example community care groups, pastoral charities, educational institutions and mutual organizations. These organizations are usually oriented towards practical action and typically distribute wealth subject to the norms of society, often mediated by government and individual fees and donations. Charities involved in climate change include the Universities, community organisations and those organisations concerned for the poor and their ability to afford heat, and organisations working in developing countries to mitigate the impacts of climate change on vulnerable communities.
- *Entrepreneurs*: Generally anti-positivist organisations, individuals or community organizations that are driven by the desire to breathe life into a vision – an innovative idea, a way to do something better, or an opportunity to create value of various types: economic, social or environmental. Entrepreneurs are often willing to act under conditions of risk or uncertainty and tend to eschew controls and rules, for example small business people and social entrepreneurs. Today there are large numbers of "green businesses" and social enterprises working in climate change mitigation and adaptation with the aim of inventing new business and social models to allow the transition to low carbon economies.
- *Governments*: Bureaucratic institutions that attempt to balance the other four, for example state governments and international bodies. In climate change policy we also note the presence of the United Nations as the principal bureaucracy involved in promoting international action on climate change. Historically Governments have focused more on the needs of powerful forces than the marginalised ones.

It is important to note that when we describe wealth creation and distribution, we are not just describing financial or economic wealth. Our definition of wealth must also include social and ecological wealth. Wheeler and Sillanpää (1997) introduced the concept of "stakeholder value" as one way of distinguishing the perspectives of corporate stakeholders from those of owners when it comes to perceptions of wealth and value creation. This concept was later refined in sustainability terms by Hart and Milstein (2003) and Wheeler *et al.* (2003) to include the notion of "sustainable value" and by Emerson (2003) in his notion of blended value. And as Mair and Martí have described (2006), social entrepreneurs are committed to the creation of social value, not just economic value. Similarly, green business entrepreneurs are committed to the creation of ecological value. In summary, when an organization creates and distributes wealth, that wealth may include economic, social or environmental assets or resource flows. Economic assets may include physical and intellectual capital and social assets may include human and social capital. But inevitably, the value of those assets and resource flows is also socially constructed in the perception of stakeholders, and that is why the social constructivist role of entrepreneurs and charities may become central to the question of climate change mitigation and adaptation in the future.

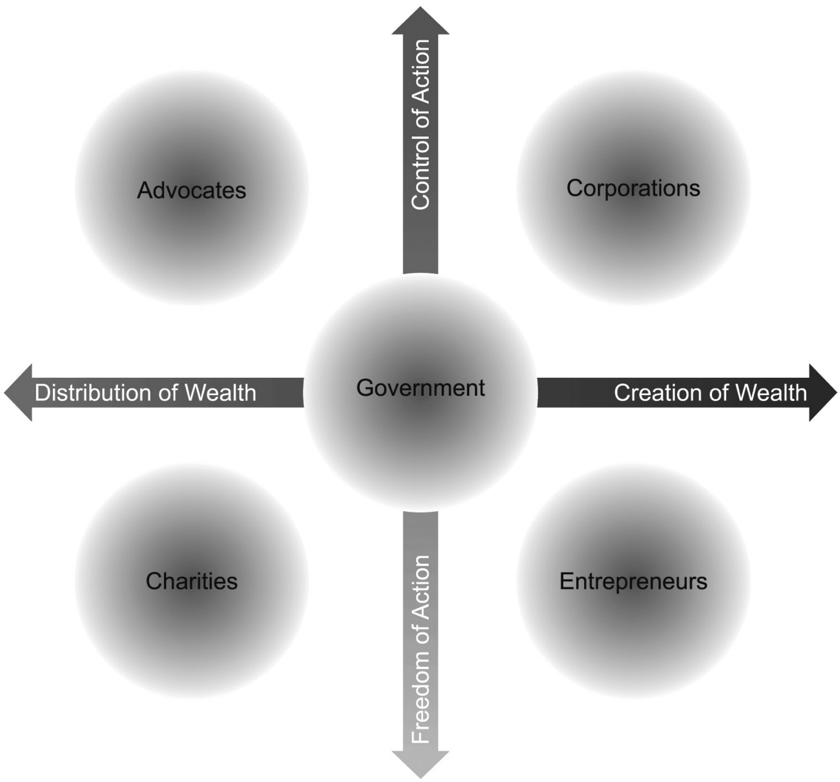

Figure 1. An historical-institutional model of wealth creation, wealth distribution, positivist control of action and anti-positivist freedom of action.

Relevance of the Model to Climate Change Governance and Decision-Making

At the World Economic Forum in Davos in January 2010 a number of Chief Executives, including representatives of such corporate giants as Unilever, Nike, German business software provider SAP, and global advertising giant Publicis, called for urgent action on climate change inspired by longer term thinking and even the replacement of the current preoccupation with short term shareholder value creation. Indeed SAP Chief Executive Leo Apotheker asserted it was “time to talk about stakeholder value” rather than shareholder value, adding: “This will be a hard transition for many chief executives because they are not trained to do that. It will be tough but we have to do it” (Wighton, 2010).

Given this kind of fundamental rethink of the capitalist paradigm – the long awaited shift from shareholder to stakeholder value – it is interesting to note the emergence of new networks and coalitions of actors to advance practical action on climate change. In December 2009 a coalition of large US corporations and civil society stakeholders issued a “call to action” to promote real time energy information flows in order to help ordinary citizens reduce energy consumption through smart metering and smart grids. The coalition included Google Inc., GE, The Climate Group, NRDC, the Alliance to Save Energy, the Center for American Progress, Dell, the Demand Response and Smart Grid Coalition, Digital Energy Solutions Campaign, Dow, the Energy Future Coalition, Intel, Kleiner Perkins Caufield & Byers, Sharp, the US Green Building Council and Whirlpool (Anon, 2009).

And of course the energy industry is also looking for a more certain international policy environment in order for them to deliver the required investments in alternative energy. Also, according to ClimateWire, meeting in Copenhagen during the governmental negotiating process, the CEOs of Duke Energy, Iberdrola, Vestas, GDF Suez and other multinational energy corporations, together with consumer focused companies like Coca Cola and Unilever were united on the need for a global price on carbon in order for them and their peers to invest seriously in alternative energy solutions.

However, these progressive corporations, civil society organisations and their CEOs may be frustrated if they wait for such developments to occur through international consensus or corporate power-plays, whether it is the mass adoption of effective energy information management systems or the introduction of a global price on carbon. Instead, it may be wiser to focus on opportunities emerging through more entrepreneurial, city and regionally based networks and associated institutional developments.

One example of the importance of emphasising more entrepreneurial approaches is that of energy demand side management in the US. Writing in the *McKinsey Quarterly*, Creyts *et al.* (2010) described research conducted into energy efficiency opportunities in the household, commercial and buildings sectors in the US. The McKinsey team looked at the potential for energy savings using existing technologies and concluded “Although significant challenges stand in the way, solutions not only exist but can also be scaled up to a national level, which would cut the US energy bill by 23 percent and save a net $680 billion by 2020”. However, as the authors concluded, the ability of the US Federal bureaucracy to deliver these savings remains seriously in doubt. Happily, the US can look to state level, entrepreneurial institutional models like the Energy Trust of Oregon and Efficiency Vermont, both of which run like independent businesses and deliver maximum energy efficiency outcomes for the minimum cost. Both of these institutions have a public purpose mandate, but they use community mobilization, business mobilization and financial incentives to deliver an environmental result. The model is now being adopted in Nova Scotia, Canada following a stakeholder inclusive design process legitimated but not driven by the Provincial Government (Adams *et al.*, 2010).

In the United Kingdom, the National Industrial Symbiosis Program (NISP) is another example of a cooperative industrial network that has effected significant energy conservation achievements within its network of over 8000 business members resulting in the saving of over 6 million tonnes of CO_2 since its inception in 2005. NISP endeavours to “to bring about long term business culture change through profitable actions that result in measurable environmental and social benefits thus making a significant contribution to international sustainability” (Laybourn and Morrissey, 2009). NISP is an exemplar of entrepreneurial innovation that supports and delivers transition to a lower carbon future through a private sector model. NISP receives sponsorship from the UK Government which has recognized the value of this entrepreneurial initiative to deliver significant reductions through the voluntary actions of the industrial sector. Through NISP’s activities their members have realized GHG reductions at just £4.60 per CO_2 tonne of UK Government investment. At the same time these activities have generated in excess of £176m of sales and £156m of cost savings for participating companies (gross) and have led directly to over 8,000 jobs being safeguarded or created (Cook and Sadiq, 2009). The NISP model has found root at an international level with similar programmes being initiated in Mexico, China, Brazil, Hungary and Romania.

Another example of an innovative development involving a regional government and the private sector has been the recent announcement of a strategic alliance between the Province of Ontario in Canada and Korean conglomerate Samsung which will see a $6.7 billion (US) investment by the company in green energy manufacturing and production (total capacity 2500 MW) and the creation of 16,000 jobs, many of which will be in small, entrepreneurial businesses and service organisations. Driven as much by post-recession industrial policy as by environmental policy, the Province of Ontario has also introduced some highly attractive “feed in tariffs” for green energy, just before Germany announced a reduction in tariffs for solar photovoltaic installations in that country. Provincial Premier Dalton McGuinty made clear strategic imperatives when he said: “We’re doing more than buying a huge amount of electricity, we are doing more than just creating jobs [...] we are trying to lay the foundation here for economic growth”; he said: “If we can build the capacity here to deliver renewable technology to the U.S. market, that’s a good thing” (McCrank, 2010).

At the municipal level, the “Transition Network” is a community-based initiative focusing on transitioning towns into low-carbon economies. The network began with

Transition Town Totnes (Devon UK) in 2006; a grassroots response to the concepts of peak oil and climate change. Started by two individuals, the purpose was to support community-driven actions that would generate awareness and engage individuals, and local organizations (both private sector and not-for-profit enterprises) in activities that specifically addressed the "how to" of carbon emission reductions. The parallel goal is to help communities build resiliency in the face of an increasingly uncertain energy future based on fossil fuel. The founders believe there is a need for increased stakeholder participation in order to deal with the complexity of such issues. Since 2006, this initiative has since engaged over 300 communities in over 20 countries and is continuing to spread (http://www.transitiontowns.org/).

What these examples have in common is that they point to the vital importance of establishing the conditions for clear and unequivocal economic, environmental and social value propositions at a local level, driven by engaged stakeholders: regional governments, municipalities, businesses, small and large, and community and civil society organisations. They are entrepreneurial and they create value in sustainable, enterprise-based networks, usually at the local level (Wheeler *et al.*, 2005).

Conclusions and Implications for Climate Change Policy and Action

One of the few global leaders to be consistent in his calls for the reform of international institutions responsible for complex issues such as global financial regulation and environmental stewardship is UK Prime Minister Gordon Brown. During the Copenhagen meeting he called for a new body to drive international progress on issues like climate change, implicitly recognizing the inability of the UN and its fora to deliver results in the face of minority internal opposition. Speaking to journalists at the conference Brown said "Never again should we face the deadlock that threatened to pull down those talks. Never again should we let a global deal to move towards a greener future be held to ransom by only a handful of countries. One of the frustrations for me was the lack of a global body with the sole responsibility for environmental stewardship [...]. I believe that in 2010 we will need to look at reforming our international institutions to meet the common challenges we face as a global community" (Webster and Elliott, 2009).

Brown is of course identifying a reality that few Western global leaders dare articulate publicly because of the implications (for them and their governments) of no longer being able to hide behind bureaucratic, international consensus building processes that are effectively broken. It remains to be seen if a supra-national new institution would have more luck than the United Nations. But if the bureaucratic/liberal democratic approach does not deliver the requisite action at national or international levels, what will?

It is the contention of this paper that in the current complex and challenging international environment, five principal actors need to conceptualise their roles in society with respect to wealth creation and distribution (broadly defined) and control or freedom of action: Advocates, Corporations, Governments, Charities and Entrepreneurs.

We would also note that up to the present day the institutions that have received most attention and exercised most power are the positivist actors: Governments, Corporations and Advocates, with governments typically paying most attention to the loudest voices, those that control resources and wealth or seek to regulate or advocate for its definition and distribution. These three institutions have effectively been operating within the classic administrative arrangements envisioned by Montesquieu and Weber. However, we have also illustrated that in terms of potential action and delivery with respect to climate change and low carbon economies, it is the Entrepreneurs, Charities and community organisations, and those networks involving new combinations (in a Schumpeterian sense) that may have the most to offer, for example the clean tech entrepreneurs, the regional energy efficiency networks, the eco-industrial networks, and the socially grounded, city-based low carbon networks.

Thus, we may contend that if Baron de La Brède et de Montesquieu and Max Weber were observing national and international decision-making systems today it is unlikely they would be advocating the state-based governance and administrative arrangements that we continue to depend on in the West. Instead, perhaps they would be exploring new forms of legitimate authority and good governance arising from the desire of citizens and entrepreneurs around the world to create sustainable value for themselves and their stakeholders in a direct and meaningful sense. Perhaps they would even be leading the discussion on the need to reduce the historic dominance of bureaucratic liberal democracy and administration and radically increasing the potential contribution of entrepreneurs, charities and community organizations in the innovative spirit envisaged by Joseph Schumpeter. In this way we might imagine an altogether more dynamic and meaningful response to climate change policy and decision-making, with Governments, Advocates and Corporations in serious support of innovation and empowerment – facilitating freedom of action by social and business entrepreneurs, community organisations and charities – rather than attempting to dictate and control the response of global civil society to an issue that is now well beyond our collective capacity to manage.

Notes

[1] In this context it is worth noting that some contemporary authors also assert that it was Chinese seafarers who actually "discovered" the Americas and even sparked the Renaissance in Europe (Menzies, 2003; 2008). And it was Islamic scholars and governance systems that were the main civilizing influences during the European "dark ages" for example through the Persian and Moorish traditions of the Golden Age of Islam (Turner, 1997).

[2] Here we might cite the importance to countries like Britain of the *Magna Carta* (1215), which symbolised a transfer of power from the throne to the barony and the establishment of rule of law and basic freedoms, and to the *Declaration of Independence* (1776), the *Constitution* (1787) and the *Bill of Rights* (1791) of the United States, which symbolised the throwing off of colonial domination and the enshrining of individual rights within a balance of state and federal powers. We might also draw attention to the catalysing force of political and economic treatises such as Thomas Paine's *Rights of Man* (1791) which had particular resonance in North America and France or Adam Smith's *On the Nature and Causes of the*

Wealth of Nations (1776) which had more universal impact.

[3] Interestingly, Weber also wrote extensively on the role of religion – notably Protestantism – in the development of Western versus Eastern (Confucian and Hindu) approaches to capitalism, arguing that Marx's theories of ownership and materialism were an incomplete explanation for the explosive growth of capitalism in the West.

[4] The CleanTech sector comprises many industries including Energy Generation, Energy Storage, Energy Infrastructure, Energy Efficiency, Transportation, Water & Wastewater, Air & Environment, Materials, Manufacturing/Industrial, Agriculture, Recycling & Waste.

[5] Research conducted by Delta Economics and IFF Research (2010) has sought to broaden the definition of social enterprise, particularly with respect to high growth businesses. Describing the phenomenon of "hidden social enterprises", the authors note that many "value driven" entrepreneurs may not self-identify as social enterprises but that as many as 50% of high growth oriented businesses have – as one of their primary triggers for setting up a business – "to make a difference, either socially, environmentally or in terms of job creation". For such hidden social enterprises, the seeking of finance and the making of investments in innovation (research and development) are more likely than for the general pool of high growth oriented enterprises.

References

Adams, M., Woolston, G. and Wheeler, D. (2010), *Stakeholder inclusion in energy policy. The case of Nova Scotia*, Working Manuscript. Halifax, Nova Scotia: Dalhousie University.

Anon (2009), "Consumer Energy Information: A Call to Action", http://www.2degreesnetwork.com/media/library-attachment-upload/402739e94ec78888c1722e52944ab80f/4b6847f0/RealTimeEnergyInfo_call_15Dec2009.pdf. Accessed 3rd March 2010.

Champlin, D. (1999), "Social capital and the privatization of public goods", *International Journal of Social Economics*, 26 (10/11), 1302–1314.

Christenson, C.M., and Raynor, M.A. (2003), *The innovator's solution: Creating and sustaining successful growth*, Boston, Mass: Harvard Business Press.

Christenson, C.M. (1997), *The innovator's dilemma*, New York: Harper.

CleanTech Network (2008), http://cleantechnetwork.com/index.cfm?pageSRC=WhoWeAre. Accessed 10th March 2008.

Cook, J. and Sadiq, K. (2009), *NISP Economic Valuation Report*, London: Scott Wilson Business Consultancy.

Creyts, J., Granade, H.C. and Ostrowski, K.J. (2010), "US Energy Savings: Opportunities and challenges", https://www.mckinseyquarterly.com/Energy_Resources_Materials/Strategy_Analysis/US_energy_savings_Opportunities_and_challenges_2511. Accessed 3rd March 2010.

Crozier, M. (1964), *The Bureaucratic Phenomenon*, London: Tavistock Publications.

Dees, J.G. (2001), "The meaning of 'social entrepreneurship'", http://www.caseatduke.org/documents/dees_sedef.pdf. Accessed 3rd April 2010.

Delta Economics and IFF Research (2010), "Hidden social enterprises. Why we need to look again at the numbers", http://www.deltaeconomics.com/COGS/Hidden%

20Social%20Enterprises/Hidden%20Social%20Enteprise%20Report.aspx. Accessed 5th April 2010.

de Secondat, Charles, Baron de Montesquieu (1748), *On the spirit of the laws* (2 vols), translation: Thomas Nugent (1750), London: Crowder, Wark, and Payne.

Economist (2010), "Carbon markets after Copenhagen. Why hasn't the carbon price fallen further?", February 6th 2010.

Elkington, J. and Hartigan, P. (2008), *The power of unreasonable people: how social entrepreneurs create markets that change the world*, Boston, Mass.: Harvard Business School Press.

Easterly, W. (2007), *The white man's burden: Why the West's efforts to aid the rest have done so much ill and so little good*, Oxford: Oxford University Press.

Emerson, J. (2003), "The blended value proposition: Integrating social and financial returns", *California Management Review*, 45(4), 35-51.

Ferguson, N. (2008), *The ascent of money*, London: Penguin.

Fukuyama, F. (1993), *The end of history and the last man*, London: Penguin.

Fukuyama, F. (2010), "The 'End Of History' 20 years later. Interview with Nathan Gardels", *New Perspectives Quarterly*, 27(1), 7-10.

Galbraith, J.K. (1977), *The Age of Uncertainty*, London: Andre Deutsch.

Habermas, J. (1985), *The philosophical discourse of modernity*, London: Polity Press (1985).

Hancock, G. (1989), *Lords of Poverty: The power, prestige, and corruption of the international aid business*, London: Macmillan.

Hall, P.D. (2001), *A historical overview of philanthropy, voluntary associations, and nonprofit organizations in the united states, 1600-2000*, Boston, Mass: Hauser Center for Nonprofit Organizations, John F. Kennedy School of Government, Harvard University.

Hart, S.L. and Milstein, M.B. (2003), "Creating sustainable value", *Academy of Management Executive*, 17(2), 55-69.

Haugh, H. (2005), A research agenda for social entrepreneurship", *Social Enterprise Journal*, 1(1), 1-12.

Harvey, F. and Fifield, A. (2010), "UN abandons climate change deadline", http://www.ft.com/cms/s/0/87479ee2-0600-11df-8c97-00144feabdc0.html?nclick_check=1. Accessed 5th March 2010.

Huntington, S.P. (1997), *The clash of civilizations and the remaking of world order*, London: Simon & Schuster.

Kachan, D. (2010), *Taking cleantech to scale. Cleantech Forum XXVI San Francisco: A report*, San Francisco: Cleantech Group LLC

Klein N. (2000), *No Logo*, London: Flamingo/Harper Collins.

Korten, D. (1990), *Getting to the 21st Century: Voluntary action and the global agenda*, West Hartford, CT: Kumarian Press.

Korten, D. (1995), *When corporations rule the world*, West Hartford, CT: Kumarian Press/Berrett-Koehler.

Laybourn, P. and Morrissey, M. (2009), *National Industrial Symbiosis Program: The pathway to a low carbon economy*, Birmingham, England: International Synergies Ltd.

Leadbeater, C. (1997), *The rise of the social entrepreneur*, London: Demos.

Mair, J. and Martí, I. (2006), "Social entrepreneurship research: A source of explanation, prediction, and delight", *Journal of World Business*, 41(1), 36-44.

McCrank, J. (2010), "Ontario says Samsung deal to make it green leader", Reuters http://planetark.org/wen/56449. Accessed 3rd March 2010.

Menzies, G. (2003), *1421: The year China discovered America*, New York: William Morrow.

Menzies, G. (2008), *1434: The year a magnificent Chinese fleet sailed to Italy and ignited the renaissance*, New York: William Morrow.

Michalski, M., Miller, R. and Stevens, B. (2001), "Power and the global knowledge economy and society", in: *Governance in the 21st Century*, Paris: OECD, 7-26.

New York Times Editorial (2010), "The case for a climate bill", http://www.nytimes.com/2010/01/24/opinion/24sun1.html?ref=opinion. Accessed 5th march 2010.

Nicholls, A. ed. (2008), *Social entrepreneurship: new models of sustainable social change*, Oxford: Oxford University Press.

North, D.C. and Thomas, R.P. (1973), *The rise of the western world: A new economic history*, Cambridge: The Press Syndicate of the University of Cambridge.

Reuters (2010), "EU industry protests against carbon 'benchmarks'", http://www.wbcsd.org/plugins/DocSearch/details.asp?type=DocDet&ObjectId=MzcyNDQ. Accessed 5th March 2010.

Roper, J. (2005), "The meanings of social entrepreneurship", *Corporate Governance*, 5(3), 95 – 104.

Schumpeter, J.A. (1911), *Theorie der wirtschaftlichen entwicklung*, republished as: Schumpeter, J.A. (1934), *The theory of economic development: An inquiry into profits, capital, credit, interest and the business cycle*, Cambridge, Mass: Harvard University Press.

Schumpeter, J.A. (1942), *Capitalism, socialism and democracy*, Harper & Row: New York.

Shiva, V. (2006), *Earth democracy: justice, sustainability and peace*, London: Zed Books.

Spear, R. (2006), "Social entrepreneurship: a different model?", *International Journal of Social Economics*, 33(5/6), 399–410.

Szabo, M. (2010), "Climate bill setback forces clean development rethink", http://planetark.org/wen/56468; The Case for a Climate Bill http://www.nytimes.com/2010/01/24/opinion/24sun1.html?ref=opinion. Accessed 5th March 2010.

Tarschys, D. (2001), "Wealth, values, institutions: trends in government and governance", in: *Governance in the 21st Century*, Paris: OECD, 27-44.

Turner, H.R. (1997), *Science in medieval Islam*, Austin, Texas: University of Texas Press.

Thompson, J. (2002), "The world of the social entrepreneur", *International Journal of Public Sector Management*, 15(5), 412-431.

Thompson, J.L. (2008), "Social enterprise and social entrepreneurship: where have we reached? A summary of issues and discussion points", *Social Enterprise Journal*, 4(2), 149 – 161.

Valaskakis, K. (2001), “From Westphalia to Seattle: Long term trends in global governance”, in: *Governance in the 21st Century*, Paris: OECD, 45-66.

Weber, M. (1947), *The theory of social and economic organization*, translated: A. M. Henderson and T Parsons. London: Collier Macmillan.

Weber, M. (2002), *The Protestant ethic and “the spirit of capitalism”*, translated: P. Baehr and G. C. Wells, London: Penguin.

Webster, B. and Elliott, F. (2009), “Gordon Brown calls for new group to police global environment issues”, http://www.timesonline.co.uk/tol/news/uk/article 6963482.ece. Accessed 3rd March 2010.

Wheeler, D. and Sillanpää, M. (1997), *The Stakeholder Corporation. A blueprint for maximising stakeholder value*, Pitman, London.

Wheeler, D. Colbert B. and Freeman, R. E. (2003), “Focusing on value: reconciling corporate social responsibility, sustainability and a stakeholder approach in a network world”, *Journal of General Management*, 28(3), 1-28.

Wheeler, D., McKague, K., Thomson, J., Davies R., Medalye, J. and Prada, M. (2005), “Creating sustainable local enterprise networks”, *MIT Sloan Management Review*, 47(1), 33-40.

Wighton, D. (2010), “Davos: Unilever chief in plea on climate change”, http://business.timesonline.co.uk/tol/business/economics/wef/article7007228.ece. Accessed 3rd March 2010.

Yunus, M. (2003), *Banker to the poor: Micro-Lending and the battle against world poverty*, New York: Public Affairs.

Yunus, M. (2008), *A world without poverty: Social business and the future of capitalism*, New York: Public Affairs.