

Brundtland Report Revisited: Toward a New Humanist Agenda¹

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ABSTRACT In the spirit of the *Brundtland Report*, the article singles out not only the profound institutional and cultural barriers to accomplishing a more sustainable development, but reflects on several of the necessary radical steps and strategies: the transformation of capitalism, the transformation of politics and regulation, the restructuring of science and education, and a revolution in culture. The article points out several untapped forms of education, in part viewing society as a learning system where a multitude of small actions can make a major difference. It ends with a tentative proposition of a new humanist agenda for a sustainable future. In general, the article addresses the challenge of transforming the complex aggregate of modern society – its cultural, economic, political and scientific components — in order to tackle dramatic environmental destruction.

1. INTRODUCTION

There is now a broad international consensus on the manifold ways in which the flourish-

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ing of life on earth is threatened by ruinous human interventions. Countless reports and statistics show how basic necessities of life provided by the earth such as food, water, clean air and an environment conducive to human health, are being harmfully affected by massive environmental destruction. The new context of the global financial crisis is not promising any exit out of the Armageddon. On the contrary, if we are to believe the chorus of international politicians and financial advisors, the task of the nations today is to consume themselves out of the current recession.

However grandiloquent it sounds, no human goods - life, love, liberty, the freedom to pursue a meaningful existence - can be enjoyed without the flourishing of life on earth. We take this to be a self-evident truth (Witoszek 2007). In the face of the daunting problems and dilemmas there is an acute need for significant reforms of our ways of thinking, organizing, and acting.

The interrelated threats which figure in emerging public agendas across the globe (adapted from Rechkemmer 2004) include among others (see Figs. 1 and 2):¹

- Climate change due to the increase in greenhouse gases entering the atmosphere
- Depletion of the stratospheric ozone layer by CFCs and other gases
- Acid rain as well as the effects of a complex mix of air pollutants on forests and crops
- Mismanagement and shortages of freshwater resources

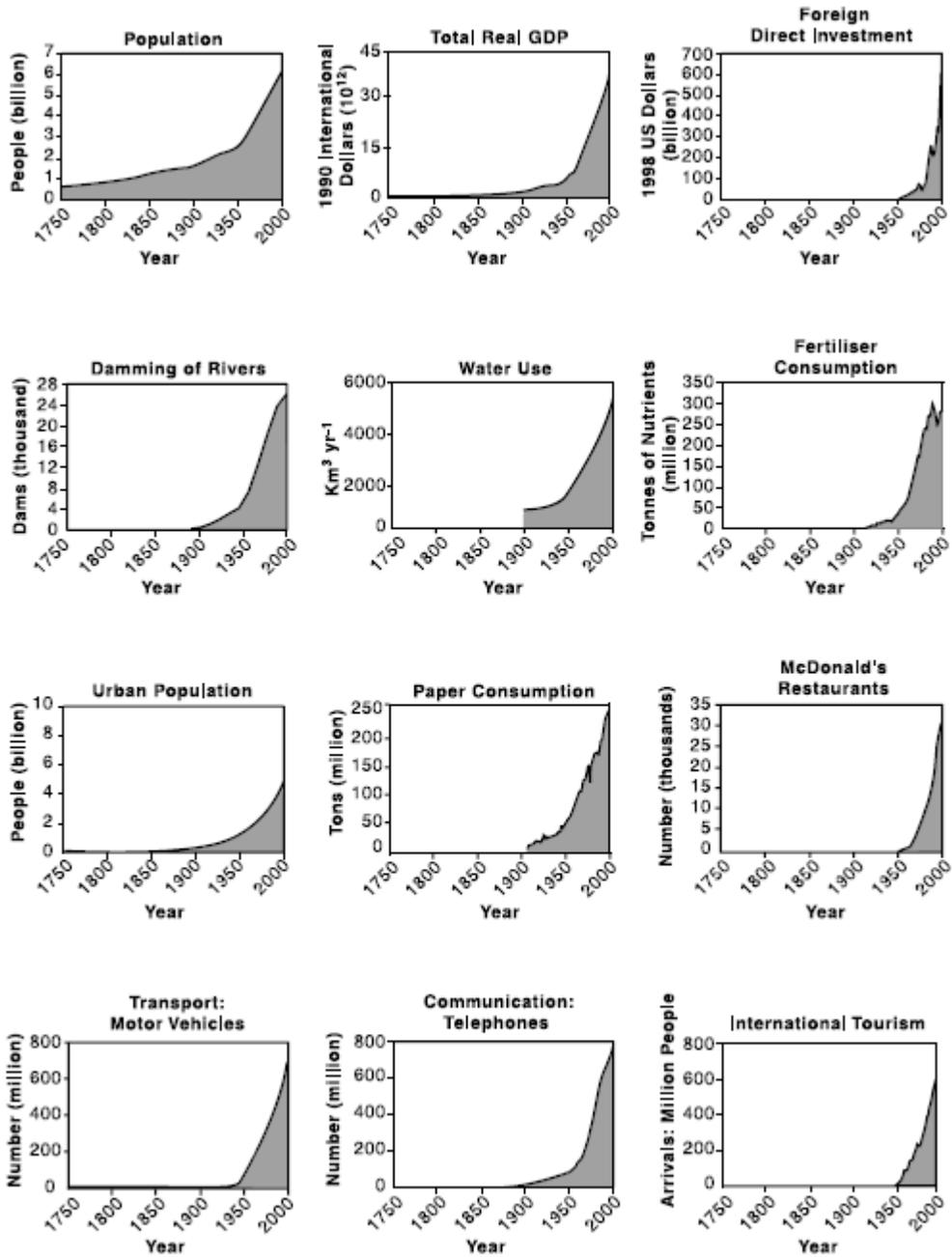


Fig. 1. Indicators of human driven environmental stressors

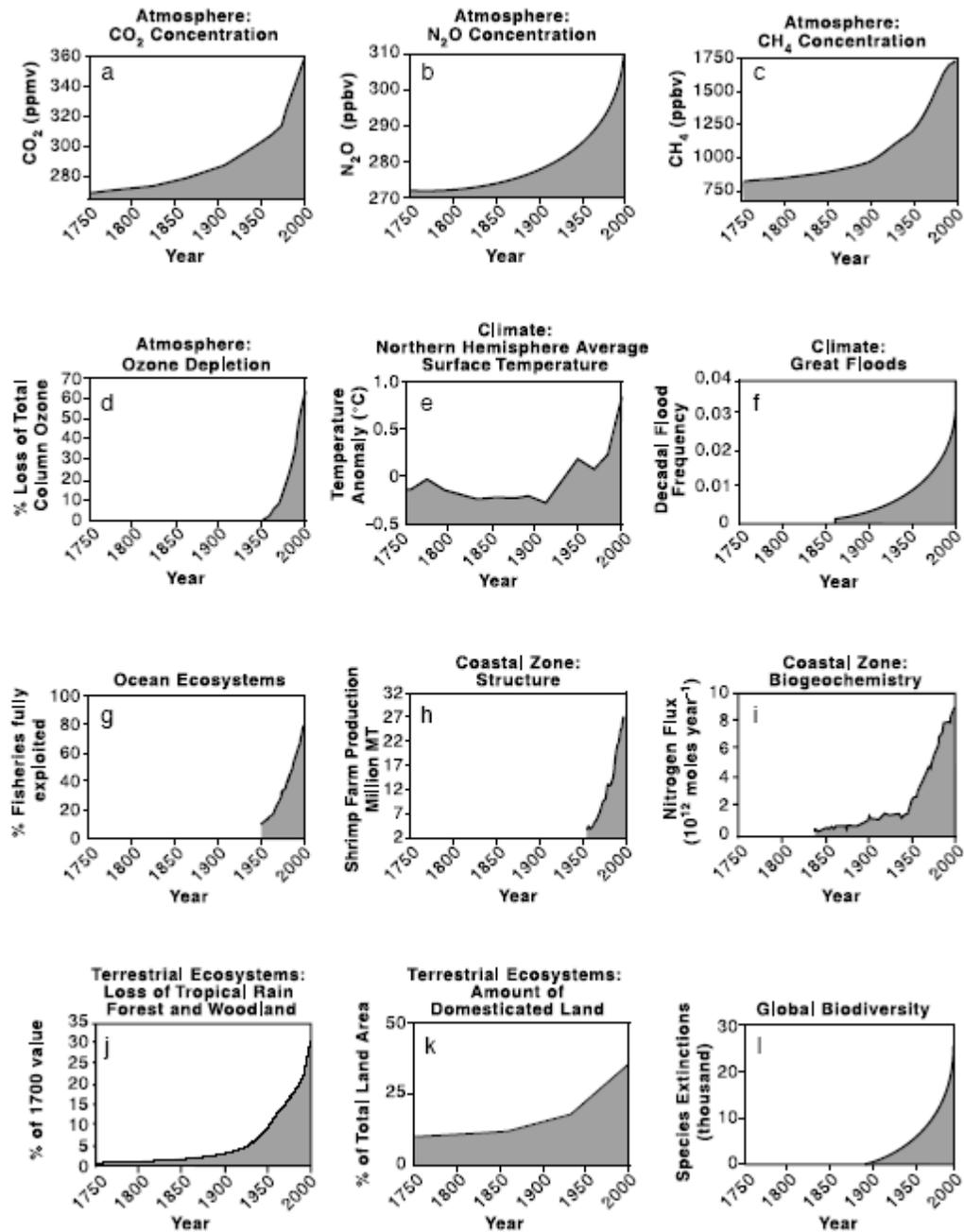


Fig. 2. Indicators of physical and ecological stress (and changes in stress) of planet earth

- Overfishing, habitat destruction and pollution in the marine environment
- Loss of crop and grazing land due to desertification, erosion, conversion of land to non-farm uses, and other drivers
- Depletion of the world's tropical forests, leading to loss of forest resources, serious watershed damage (erosion, flooding, and situation), and other adverse consequences
- Mass extinction of species, principally from the global loss of wildlife habitat, and the associated loss of genetic resources
- Threats to human health on local, regional, and global environmental levels from exposures to chemicals in production processes, products, consumption activities – often as a result of the misuse, overuse, and mismanagement of such chemicals as persistent organic pollutants, pesticides.
- Rapid population growth and migration, burgeoning Third World cities, and ecological refugees

Global environmental change touches upon every facet of human existence: production, consumption, education, research, politics, and societal values as well as health, diet, leisure, quality of life, everyday practices.

2. POINT OF DEPARTURE

As background for our attempt to redesign of the agenda of sustainability, let us review some of the facts. Scientific research² carried out over the past decades has shown, among other things, that:³

- ***The Earth System behaves as a single, self-regulating system comprised of physical, chemical, biological and human components.*** The interactions and feedbacks between the component parts are highly complex and non-linear.⁴ The scientific understanding of the current and historical dynamics of the Earth System has advanced greatly in recent years and provides a sound basis for evaluating many of the effects and consequences of human-driven change.
- ***Human activities are significantly and, in many instances, harmfully changing the Earth's environment (see Figs. 1 and 2).***⁵ Anthropogenic changes to the planet Earth are clearly identifiable beyond nat-

ural variability and include the impact on the planet's land surface, oceans, coasts and atmosphere and its biological diversity as well as water cycles and biogeochemical cycles. The potential for radical climate change and other possible effects of greenhouse gas emissions is now recognized – though it constitutes only a small fraction of other global change developments.

- ***Global change cannot be understood in terms of a simple cause-effect paradigm.*** Human-driven changes cause multiple effects that cascade through the Earth System in complex ways. These effects interact with each other and with local- and regional-scale changes in intricate ways that are difficult to predict or even to understand. Predictions often fail, surprises abound.
- ***Earth system dynamics are characterised by critical thresholds and abrupt changes. Human activities can inadvertently trigger such changes with severe consequences for Earth's environment and inhabitants.*** Natural scientists report that the Earth System has operated in different states over the last half million years, with abrupt transitions (a decade or less) sometimes occurring between them. Human activities have the potential to switch the Earth System to alternative modes of response that may prove irreversible and far less hospitable to human and other life.

The probability of a human-driven abrupt change in Earth's environment is increasing as available research data more and more demonstrates.

- ***In terms of some key environmental parameters, the Earth System has moved well outside the range of the natural variability exhibited over the last half million years.*** The nature of changes now occurring *simultaneously* in the Earth System, their *magnitude*, and *rates of change* are unprecedented. Many natural scientists claim that the Earth is currently operating in a “no-analogue state.” We may already be beyond the bounds of the system that produced ice ages and “inter-glacials”.⁶ (See Figs. 1, 2)

3. CONCRETE STEPS TO CREATING A NEW SOCIAL-ECOLOGICAL ORDER

Given what is already widely recognized as an environmental crisis (or more precisely, several crises) and the threat of much worse to come, *there is a need to redirect and transform our economic, political, scientific, and educational systems to protect our earth home and to translate the agenda of sustainable development from being an instrument of “moral blackmail” deployed by governments to a “culture” which is accepted by the world at large.*⁷ This involves the project of redesigning The Brundtland Report in the light of the 21st century challenges. The world is not the same as when the Brundtland Report was written in 1987. Twenty years later we are all affected by both positive and negative impacts of ‘globalization’. Transnational corporations are increasingly important actors, both benefiting and harming people and the environment; new forms of communication have made both education, propaganda - and terrorism - faster and more effective than ever; non-governmental actors other than governments and corporations apply pressure and increasingly influence legislation, regulation, and management; the energy crisis creates both hardship and opportunities; social migration leads both to exhilarating trans-border identities and to the exacerbation of xenophobic, nationalist sentiments. Never before has humanity been so mobile, and never before has it been confronted with such massive challenges to its own security. The affluent, Cartesian West is no longer an unassailable, rational manager of the world order: today it has to reckon with a force which it has long tried to dismiss or suppress – the force of identity, culture and religion in formerly colonized regions or in fast growing economies like China and India.

It is precisely this cultural dimension – one that has been conspicuously absent from the Brundtland Report - that we would like to highlight in our paradigm of sustainable renovation.

The following six principles are grounded in knowledge from contemporary social science and humanities about the functioning and development of societies.

3.1. We Need a New Ethics for Global Stewardship and Collective Problem-solving⁸

Because the accelerating human transformation of the Earth’s environment is not sustain-

able, the *business-as-usual* way of thinking about and dealing with current global environment change is *not* an acceptable option. It must be ended and replaced by deliberate strategies and institutional arrangements of good management to sustain the Earth’s environment. Meeting social and economic development objectives must be accompanied by a revival of moral communities:⁹ The search for the foundations of environmental ethics as well as work on the ethics for key groups and populations on the planet earth: business ethics and corporate social responsibility, the ethics of good government, ethics for scientists, NGO ethics and the ethics of everyday citizens, families, and communities, etc.¹⁰ To this effect, one of the objectives of the Oslo Sustainability Initiative has been the exploration of a *codex of partnership* (Witoszek 2007). The codex of partnership is a crisis toolkit which prompts actors to follow the tradition of Scandinavian mutual aid systems (*dugnad*) that ensures a swifter and better use of resources and resolution of problems. The motif of partnership figures both in Brundtland’s *Our Common Future* and in the *Earth Charter* (both referring to the necessity of “global partnership”). Retranslated into a minimum ethical programme for the crisis of the 21st century, the rules of partnership offer a *negotiatory platform* between contemporary and future generations, between men and women, humanity and nature; between continents and governments, between industry and politicians - and between the natural, humanist and social sciences. The partnership codex is less a grand and abstract normative system and more a value platform applicable to concrete political and economic contexts. It aims at public good irrespective of motivations (idealist, rational or profit driven). It draws on the principles and advantages of both the social interest ethic and the economic environmental ethic of people and nature. The partnership codex – in contrast to the principle of self-interest and *homo economicus* — is grounded in the concept of relation, or a mode of connection. It recognizes both the continuities and differences between human and non human nature. It perceives nature as an active agent and asks humans to listen to, understand, adapt to, and “dance” with nature. Though the subject needs more research, there are reasons to believe that the partnership codex may be the a starting point of the much needed moral revolution in big busi-

ness which, as the financial crisis has shown, undercuts the conditions of its own perpetuation by destroying the environment from which it extracts free resources.

This new ethical codex calls for a new version of the Declaration of Independence: the *Declaration* whose core message is that *all life on earth is interdependent*. This new *Declaration of Interdependence* should become now the cornerstone for our thinking, the shaping of our institutions, and our policies and other actions. (Witoszek 2007) Survival requires that we recognize and, if possible, reverse the damage that we are doing. To replenish and to protect the earth's riches is the duty of all people. To play on the words of the American Declaration: "Whenever any government or enterprise becomes destructive of this end, it is the right of the people to act to stop this destruction and to strive to create a better world."

3.2 Transformation of the Pillars of Capitalism

Sustainable development will have to be sustainable economically in the globalized world. Economic institutions must be critically reviewed and realigned from a sustainable development perspective. This will entail making production, distribution, and consumption much more transparent as a basis for accountability and realignment. For instance, many environmental effects are redistributed via the world market mechanism (international trade and investment). These effects have to be made more visible, better known, and realigned appropriately. Ultimately, the rules of international trade (for example, World Trade Organization (WTO) rules, petroleum price regulation, etc.) will have to be rewritten to take into account in a fundamental and systematic way ecological as well as social justice considerations. Of course, this will be a difficult, painful process. There is bound to be a formidable mobilization of economic and political powers as well as scientific authority to oppose this. Paradoxically, as has been observed, one of unintended consequences of the financial recession at the beginning of the 21st century can be an opportunity to "civilize" capitalism. This would entail, among other things, substantial institutional redesign and global policy changes, reducing, for instance world market competition and insecurity (as George Soros and others have argued). The earth-friend-

ly capitalism requires, we would argue, substantial changes in the rights to maximize economic gain. In other words, those rights which typically allow for the disregard of many significant non-monetary consequences will have to be rewritten. The irresponsibility of much contemporary capitalism would have been replaced with constrained powers; the latter formulated in terms of more limited rights as well as of increased responsibility with respect to the physical environment as well as social conditions. While conventional, "capitalist freedoms" would have to be greatly reduced, new freedoms and incentives would need to be established in areas related to green technological innovation.

Corporate planning and determination of enterprise innovations and developments would be required to march to the tune of a sustainability piper. Here we have in mind decisions and practices relating to the production and use of energy and other natural resources, chemicals, transport systems including private transportation, chemically intensive farming, waste production, technological innovation and development, etc. In general, key dimensions of economic activity would require to a greater or lesser extent some form of "societal regulation" which would aim both at sustainability and social justice.

Key pillars of contemporary capitalism such as corporate structures, management practices, and accounting systems, as well as property arrangements must be radically reformed in order to achieve a sustainable economy. One promising form of a reformed capitalist project is "stakeholder capitalism" (Bogle 2005).¹¹ The stakeholder model conceptualizes business enterprise as operating in a nexus of multiple interests which enterprise decision-making and development would be required to take into account (as current occurs to some but not to a sufficient extent): employees, the suppliers, customers, shareholders, the state, local communities, environmentalists, and the larger society generally – the so-called *stakeholders*. In this model, the managers are key agents for resolving conflicts and finding strategies of enterprise development that satisfy a spectrum of interests or stakeholders. Stakeholders would participate in institutionalized and effective ways in discussing and influencing corporate managers' planning and decision-making. In such a stakeholder framework, boards of directors and

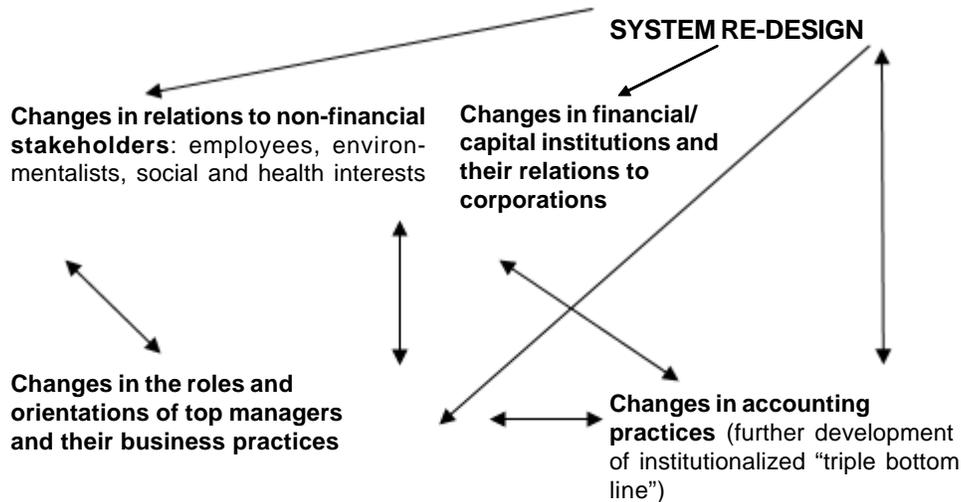


Fig. 3. Redesigning four economic pillars to establish “stakeholder capitalism”

managers would take on a much broader set of responsibilities beyond simply pursuing profitability and the value of company stock.¹² Such a system would be more capable than present models of aligning its institutional arrangements with emerging shared values about sustainability and social justice.

In the past, systematic regulation has been essential to an effective and relatively stable capitalism (for example, Burns 2006; Burns et al. 2003). Our analyses indicate that some forms of regulated capitalism can be made more compatible with long-term ecological and social sustainability than others. In the universe of the managers’ mind, the imperative of sound profit should be accompanied by a complex spectrum of other imperatives; matters of sustainability, productivity, corporate and societal responsibility, reduction of poverty, and more equitable distribution of wealth. *Key elements in any redesign would entail reforms of financial institutions, accounting systems and the roles of corporate management and its relationships to stakeholders* (see Fig. 3).

This version of “stakeholder capitalism” is a counterpoint to “finance capitalism.” On an informal level today, many corporate interests accept the engagement of “stakeholders”, and invite them on a regular basis into corporate discussions (“hearings”) and deliberations about the introduction of new technologies and new products, and dealing with environmental and health issues, among others. What is at stake

ultimately is the effective institutionalization of such procedures. *This means bringing different categories of stakeholder into corporate governance and the deliberations on policy, strategy, and investments.* Of course, which stakeholders are to be represented, how they would be selected, what role(s) they would play, still remains to be spelled out (and would entail contentious issues). Experiments with such arrangements have been going on for some time in the Scandinavian context but also in other parts of Europe as well as in North America. Much can be learned from these experiments, their successes as well as their failures.

“Stakeholder capitalism” involves the reduction of the dependence of companies on international financial markets, and therefore the reduction of the *liquidity of financial transactions*. The exaggerated emphasis on “shareholder value” would be reduced institutionally – as the major driver of business activity. This is achievable not only through taxation and direct legal constraints but particularly through changing corporate power relationships, in part by bringing stakeholders formally into the governance structures and, in part, through other reforms, for instance, relating to accounting and accountability.

Needless to say that a “democratization of the firm” implies a major reform of property regimes and greater attention to obligations and constraints with respect to the uses and products of property. This may be achieved not only

through imposition of legal constraints, but by the institutionalization of new accounting systems (for example, “the triple bottom line”) which extend beyond financial results, encompassing social and environmental considerations.

Further, the transition to a reformed capitalism involves redesigning incentive structures for top management via treating the corporate social responsibility (CSR) not just as a moral spice adding respectability to a capitalist enterprise, but a genuine reform movement). The new incentive structures should re-orient management away from a preoccupation (in many instances, an “obsession”) with the value of corporate stocks and stockholders interests and toward much greater emphasis on ecological and social considerations. Managerial performance and merit should be consistently assessed and rewarded according to multidimensional criteria involving not only profitability, but the health and welfare conditions of employees, reductions in pollutants and wastes, and the development of ecologically improved production methods and products. This would entail of course a transformation of managerial roles as well as management education and training. Above all, there would be greater autonomy from financial structures and greater engagement with multiple conflicting values and demands as well as the complex negotiation processes that this much more complex world of legitimate interests implies.

Top recap our argument: *New institutional designs and forms of regulation are needed to reshape current capitalist arrangements and mechanism. These include, for instance, stakeholder models that, by contrast with financial capitalism, appear to be much more compatible with social and ecological requisites* (Bohle 2005). In a stakeholder type of capitalism, the following principles would be observed:

- (1) The multiple interests and aspirations of employees, communities, customers, and suppliers, environmentalists, etc. – “the stakeholders of the company” – are taken into account, in part through legally binding representation and participation in corporate structures such as the Board of Directors.
- (2) The Boards of Directors have thus a much broader set of responsibilities, that is, beyond simply profitability, the value

of the stocks or fiscal obligation (taxation).

- (3) In addition to far-reaching system re-design, incentive structures and accounting systems would be re-aligned to reflect the objectives of sustainable development.
- (4) The new incentives structures and normative pressures would be oriented to values and conditions other than maximizing profitability and shareholder value in pursuing corporate decisions and determining policy.

Is such a new paradigm for capitalism possible? The answer is well worth exploring. There are already many promising improvements and developments in this direction.

Economic investment, innovation, and growth start being redirected, above all to bring about technological adaptation and innovation for the aims of sustainable development. Many businesses have seen opportunities in making such sustainable innovations in production, distribution, and products. The appropriate technological development for sustainability would, however, require novel forms of governance intervention designed to facilitate or to encourage green innovation and development of appropriate technologies as well as products for sustainable production. Whether these governance mechanisms would be organized and implemented through stakeholder capitalism, business associations, NGOs, state agencies, inter-governmental organizations, or new combinations of these remains to be worked out (see the next section).

3.3 Beyond Government: Supporting New Systems and Strategies of Governance and Regulation

Even earth-friendly governments are not likely to do much, since radical measures would create uncertainty and instability, for which governments will be held accountable. Their actions will be more symbolic in character. They will, of course, support powerful interests which claim that they are prepared to act effectively. But one cannot expect much from political leaders who are extremely cautious not to alienate powerful economic and media interests on the one hand,

and their constituencies through radical actions which undermine the economy, welfare, and lifestyles. Fortunately, there is already an emerging global trend manifested in *thousands* of sustainability governance structures and mechanisms, NGOs, and local and transnational activist groups as well as expert networks (Burns 2012).¹³ Some of them are confrontational, but quite a significant number follows the idea and ethos of partnership in their agendas. Their growing importance today indicates that governance is a broader and more promising concept than government, though it does not replace it. *Governance refers to a complex of social steering processes (public as well as private) where competencies are shared among multiple actors, public as well as private (local, national, and international); it results in changes in activities, outcomes, and developments – in particular, rule-making, implementation, and institutional innovation with respect to sustainability issues and strategies.* The actors participating in modern governance are not only “political” agents (parties, states, international government organs), but a whole spectrum of civil society agents: economic interests (private companies, business alliances and associations), representatives of community associations, NGOs, groups and associations of scientists and other experts, etc. This represents new modes of regulation as well as a new form of “organic democracy” (Burns 1999).

The “era of governance” has been necessitated by the emergence of entirely complex hybrid forms of coordination and regulation in contemporary society. Public-private boundaries have become blurred where business interests, as well as NGOs, have become intimately involved with government actions (and in some cases are more important than government agents).¹⁴ The era of governance is also signaled by considerable power and sovereignty shifts upwards to supra-national bodies,¹⁵ downwards to regional and local levels and outwards to multiple agents in civil society. In short, state and state-centric forms are no longer the only and the most important forms of rule-formation, policymaking, and regulation in a number of areas. *Environmental governance* concerns, of course, environmentally significant rule-making, policy strategies, and interventions aimed at changing environment-related incentives, knowledge, institutions, decision-making and

behavior (cf Lemos and Agrawal, 2006). It signifies a wide set of regulatory processes, not just international governance mechanisms and their impacts at the international level or just the state and its agencies at the national and subnational levels. Lemos and Agrawal (2006) *highlight the hybrid, multi-level and cross-sectoral nature of emerging forms of governance.* The shift since the 1960s has seen the engagement of specific change agents such as market actors, NGOs, communities and local institutions, as well as state agents as key actors advocating effective environmental protection and management. In the past 15 years especially, the authors point out that a number of new sets of instruments of environmental governance have emerged. They identify, in particular, three *emergent forms of cooperative governance*: (1) co-management as the form of collaboration between state agencies and communities; (2) public-private partnerships between market actors and state agencies; and (3) social-private partnerships between market actors and communities. There are others as well: *partnerships* between business firms and NGOs, between state agencies and NGOs, and more complex associations engaging a diversity of types of societal actors. In general, we are witnessing a profusion of partnership forms and activities when it comes to addressing environmental problems and issues.

Emerging forms of environmental governance rely, on the one hand, on partnerships and, on the other hand, on the mobilization of individual incentives characteristic of market-based instruments (and “win-win” type conditions) to accomplish environmental regulation. Since the aim is to gain the willing participation of a range of actors who would subject themselves to regulatory mechanisms, they are viewed by many as being amenable to more efficient implementation. However, the fact that human interventions in ecosystem processes are already leading to unsustainable use of a major part of the ecosystem implies that, together with increased efficiency, *it is equally necessary to work toward systematic restraint on the human use of major ecosystems.* Effective environmental governance requires, then, the incorporation of knowledge about limits on aggregate levels of human activities that depend on high intensities of resource exploitation or lead to high levels of pollutant emissions. In designing and assessing strategies of environmental gover-

nance, it is critical therefore to focus not just on efficiency and equity, but also on defining limits of exploitation and developing sustainable alternatives (Lemos and Agrawal 2003:23).

As a social trend and as a political project, the establishment of effective earth system governance represents a challenge. Some degree, level, or type of nation-state as well as extra-state intervention will be necessary to encourage (or to compel) actors to change their present behaviors and to act in more sustainable ways.¹⁶ States and regional bodies such as the EU have a major role to play, not only in taxing or outlawing non-sustainable patterns of production and consumption but also in providing incentive systems including subsidies to encourage more sustainable patterns of decision and action. On the one hand, we need to continue exploring and developing innovative forms of sustainability governance¹⁷ and new models of “deliberative and reflective democracy” and “association democracy” (for example, Giddens 1994). They can help bring about normative consensus across a diversity of social actors (individual and organizational), publicizing agreement to a wider public, and building all of this into ‘normal’ forms of thinking, of politics, of everyday life. These initiatives in innovation must be further elaborated and tested in the search for optimal solutions.

3.4 Establishing a New System of Global Environmental Sciences Including the Social Sciences and the Humanities (see *Amsterdam Declaration* referred to in footnote 5)

Such scientific development has already begun to evolve from complementary approaches of the international global change research programmes. These developments need of course further strengthening and elaboration. Drawing on the existing and expanding disciplinary base of global change sciences, we need to develop partnerships across disciplines, across environments and development issues as well as across the natural and social sciences and the humanities. Collaboration across national boundaries is already taking place on a massive scale, but it is highly uneven across the globe (Burns 2012). Efforts must be intensified to enable the full involvement of developing country scientists. The complementary strengths of nations, regions, and professions should be mobilized to

build an effective international system of global environmental sciences.

The current climate shift and the global economic crisis double the need for strengthening the role of the social sciences and the humanities. Their insights are essential in developing understandings and strategies of how to redirect and transform society, in particular, its institutions and cultural formations most relevant for accomplishing sustainability. As argued here, shaping and developing a sustainable society will require radical transformations - that is, a form of socio-cultural revolution - best realized through gradual or incremental changes and legitimized through democratic means. The social sciences and humanities have a substantial knowledge base about such processes of change and development, the vast potentialities in every society, key constraining and facilitating factors, and also the manifold risks involved in such undertakings.

3.5 Society as a Crucible of Learning; New Educational Strategies and Systems are Necessary¹⁸

The project of sustainable revolution will never succeed without the accompanying educational effort. The alter-globalist civil initiatives, projects of “green” or “natural” capitalism” or new forms of governance will never succeed without making basic concepts, principles, stories, and strategies a core part of education at all levels and in all countries. This is a complex and challenging process. New educational institutions, programs, and courses need experienced teachers, and a holistic, interdisciplinary mindset. Such mindset exists only in theory. In reality, schools and universities, teach knowledge which comes in silos and chimneys. A study conducted between 2004-2007 shows that in Norway, a country which boasts to be a cutting edge of environmental thought, teachers have been fleeing from sustainable education (Laumann 2007). They do it for two reasons. Firstly, because sustainability has been largely mediated through a dead, technocratic language of policy documents. Secondly, because it requires an interdisciplinary competence and imaginative flair which few can muster. Even if we assume that in some communities there are after-school activity centers filled with informed idealists who are able to engage both parents

and children in issues and initiatives for sustainability, the teachers are more often than not treated as oddballs and the education as a drag about recycling. In order to succeed, we have to rethink and rework the Renaissance idea of the *paideia*: *a holistic humanist education which would comprise new insights into the interconnectedness of things in modern societies.*

Modern developed societies – which have to take the lead in this process - must broaden conventional conceptions of learning and education. Contemporary social science and the humanities show us that “learning” and “education” are processes which are not confined to schools; they are mediated by mass media, by everyday exchanges and discussions among people, by expressions of religious leaders, the heritage industry, and the arts. There is also an open cultural space for sustainable education in film-making, theatre performances, literature, music, dance, and the Worldwide Web. Science centers, museums, zoos, and aquaria, all of which have informal learning agendas, are exciting venues for dialogues and presentations of the sustainability story.¹⁹ They have personnel who often are experienced and adept at engaging the public in dialogues. These institutions are typically part of large networks or infrastructures, both at the local and global level, and can increase the efficiency of outreach initiatives. It goes without saying that the mass media – as the “fourth power” (in addition to corporate, governmental, and religious powers) – is a key part of societal learning and education. Al Gore’s documentary, “An Inconvenient Truth” has undoubtedly helped many people visualize concretely what is happening with respect to global warming – thousands of miles away from their homes and workplaces. Hollywood films dramatising changing weather patterns and increased destructiveness of natural elements play a role in raising people’s consciousness about environmental scenarios, though their focus on the spectacular aspects of the Armageddon inspires fatalism rather than creative adaptation. There is also the new media, the web, the increasing use of sites and blogs, which provide opportunities for new kinds of learning and education as well as engagement in sustainable initiatives.

Some individuals and organizations have been quick to exploit these opportunities. NGOs make use of the old media (TV, radio, and newspapers) as well as the new IC media; in the latter

case they do this through their provocative websites, their posting of monitoring reports on corporate, government, and community misbehaviour. These influential agents of civil society are not simply lobbying or pressure groups but major forces in the process of raising consciousness, educating, and mobilizing people to push for change, whether this takes place on the local level (for instance, struggling against local hazardous waste dumping or the use of dangerous herbicides and pesticides), the government level (such as pointing out that existing environmental laws and policies are not being enforced), or on the global level (for example, challenging multi-national corporate policies and interests).

Education about sustainability in the broad sense - as a new *paideia* – would ideally be operative if it comprised all levels of society, including: power-holders and power-brokers, policy makers, business leaders, community leaders, representatives of NGOs, academics, and citizens.²⁰ Such an approach involves working out multiple strategies and methods for making sustainability interesting, important, alive and vital to the twenty-first century.

3.6. Sustainable Development Needs to Enter New, Powerful Mobilizing Stories (Witoszek 2006).

It is often overlooked that the most fascinating, compelling narratives that have nourished human imagination since the time immemorial have to do with profusion and abundance (from Adam and Eve, King Midas, Aladdin’s Lamp, Dr. Faustus, the idea of *carpe diem*, to soap opera versions of the American Dream watched all over the world). People at large are drawn to the myths of the hedonist greatness and glory in the same way they are NOT drawn to the penitential story of conservation and restraint. Thus, one of the underestimated obstacles to sustainable development is narrative, or mythical, deficit (Witoszek 2007). Many, if not most, people on the planet are put off by stories advocating asceticism, constraint, sobriety, temperance, astringency (although “recycling” has a faintly positive ring for some). A major characteristic of modern society is that hegemonic discourses eulogize values and lifestyles that are to a greater or lesser extent non-sustainable. On this “unsustainable side”, charismatic narratives such as “the American Dream”, or the account

of the magic passage from rags to riches, or a “slum dog millionaire” nourish people’s imagination the world over. At the level of institutional leadership and policymaking, we find an obsession with “more is better,” “growth is good”, and “economic development is necessary” – the imperatives which figure not only to contemporary, advanced societies but also to developing countries such as China, Poland, India or Ghana. The brutal fact is that we lack compelling images and stories of sustainability which could defy the fatal attraction of the American Dream, and which would be capable of capturing the imagination of rich and poor alike all over the world. The challenge is a daunting one. In the highly seductive world of consumer capitalism, there is a multitude of communicative and learning mechanisms serving to peddle the opposites of constraint and conservation and constraint, drafting visions of “freedom” (the freedom to waste, among other things), “happiness” and “pleasure”. These messages work; they engage and even enchant most people through an increasingly sophisticated advertising (especially when combined with the practice of engaging celebrities with whom many people identify and imitate). Journals, books, TV and other media peddle their strategic, profit-making, unsustainable scenarios. Neighbors, people at work, and associates who demonstrate affluent lifestyles, exert pressure on the rest of the population.

Through open and “free” communication new and highly vibrant “needs” are formed; some of them are satisfied through “shopping” and new forms of consumption, the others are promising a sense of “power”, “freedom”, or “happiness”— or all of these. Indeed, the pursuit of “happiness” is understood by many as the freedom to buy ever new and exciting goods. This is part of a desirable, comprehensive lifestyle resting on a *deep-rooted value complex* – which powerful institutions play a role in maintaining and elaborating.²¹ This is just to note that the consumption society in its postmodern version is not necessarily “materialistic” in the conventional sense. There are many practices which are central to contemporary capitalism – for instance, “hyper-consumption” and “compulsive shopping”, which spring from non-material needs such as high personal anxiety, lack of confidence, stress, loneliness, the search for self-definition.

There are, of course, counter-narratives and counter-narrators (including those relating to environmental and conservation policies), that point to emerging values and practices consistent with principles of sustainability, conservation, recycling, and economizing. Among these “sustainability discourses”, there are “everyday life stories” which teach about earth-friendly lifestyles, as well as new narratives of business practices based on the discourses about corporate social responsibility and business ethics as well as environmental ethics generally.²² The questions are: how to make these narratives captivating for electorates and, especially, for young generations? How to prevent CSR from being a glorious story fronted in corporate agendas and reports – and hiding dirty deeds? And finally, how to overcome the hegemony of the story that growth is good and that to consume is to fulfil one’s patriotic duty in the times of global financial crisis? There is a need for a cultural struggle – a new *Kulturkampf* – which starts with new stories and new heroes that would be powerful enough to inspire a broad mass mobilization for the planet in crisis.

4. CONCLUSION: TOWARDS A HUMANIST AGENDA²³

As have pointed out, Millions of small initiatives can collectively bring forth a society that can endure and become sustainable. Unlike the Mayans, Easter Islanders, or other unfortunate communities which destroyed the ecology on which they depended, we know much more about our conditions and about what must be done.

Humanity in the extended sense – adding Hippocrates’ age-old “earth, air and places” – has until now had no voice, no leadership, no payroll, no budget, and no army. But first and foremost, it lacks a story that makes its common future a common reality, a compelling narrative that locates it in time and place, and that communicates the interdependencies that unite people in a divided world. As we have argued, sustainability is not just about policy and justice; it is first of all about ethics and aesthetics. The problem is that in most international sustainability discourse, including the *Brundtland Report*, there is little, if any, evocative prose, little sense of the mystery and wonder of life. The profound sense of belonging and connection to the earth that people often feel is seldom ac-

knowledge, nor are the feelings of kinship and compassion that humans often have with their non-human fellow travellers on the planet.

Admittedly, there is no entry for “culture” in the index of the Brundtland Report. There are passing references to “valuable native traditions” which, like the rest of the environment, should be protected and fostered. Sustainable development is to be an antidote to “an environmental crisis, a development crisis, and an energy crisis”. However, the concurrent cultural/ethnic, religious and civilizational crisis that has been pulling the world apart has received no attention. The neglect of culture in the Report means that major drivers in contemporary society are overlooked, for instance, the role of powerful belief systems and myths and narratives which we emphasized above. Sustainability is about the human condition and about values – hence the importance of a humanist agenda. There is no sustainability without sustainable cultures (see endnote 23).

NOTES

1. In 1972, the authors of the now famous study, *The Limits to Growth* (Meadows et al. 1972), predicted that global trends in industrial output, food production, and pollution would lead to economic and societal collapse in the 21st century. The report was dismissed by some as a doomsday prophesy, but in the 40 years since its initial publication, stories of environmental collapse have moved from the fringes to the core of the political mainstream.
2. Among others, research under the auspices of four large-scale global programs (see footnote 5).
3. The following 5 points draw upon The Amsterdam Declaration formulated by Berrien Moore III, Arild Underdal, Peter Lemke and Michel Loreau chairs, respectively, of four international global change research programmes - the International Exosphere-Biosphere Programme (GIBE), the International Human Dimensions Programme on Global Environmental Change (IHDP), the World Climate Research Programme (WCRP) and the international biodiversity programme DIVERSITAS. Prepared for “Challenges of a Changing Earth: Global Change Open Science Conference”, Amsterdam, The Netherlands 13 July 2001. http://www.sciconf.igbp.kva.se/Amsterdam_Declaration.html
4. This system exhibits non-linearity (with multi-dimensional variability in time and space).
5. These show the exponential growth of “drivers” of environmental change (the systems producing increased garbage, cars, water use, etc.) and the physical impacts (also, exponential growth curves).
6. The International Geosphere-Biosphere Programme (IGBP) refers to Anthropocene, a new geological period dominated by man’s activities (see IGBP Science, #4, 2001).
7. The problem with the notion of sustainable development is that it is not a technical concept but a normative idea and an umbrella term encompassing a variety of environmental issues. In practice then, one must focus on concrete empirical issues (such as those referred to on page 2), for example, depletion of forests, loss of crop and grazing land, dumping of hazardous wastes, CO2 production, global warming and climate change, etc. And initiatives and programs to overcome these destructive forces.
8. Jörgen Randers and Donella Meadows in a paper for the World Council of Churches argue that in the move toward sustainability “it will be necessary to develop new ethical principles, a goal that will inevitably involve religious institutions”. Others suggest that science as well as religion have fostered an attitude that encourages the dangerous exploitation of the earth and its nonhuman forms of life- Duane Elgin and Arnold Mitchell of Stanford Research Institute (SRI) note that “the American Friends Service Committee, long a leader in exploring a way of life of creative simplicity, defines *simple living* as a ‘non-consumerist lifestyle based upon being and becoming, not having’” (Brown 1981:329). Jeremy Rifkin (in *The Emerging Order: God in an Age of Scarcity*) points out that “‘dominion’” which Christian theology for so long has used to justify peoples’ unrestrained pillage and exploitation of the natural world, is suddenly and dramatically being reinterpreted. Now, according to the new definition of dominion, God’s first instruction to the human race is to serve as steward and protector over all of His creation.” (quoted in Brown, 1981: 333). Brown (1981:333) continues: “Many Christian scholars now argue that anything that exploits or harms God’s creation is both sinful and disrespectful – a far cry from the materialist view of recent centuries.
9. That is, we agree with the contemporary questioning and critique of many of the assumptions of modern “developed” civilization. Associated with this is the necessity of normative, cognitive, and institutional transformations: (1) normatively, we must continue the development of universal ethical codes, such as environmental ethics, business ethics and conceptions of corporate social responsibility, the ethics of democratic politics, NGO ethics, personal ethics, etc. (2) institutionally, there is an apparent need for reforms of capitalism, governance and governments, civil society, lifestyles, etc. (Opschoor, 1996; Opschoor and van der Straaten, 1993) (3) cognitively, we must develop holistic concepts and methods of modelling, for instance, elaborating ecological and systems analysis tools.
10. Jose Maria Castro Caldas proposed *basic values* in discussions with the Oslo Sustainability Initiative: (I) We hold it as self evident that LIFE is the only conceivable single value which trumps all other goods. This is a reverence for life. (II) We believe that this ethical commitment towards LIFE is

shared by most peoples cross-culturally and within our communities. (III) We believe that for individuals to be able to live up to this ideal supportive institutions are needed and this involves a transformation of the drivers of production, capital accumulation, and consumption. The economy is part of an ecological system. There is no economics without eco-system resources and mechanisms. Moreover, the institutions supportive of development in addition to dealing with issues of sustainability should serve people. This is the ultimate test or judgment – not objects. Also, growth is not the same as development. One can have economic growth without development on many key human dimensions. And one can have development without growth.

11. The notion of a stakeholder model, which is increasingly taken up in current discourses, has a relatively long history. In the late 1960s, the Swedish economist Eric Rhenman (Rhenman, 1968), among others, formulated such a model, and it was used in the research and consulting activity of his consulting firm, The Scandinavian Institute of Administrative Research (SIAR). His work and others in this period were seen as part of a general movement to humanise and decommodify work and production.
12. Brown (1981:322-323) stresses the *power and ultimate responsibility* of large business enterprises. Many multi-national corporations represent concentrations of power that rival those of the weaker nation states. And such power brings with it responsibility. Quoting Willis Harman of the Stanford Research Institute, he writes: “As the largest corporations begin to wield influences over human lives that are comparable to those of governments, they face a demand that has historically been made only of government – that they assume responsibility for the welfare of those over whom they wield power.”
13. These networks include not only natural, technical, and medical scientists but social scientists as well as scholars in the humanities. Interestingly, some scholars consider a cultural paradigm shift towards sustainability is already underway (Burns 2012). Ronald Inglehart (1977) found early evidence for a post-material shift of values in Western societies.
14. While “organizational citizens” and the new politics of organic democracy (Burns 1999; Burns et al. 2000, among others) are part and parcel of a major transformation of contemporary “democratic politics”, there are a number of drawbacks, among others, the complexity and lack of transparency, the fact that many peripheral and disempowered groups have little or no opportunity to participate in current efforts of, among other things, environmental governance (Lemos and Agrawal, 2006). Indeed, Ford (cited in Lemos and Agrawal, 2006:298) argued that Brundtland failed to address power issues, for instance, the awesome powers of capitalism.
15. Lemos and Agrawal (2006) point out that one can distinguish several dimensions concerning the *essence of international governance as it relates to ecological and sustainability issues*. They ask what is it that *de facto* governs international behavior? *One important line of thought in line with what is proposed here emphasizes the influence of norms and institutions and introduces the concept of international regimes* as sets of implicit or explicit principles, norms, rules, and decision-making procedures around which actors’ expectations converge in a given area of international policy and relations. The point is that the international arena does not have the same discretionary powers as the national regulatory context. Supposedly, international collaborative efforts are then, both for their initiation and subsequent implementation, to a high degree built on voluntary and negotiated means. Moreover, *cognitive and cultural aspects are likely to have a major impact*. More importantly, though, the notion of regimes suggests that international governance *de facto* can take place in a more or less formalized way. However, it is an empirical question as to what extent a written agreement is a more efficient instrument for governance than a looser regime.
16. Of course, corporate power is likely to be mobilized to resist some sustainability initiatives. There are many historical examples of a part of the corporate sector mobilizing its power to pursue its interests and, thereby, to impact negatively on many ecological and social conditions. This is pointed up by Stanley I. Fischler’s study (*Moving Millions: An Inside Look at Mass Transit*, Harper and Row, New York, 1979) of the systematic dismantling of U.S. urban streetcar systems during the early postwar period under the leadership of General Motors in cooperation with Standard Oil, Firestone, and others who stood to benefit from automobile sales (Brown 1981). GM formed a jointly owned subsidiary that proceeded to purchase and dismantle privately owned urban rapid-rail transit systems. Fischler quotes Congressional testimony by the San Francisco Mayor Joseph Alioto: “in all, General Motors, acting through subsidafry mass transit companies acquired forty-six streetcar systems in forty-five cities and converted all to smog-producing bus operations.” Los Angeles Mayor Thomas Bradley was no less emphatic: “The destruction of a system in Los Angeles with over one thousand miles of track took place in a very calculated fashion. The fact that a handful of giant corporations determined the form of ground transportation for the country’s three largest cities – and for a hundred other cities – should not be easily forgotten...” Thus these companies nourished US. dependence on the automobile, which in turn has helped deepen national dependence on petroleum (and its import), which at the same time has had economic as well as geo-political implications.
17. This was, for example, the theme of the Conference on the Human Dimensions of Global Environmental Change, “Earth System Governance: Theories and Strategies for Sustainability”, Amsterdam, May 24-26, 2007.
18. This sections draws upon a note prepared by Ilan Chabay for the Oslo Sustainability Initiative.

19. For instance, three science centers that have addressed aspects of global sustainability - largely climate change - with exhibitions and other media are the Exploratorium in San Francisco, Science North in Sudbury, Ontario, Canada, and the Marian Koshland Science Museum in Washington, DC. The Exploratorium (www.exploratorium.edu) has produced a number of webcasts on related topics, which have been seen by individuals all over the world, as well as featured in many other science centers. Science North (www.sciencenorth.on.ca) has created a traveling multimedia exhibit entitled, "The Climate Change Show." A set of permanent exhibits are featured at the Koshland Museum (www.koshland-science-museum.org) focusing on climate change. The Koshland museum also hosts well-publicized symposia for the community on the same issues.
20. It is well to keep in mind that in most institutional settings (corporate structures, government agencies, professional communities, mass media networks), many stakeholders are not represented or not equally represented in "public participation" and in the dialogues and deliberative (alternatively governance) processes. It is important not only from an ethical perspective, but also from a practical perspective to reach people who play different roles in society, that we identify even those stakeholders who do not yet see themselves as such.
21. The cultural conceptions and patterns of material life are not simply floating in the air. We find powerful institutions producing influential narratives and discourses, encouraging hyper-consumption, the pursuit of endless material needs at the same time promising the participants happiness, status, and power. The institutional arrangements consist of vast systems of advertisement, consumer incentive structures, systems of easy credit, and consumerism in general. This complex in turn sustains and elaborates many of the narratives and images of hyper-consumption, extravagance, non-sustainable lifestyles which characterise our modern, "successful" societies. In general, key modern value complexes undergird consumer drives and gluttony. At the same time, much consumer pleasure is illusory. Many new acquisitions lead to saturation and to frustration and the desire for further acquisition, in an endless cycle.
22. Unfortunately, these stories and their guidelines are offset or countered by powerful institutionalized incentive structures and established patterns of life which work against the emerging values and norms. Hence, the necessity of institutional re-design and re-alignment.
23. The following is adapted from a core statement about a humanist agenda of the Oslo Sustainability Initiative as formulated by Sörlin, Taylor and Witoszek (Witoszek, 2007). They have stressed that *there is no sustainable future without sustainable cultures.*
24. See Brown (1981:371), Chambers (2005), and Burns (2012) concerning incremental, piecemeal changes. Brown (1981:371) stresses: "At first the changes are slow, but they are cumulative and they can accelerate. Mutually reinforcing trends may

move us toward a sustainable society much more quickly than now seems likely....Achieving a sustainable society will not be possible without a massive reordering of priorities, institutions, and daily practices. This in turn depends not only on governments, corporations, and professional bodies but on the concrete actions of individuals and of public interest groups; much of it may come from the bottom rather than from the top...If we fail, it will not be because we did not know what needed to be done." In contrast to societies that collapsed out of ignorance (Diamond, 2005).

REFERENCES

- Amsterdam Declaration 2001. Formulated by Moore B III, Underdal A, Lemke P, and M Loreau. From <http://www.sciconf.igbp.kva.se/Amsterdam_Declaration.html> (Retrieved on 5 May 2012).
- Bogle JC 2005. *The Battle for the Soul of Capitalism*. New Haven: Yale University Press.
- Brown L R 1981. *Building a Sustainable Society*. New York: Norton.
- Brundtland GH 1987. *Our Common Future: The World Commission on Environment and Development*. Oxford: Oxford University Press.
- Burns TR 1999. The evolution of parliaments and societies in Europe: Challenges and prospects. *European J. of Social Theory*, 2(2): 167-194.
- Burns TR 2012. The Sustainability revolution: A societal paradigm shift. *Sustainability*, 4:1118-1134.
- Burns TR, Jaeger C, Kamali M, Liberatore A, Meny Y, Nanz P 2000. The Future of Parliamentary Democracy: Transition and Challenge in European Governance. Green Paper prepared for the Conference of the European Union Speakers of Parliament, Rome, Italy, September 22-24, 2000. From <http://www.camera.it/_cppueg/ing/conferenza_odg_Conclusioni_gruppoesperti.asp> (Retrieved on 7 May 2012).
- Burns TR, Baumgartner T, Dietz T, Machado N 2003. The theory of actor-system dynamics: Human agency, rule systems, and cultural evolution. In: *Encyclopedia of Life Support Systems (EOLSS)*. Oxford: UNESCO, EOLSS Publishers. From <<http://www.eolss.net>> (Retrieved on 7 may 2012).
- Burns TR 2006. Dynamic systems theory. In: D Clifton, PDL Bryant (Eds.): *The Handbook of 21st Century Sociology*. California: Sage Publications, pp. 569-582.
- Chambers R 2005. *Ideas for Development: Reflecting Forwards*. London: Earthscan.
- Costanza R, Lisa J, Graumlich SW (Eds.) 2007. *Sustainability or Collapse? An Integrated History and Future of People on Earth*. Cambridge, Mass.: The MIT Press.
- Daly H 1996. *Beyond Growth: The Economics of Sustainable Development*. Boston: Beacon Press.
- De Man R, Burns TR 2006. Sustainability: Supply chains, partner linkages, and new forms of self-regulation. *Human System Management*, 25(1): 1-12.
- Diamond J 2005. *Collapse. How Societies Choose to Fail or Succeed*. New York: Penguin.

- Giddens A 1994. *Beyond Left and Right*. Cambridge: Polity Press.
- Krasner SD 1983. Structural causes and regime consequences: regimes as intervening variables. In: SD Krasner (Ed.): *International Regimes*. Ithaca & London: Cornell University Press, pp. 1-21.
- Laumann K 2007. *The Missing Story: Education for Sustainable Development in Norway*. MA Thesis, Unpublished. Oslo: SUM, University of Oslo.
- Lemos MC, Agrawal A 2006. Environmental Governance. *Annual Review of Environment and Resources*, 31: 297–325.
- Mäler KG 1990. Sustainable Development. In: *WCED (World Commission for Environment and Development), The Conference Report, Sustainable Development, Science and Policy*, Bergen 2-12 May, 1990.
- Naess A 1981. *Ekologi, Samhälle och livsstil*. Stockholm: LTs förlag.
- Odum HT 1983. *Systems Ecology: An Introduction*. New York: John Wiley & Sons.
- O'Riordan T 1981. *Environmentalism*. London: Pion.
- Opschoor J 1996. Institutional change and development towards sustainability. In: R Costanza, O Segura, J Martinez-Alier (Eds.): *Getting Down to Earth: Practical Applications of Ecological Economics*. Washington, D.C.: Island Press. pp. 327-351.
- Opschoor H, van der Straaten J 1993. Sustainable development: An institutionalist approach. *Ecological Economics*, 7: 203-222.
- Pearce DW, Turner RK 1990. *Economics of Natural Resources and the Environment*. Hemel Hempstead: Harvester Wheatsheaf.
- Rhenman E 1968. *Industrial Democracy and Industrial Management*. London: Tavistock Publications.
- Rechkemmer A 2004. *Postmodern Global Governance. The United Nations Convention to Combat Desertification*. Baden-Baden: Nomos.
- Rifkin J 1979. *The Emerging Order: God in an Age of Scarcity*. New York: Ballantine
- Sörlin S, Taylor B, Witoszek N 2007. *Notes on a Humanistic Agenda*. Oslo: Center for Development and the Environment, Oslo University.
- Steffen W, Sanderson A, Tyson PD, Jäger J, Matson PA et al. 2004. *Global Change and the Earth System: A Planet under Pressure*. Heidelberg: Springer-Verlag.
- Wildlife Conservation Society (WCS) 2006. Wildlife Conservation Society. From <http://www.wcs.org/international/latinamerica/centralandes/bolivia_dryforests> (Retrieved on October 14, 2006).
- Winer N 2003. Co-management of Protected Areas, the Oil and Gas Industry and Indigenous Empowerment— The Experience of Bolivia's Kaa Iya del Gran Chaco. *Policy Matters*, 12: 181-191. From <<http://www.iucn.org/themes/ceesp/Publications/Publications.htm>> (Retrieved on September 2, 2006).
- Witoszek N 2006. Sustainability for the 21 Century: Challenges and Alternatives. *Presentation at the Oslo Sustainability Workshop*, February 26, 2006, Center for Development and the Environment, Oslo University, Norway.
- Witoszek N 2007. A humanistic agenda for sustainable development. *Presentation at the seminar Our Common Future - Twenty Years on* in New York, the UN Headquarters, May 8, 2007. Published as a report, N Witoszek (Ed.): *Sustainable Development and the Challenges of the 21st Century: Cultural, Political and Industrial Dimensions of Sustainable Agenda*. From <ceres21.org/submenu/publications.aspx> (Retrieved on 14 March 2012).
- World Resources Institute (WRI) in collaboration with United Nations Development Programme, United Nations Environment Programme, and World Bank 2005. *World Resources 2005: The Wealth of the Poor—Managing Ecosystems to Fight Poverty*. Washington, DC: WRI. From <http://population.wri.org/pubs_pdf.cfm?PubID=4073> (Retrieved on October 4, 2006)
- WWF 2002. *Living Planet Report 2002*. Gland: World Wildlife Fund for Nature.