

## Sustainability and beyond

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### Abstract

In this paper I discuss both the limitations and possible uses of the sustainability discourse. I begin by canvassing various conceptions of sustainability and sketching some difficulties with the notions that have been introduced. Next some possible uses of the idea of sustainability are identified. I go on to discuss these in the context of disputes over public lands in the United States. Finally I say why we must go beyond sustainability if we are successfully to address the present disorder regarding the human relationship to nature. © 1998 Elsevier Science B.V.

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### 1. Introduction

During the decade of the 1980s the phrase ‘sustainable development’ migrated from an obscure report produced by the International Union for the Conservation of Nature and Natural Resources in 1980, through several popular ‘green’ books, to become the central organizing concept of the Brundtland Commission report. Convened by the General Assembly of the United Nations and known officially as the World Commission on Environment and Development, the Brundtland Commission identified sustainable development as the criterion against which human changes of the environment should be assessed, and defined it as

development that “meets the needs of the present without compromising the ability of future generations to meet their own needs” (The World Commission on Environment and Development, 1987). By joining the words ‘sustainable’ and ‘development,’ the Commission sought to reconcile the demands of the environment with concerns about global poverty. Ramphal (1992), who served on the Brundtland Commission, has recently written that

the great achievement of the sustainable development concept is that it broke with the old conservationist approach to natural resources and its tendency to place Earth’s other species above people.

While those who were most concerned with poverty could emphasize the word ‘development’

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in the Brundtland formulation, environmentalists could just as well emphasize the word ‘sustainable.’

The balance between fruitful ambiguity and outright contradiction is a delicate one, and ultimately the idea of sustainable development could not bear the weight of competing interpretations (Redclift, 1987). Over the last decade ‘sustainable development’ has given way to the idea of sustainability. While on the surface this may appear to be a victory for environmentalists, it reflects a number of distinct concerns, including the colonization of the sustainable development discourse by economists, the lack of interest in development in the already developed countries, and the growing awareness that sustainable development should be directed towards building societal capabilities rather than towards development as an end in itself. But while sustainability is almost universally considered to be a good thing (there are few who would defend unsustainability), the tensions implicated in ‘sustainable development’ are increasingly recapitulated in the various conceptions of sustainability. These ambiguities go back to the earliest English uses of ‘sustain’ and its cognates. One family of meanings is related to the idea of sustenance; a concern with needs is a natural extension of this notion. A second family of meanings centers on maintaining something in existence, and leads naturally to a focus on preservation. The former pushes in the direction of ‘meeting the needs of the present’ while the latter leans towards concern for the interests of the future.

In this paper, both the limitations and possible uses of the sustainability discourse has been discussed. Various conceptions of sustainability have been canvassed and some of the difficulties with the notions that have been introduced, have been outlined. Next some possible uses of the idea of sustainability are identified. These have been discussed in the context of disputes over public lands in the United States. Finally, there is a discussion on why we must go beyond sustainability if we are to address successfully the present disorder regarding the human relationship to nature.

## 2. The meaning and importance of sustainability

Many questions can be asked about sustainability. Two of the most important are: what exactly is sustainability? and how important is it to achieve sustainability? While the answers to these questions overlap, they shall be discussed in turn.

### 2.1. *What is sustainability?*

Most people’s thoughts about the meaning of sustainability are probably simple and grand: sustainability is about human survivability and the avoidance of ecological disaster. The professional discourse, on the other hand, is complex and technical. What both discourses share is an anthropocentric outlook. It is human survivability and well-being that ultimately matter; nature enters the picture only as a means. (Exceptions to this are ‘biocentrists’, and those who take the interests of animals seriously, see Taylor (1986) and Singer (1990).)

At least two distinct conceptions of sustainability have been developed. Strong sustainability (SS) asserts that it is ‘natural capital’ that should be sustained while weak sustainability (WS) is centered on well-being (Beckerman, 1994, 1995; Turner et al., 1995; Holland, 1996) Both conceptions of sustainability have their problems.

WS, which is more likely to be embraced by conventional economists than SS, can be characterized as a state in which ‘well-being does not decline through time’ (Pearce, 1993). Here are three problems with the idea of WS.

First, WS makes no essential reference to environmental goods. Clear-cutting forests and driving species to extinction would pass the WS test, so long as human well-being does not decline as a result. In principle human well-being would not decline so long as other goods that are substitutable for forests and species could be purchased with the money that these policies would produce.

Second, there is little reason to object to declines in well-being so long as they are on the optimal path (however optimality is defined). Most of us would prefer a path that involved greater well-being to a path that involved lesser well-being, even if the former path included a

period of decline while the latter path did not. This is an abstract version of the common sense belief that sometimes we would choose to accept a setback (e.g. an operation) in order to produce a result that is better overall (e.g. becoming cancer-free) than the alternatives (Heyes and Liston-Heyes, 1995).

Finally, some would object to characterizing sustainability in terms of welfare rather than resources. For example, Daly writes that "...the welfare of future generations is beyond our control and fundamentally none of our business...our obligation therefore is not to guarantee their welfare but their capacity to produce, in the form of a minimum level of natural capital..." (Daly, 1995). The idea is that a generation has a great deal of control over the resources that it bequeaths to its successors, but little control over their welfare. There is the further objection that it is at least possible that future generations would have the highest welfare levels if we were to exploit nature to the greatest possible extent and invest the economic benefits in ever more convincing virtual reality machines. Whatever may be said on behalf of such a proposal, it would not satisfy any reasonable understanding of sustainability, though it would pass the WS test.

SS is more in the spirit of environmentalism than WS, but it too faces difficulties.

First, since SS is defined in terms of the maintenance of the stock of natural capital, natural capital must be defined and distinguished from human-produced capital. Berkes and Folke (1995) characterize natural capital in the following way:

Natural capital consists of three major components (1) nonrenewable resources, such as oil and minerals, that are extracted from ecosystems; (2) renewable resources, such as fish, wood, and drinking water that are produced and maintained by the processes and functions of ecosystems; and (3) environmental services such as maintenance of the quality of the atmosphere, climate, operation of the hydrological cycle including flood controls and drinking water supply, waste assimilation, recycling of nutrients, generation of soils, pollination of crops, provision of food from the sea, and the maintenance of a vast genetic library (Berkes and Folke, 1995).

What is most striking about this characterization is the degree to which human interests and activity are implicated in the examples of natural capital that are provided. Non-renewable resources are only natural capital if they are 'extracted from ecosystems'. (It's not clear whether it is the kind of thing that must be extracted or the very material itself if something is to count as natural capital.) Renewable resources such as 'wood', 'drinking water', and the 'quality of the atmosphere' are not given to us by brute nature. Nature produces trees; humans act on trees in such a way so as to be able to use their wood. What makes water drinking water is that it is fit for humans to drink. Similarly, atmospheric changes are only deteriorations in the quality of the atmosphere relative to human uses of the atmosphere. The fundamental problem with the idea of natural capital is that the very idea of capital implicitly involves the idea of human transformation and use; thus it is quite difficult to distinguish natural from human produced capital.

Second, some account must be given of what exactly it means to maintain natural capital. Read in the strongest way, any reduction in the stock of Earth's natural resources would violate SS. Read in the weakest way, natural capital would be maintained so long as there were no reduction in the kinds of things that exist, even if the stocks of each kind were radically reduced. Daly reads this requirement as permitting reductions in stock so long as the benefits produced by such reductions are invested in "...a real rather than a merely financial substitute—e.g. a capital set-aside from petroleum depletion should be invested in new energy supplies, including improvements in energy efficiency, but not in, say, law schools, medical research, or McDonald's Hamburger franchises" (Daly, 1995).

An analogy may help to clarify the point. If I sell part of my stamp collection and use the proceeds to buy more stamps, then it seems plausible to say that my stamp collection is maintained through these transactions. If, on the other hand, I sell part of my stamp collection and use the money to go on a tour of Michelin-starred restaurants, then my stamp collection has not been maintained. Daly's point is that using the

benefits of petroleum depletion to invest in new energy supplies is a way of maintaining our energy endowment, while investing in law schools is not. The reason for this is that natural and human-produced capital are complements, not substitutes; therefore human-produced capital of the sort that investing in law schools would provide, cannot be a substitute for the loss of natural capital entailed by petroleum depletion.

Daly gives three arguments for the complementarity of natural and human-produced capital.

The first argument rests on pointing out that the existence of human-produced capital presupposes natural capital, but the existence of natural capital does not presuppose human produced capital. Even if this claim is true, it establishes very little, for this claim is consistent with supposing that vast amounts of human-produced capital require only tiny amounts of natural capital. We could accept the presupposition and still hold that substitutability is generally the rule.

The second argument rests on viewing human-produced capital as the agent for the transformation of natural capital into products. It is difficult to understand fully this claim since it is misleading to ascribe agency to capital. However, the basic idea appears to be that production requires both natural and human-produced capital. This claim seems just false (except in the most trivial sense) for intellectual property, services, and some other commodities. However even if this argument establishes complementarity over some domain, it is not clear how important this result is without some further account of how invariant are the ratios of natural to human-produced capital. A high degree of variance would indicate a large range of substitutability.

Finally, Daly argues that if human-produced and natural capital were substitutable, then people would not have bothered to accumulate human-produced capital. Since they have bothered to accumulate human-produced capital, substitutability must fail. The fundamental error here is in assuming that natural capital and human-produced capital must either be substitutable or complementary, but cannot be both. As Beckerman points out, commodities may be complements in some respects and substitutes in others. For exam-

ple, we may regard wood and plastic as complementary—preferring to use wood for some purposes and plastic for others—yet treat them as substitutes in our market behavior (Beckerman, 1995).

To the extent that the distinction can be made at all, the plain fact is that we often treat natural and human-made capital as substitutes. For example, in recent years we have substituted synthetic materials for natural ones across a wide range of uses, and various energy conservation programs involve substituting behavior change for resource consumption. Indeed, in Daly's own example it is plausible to suppose that investing in law schools could be a substitute for investing in new energy sources. Since many of the barriers to energy efficiency are institutional, investing in law schools (or other. . .) schools (or other forms of human capital) may do as much to preserve our energy endowment as investing in new energy sources.

Thus far Daly's anti-substitutability claim has been treated as if it were straightforwardly descriptive. But perhaps he is making a normative rather than descriptive claim. His point may be that we ought not to treat natural and human-produced capital as substitutable—not that we do not. But we may ask why we should accept this restriction on substitution if well-being would be improved by violating it, e.g. by using the benefits of petroleum depletion for law schools or medical research rather than for energy conservation. The reply may be that while violating this restriction may be a good thing to do, it would not be sustainable, and the attempt here is to give an analysis of sustainability. One response to this reply would be to say so much the worse for sustainability. If concern for sustainability does not lead us to do what is best (or at least better), then it is hard to see why we should make it decisive in our decision-making.

In addition to these questions about what should be sustained, the idea of sustainability also raises questions of scale (Worster, 1993). No one expects humans or other forms of life to last forever. Indeed, evolutionary theory implies that they will not. Given that 'forever' is not a reasonable answer to the question of how long we should try to sustain something, we need some

way of thinking about the temporal goal of sustainability. Our resource management policies would be very different if sustainability were thought of in terms of millennia rather than decades. Similar questions arise with respect to geographical scale. Should people attempt to maintain natural capital in their bioregions, their states, their countries, their continents, their planet, or in their solar system? These may sound like silly or ‘academic’ questions, but they arise in real debates about (for example) whether a population or species can be reduced or eliminated in one area so long as it is increased or preserved in another. Focusing on national or subnational sustainability can also lead to very different policies regarding trade than focusing on global sustainability.

## 2.2. *How important is it to achieve sustainability?*

As important as sustainability is to many people now, it is hard to believe that it has always been an important goal. Indeed, it is interesting to imagine what response people in diverse cultures at earlier times would have had to the idea of sustainability. While various cultures have been more or less ‘biophilic’ (Wilson, 1984) and attitudes towards nature have been many and varied, it is doubtful whether or not the idea of sustainability would generally have resonated with people outside of our immediate cultural context. For most of human history nature has been too large and overwhelming for people to worry about sustaining it. Moreover, whatever sustaining is to be done has been someone else’s job in most cultures. God or providence have generally been regarded as the sustainers of both humans and nature. In this century we have lost confidence in the idea that the world is self-sustaining or under divine protection. At the same time we see that the threat to nature comes primarily from ourselves. Ironically, since there are no other applicants for the job, we who are nature’s greatest enemy have appointed ourselves as its savior. In my opinion, the idea of sustainability is a distinctly modern notion, closely tied to the schizophrenia of modern life that simultaneously persecutes nature while trying to protect it (Jamieson, 1995a).

The importance of sustainability is not beyond question. Holland has pointed out that the value of some goods, ranging from disposable diapers to sunsets, are partly constituted by their transitory nature. Any attempt to sustain them would be silly or self-defeating (Holland, 1995). But perhaps we should go further and embrace the lessons of the new ecology—that turmoil and change is the way of nature (Botkin, 1990). From this perspective everything is disposable or transient, not just diapers and sunsets. On this view, our resistance to change is more psychological than logical. Just as humans fear and avoid death, so they resist environmental change. Tranquil people and societies, more attuned to the ways of nature, would perhaps be accepting of both death and environmental change.

The concern for sustainability may be a distinctively modern one and it may not be appropriate to sustain everything we value. Still, in general, we value sustainability, although people disagree about its scope and importance. Over the human population there is a range of attitudes about the importance of sustainability. Most people probably believe that some things should be sustained at all costs, others gotten rid of as soon as possible, and that most things fall somewhere in between. What category things wind up in depends in part on people’s attitudes towards them. Many people think that the human species should be sustained at all costs, as well as human communities and cultures, even ones that are economically inefficient or exploitative. On the other hand, most people probably think that HIV should be driven to extinction as soon as possible. Various snail darters fall somewhere in between, with different people assigning very different weights to the importance of sustaining them. Here reference is made to a small fish, the discovery of which put the brakes on the half-built, multi-billion-dollar Tellico Dam. There were many reasons not to build the dam, but the fact that it was (temporarily) halted by a ‘trash’ fish led to amending the Endangered Species Act and setting the stage for future assaults on the Act (for discussion, Wheeler and McDonald, 1986).

What is important to recognize is that even if it is generally accepted that sustainability is a good

thing, the question of how good a thing cannot be avoided. Sustainability must sometimes be traded off against other goods, including the welfare of our poor contemporaries. This is the trade-off that the Brundtland Commission wanted to avoid, but it is inescapable.

Summarizing this section we can say that the concept of sustainability is deeply contested, perhaps even confused. People disagree about what it is and how important we should regard it. Disagreements about sustainability reflect not only different interests, but also different ideals and values. These involve disagreements about the range of proper human relationships to nature, how decisions should be made, and whose voices should prevail. However, despite the contested nature of sustainability, this idea may have its uses.

### **3. The uses of sustainability**

It is quite common for parties in environmental disputes to seek the normative high ground. One way of trying to do this is to define a technical term, and then implement the hypothetical imperative suggested by it. For example, some environmentalists have attempted to define a technical notion of ecosystem health, suggesting that environmental policy should follow by implication (Costanza et al., 1992). If successful, they wrongly bypass the ethical and political disputes that are at the heart of environmental questions. If they fail, they provide another, generally more confused forum in which the ethical and political conflicts are reproduced (Jamieson, 1995b).

Despite these reservations, it is important for people who disagree to practice a common discourse and, to some extent anyway, have a common conceptual framework. Because of the very breadth of the notion of sustainability and its popular appeal, this language has the potential to structure discourse between people who have quite different values and epistemologies. At this stage anyway, no one owns the sustainability discourse in the way in which ecologists own the discourse of ecosystem health. If parties to a dispute can agree that sustainability matters, then

arguments will turn on the meaning of sustainability and how various policies contribute to its realization. There will be room for a great deal of disagreement, but the parties will at least be using the same words even if they assign them different meanings. Some progress will have been made if they can agree on the importance and centrality of sustainability, even if they disagree about what sustainability is and how it can be realized. This may seem like a small achievement, but often parties to various disputes do not even share a common vocabulary, much less a common conceptual framework.

As a negative example, consider the current dispute in America over the death penalty. The small band of abolitionists speaks of the death penalty's lack of deterrence, while those in favor of the death penalty speak of the need for retribution. They disagree not just about the death penalty, but also about what considerations are relevant in deciding whether or not to support it. Not only are their beliefs distinct but their vocabularies are disjoint.

Although the sustainability discourse has some potential usefulness, at the level of abstract, philosophical discussion it is unlikely to have much traction. As we have seen, even the technical definitions of sustainability are excessively abstract and in at least some cases fail to be sufficiently sensitive to environmental concerns. The language of sustainability is likely to be most powerful when used in highly contextualized concrete cases, and when it is employed negatively. These suggestions will be discussed in turn.

People may have no idea what sustainability means in general, yet have definite ideas about what it would be like for Boulder, Colorado, Rocky Mountain National Park, or the Northern Rockies region to be sustainable. Focusing on specific questions not only provides content to various abstract conceptions of sustainability, but also helps make clear the trade-offs between sustainability and other goods. If, for example, sustainability for Colorado's Front Range means that no one can have a lawn because water transfers from other watersheds are not allowed, then some people may decide that sustainability is not such a hot idea after all and that it should take a

back seat to other values. While some people may think that moving from vague agreement to precise disagreement is a step in the wrong direction, there may be some disagreement. It is believed that some progress will have been made if people understand the choices and trade-offs they face and confront them directly, even if they disagree (at least initially) about how to respond.

In many specific contexts the language of sustainability can be made more useful by focusing on what is unsustainable rather than on a positive definition of sustainability. Often people who would initially disagree about what sustainability is can agree about when something is unsustainable. Ranchers and environmentalists (for example) may agree that eroded, denuded land is unsustainable, even if they disagree about what it would be like for the land to be sustainable. People may have different ultimate goals, yet be able to work together in preventing practices which they agree are clearly unsustainable. Moreover, once they have found some common ground about what is unsustainable, they may be able to go on to agree about the causes of these unsustainable practices. This, in turn, may bring some agreement about what policies should be adopted and what should be avoided.

If one is correct in thinking that the language of sustainability is most likely to be useful when employed negatively in highly contextualized situations, then ironically the discourse of sustainability is least likely to be useful at the level for which it was originally intended. At the global level there is too little by way of shared beliefs and values to provide enough content to ideas of sustainability to make them effective. Since talk about global sustainability is far removed from concrete cases and situations, meaningful discourse is unlikely to occur. Too many ground level beliefs and presuppositions drop out at the global level to make progress, and perhaps even mutual intelligibility, possible. The forms of unsustainability and the causal linkages involved are too diverse to command much by way of common responses.

If what has been said is correct, the language of sustainability is more likely to be useful in small communities facing specific problems. However,

despite my scepticism, there is a desperate need for human thought and language to become as integrated as the problems we face. While these problems are global, the interests and understandings of humankind are fractured and fragmented. One can hope that the sustainability discourse which has become so ubiquitous may have some role to play in contributing to this integration.

#### **4. Sustainability and the public lands**

It is an obvious fact that there is a great deal of conflict about the use and control of public lands. Although the sustainability discourse may have some role to play in managing these conflicts, we should not think that it alone can resolve them. Nor should we think that conflicts about the public lands are necessarily caused by how these lands are managed.

There is a great deal of anger, alienation, and insecurity in American society, and this often finds expression in issues that have little to do with the sources of these feelings. If it is true that the causes of conflict over the public lands are wider than these issues themselves, then we should not expect policy change in this area to end the conflict. Another reason we should be modest about the possibility of progress in this area is that the issues are highly politicized, and diverse, often conflicting, interests, preferences, and values are at stake. While progress can be made on such issues, it requires time, good will, respectful dialogue, and a sense of community, all of which are in short supply. The idea of sustainability has its uses, but it cannot perform miracles.

It should come as no surprise that debates about the uses and control of public lands are so heated and polarized when there is so much disagreement about how to use private land. A look around Boulder, or any comparable town in the West, shows that there are quite different views about appropriate land-use. Some people use their yards as car parks or storage. Others put in gravel or concrete in order to reduce maintenance. Some xeriscape, while others grow lawns and flowers that are characteristic of the eastern United States. Still others let 'nature take its course.'

People with lawns are often afraid that their yard will be contaminated by weeds or unwanted native plants from the neighbor's yard. The xeriscaper may hate the smells coming from her neighbor's compost pile. Parking a car in a yard is illegal in Boulder. Some neighborhoods have restrictive covenants against replacing lawns with rocks. When we move to the question of development, conflicts increase. Many people would reject the idea that their neighbors have a right to build additional living units on their property or to open a commercial establishment. Imagine how people would respond to their neighbors turning their land into gravel pits. Zoning restrictions typically separate commercial and residential uses, and specify variable densities in different neighborhoods. These restrictions are often quite inconsistent, arbitrary, and in many cases involve bad planning; yet to a great extent they are often quite representative of people's attitudes.

In the case of private lands, most people believe that owners' decisions should carry a great deal of weight in determining land-use. In the case of public lands, the very idea of public ownership is contested. Not only do people have different desires about how these lands should be used, but there is little agreement about how conflicts should be resolved.

Many people in the West believe that there should be a pyramid of authority in which those who live close to the land or use it for extractive purposes should have the loudest voice in determining how public lands are used. Indeed, many of these people are opposed to the whole idea of public land. They believe that, morally speaking, they own these lands but that the federal government has usurped their title to them. Environmentalists and many people who live in the rest of the country reject the pyramid view of whose will should be dominant. They believe that everyone owns the public lands, and that they should be managed in ways that are maximally consistent with a broad range of interests and desires. When the discussion of public lands policy is stuck on whose voices should count in management decisions, the question of sustainability barely arises.<sup>1</sup>

Another factor that tends to push the discussion of sustainability to the background is another view

prevalent in many western communities that traditional uses of the public lands should take precedence over non-traditional ones (e.g. recreation). Thus there is a great deal of support for the idea that grazing, mining, and other extractive uses should have priority because they are the 'senior' uses of the land.<sup>2</sup> This idea often goes with a romantic view of both western history and contemporary realities. Whether justified or not, this view also tends to undercut discussions of sustainability by defending traditional uses because they are traditional, even if they ultimately lead to what everyone would regard as the degradation of the land.

Reflecting on these conflicts shows how important the sustainability discourse can be in setting public lands policy. As suggested in the previous section, it can structure the conversation and supply common vocabulary. It can be especially useful when the focus is on what is unsustainable in a specific case. But the sustainability discourse can also help move the conflict away from questions about who should make decisions towards questions about how we want the land to be used. Even though sustainability is not the all-purpose solvent for our environmental problems that many have wanted it to be, it can help to structure and clarify the choices and trade-offs that we face.

## 5. Envisioning sustainability

It has been argued that the sustainability discourse may have some role to play at the present moment in thinking about environmental policy. However there are serious limits on what can be accomplished in this discourse. Because of its open-endedness, the language of sustainability can

<sup>1</sup> It is difficult to see exactly what the argument is for the pyramid view. It is not generally held that those who benefit from government programs should have the loudest voice in determining how they are run. Indeed, when it comes to welfare recipients, the prevailing view seems to be quite the opposite.

<sup>2</sup> It is interesting that these appeals to the importance of place and history typically begin with the settlement of these lands by white immigrants; the much more ancient Native-American claims and uses are hardly discussed at all outside of a narrow legal context.



draw diverse parties into the conversation. But since we can always ask what should be sustained, for what period, in what region; and even why sustainability is good, and if it is good, how good it is; the discourse of sustainability as it is practiced is not likely to bring us to closure with respect to important, long-term issues. Ultimately, the concept of sustainability cannot supply the motivation to act. As Beckerman writes,

...a definition of whether any particular development path is technically sustainable does not, by itself, carry any special moral force. The definition of a straight line does not imply that there is any particular moral virtue in always walking in straight lines (Beckerman, 1994).

The most important limitation on the sustainability discourse is that, like any other concept, it directs our attention towards some concerns and away from others. Sustainability, as it is employed in most of its guises, is primarily an economic and anthropocentric notion. The moral reorientation that is required, which involves new relationships between humans as well as with other animals and the rest of nature, is unlikely to be affected by developing ever more precise understandings of sustainability. We need a discourse that permits deeper discussion of aesthetic, spiritual, religious, cultural, political, and moral values.

In his critique of the way the idea of sustainable development has been deployed in the wake of the Brundtland Commission report, Kothari has distinguished two notions of sustainable development (Kothari, 1994). One notion is a technical, scientific notion. The other is an ethical notion. According to Kothari, the technical, scientific notion of sustainable development does not get to the heart of the environmental crisis. For that we need a new notion of sustainable development, which describes in the following way:

To shift to sustainable development is primarily an ethical shift. It is not a technological fix, nor a matter of new financial investment. It is a shift in values such that nature is valued in itself and for its life support functions, not merely for how

it can be converted into resources and commodities to feed the engine of economic growth. Respect for nature's diversity, and the responsibility to conserve that diversity, define sustainable development as an ethical ideal. Out of an ethics of respect for nature's diversity flows a respect for the diversity of cultures and livelihoods, the basis not only of sustainability, but also of justice and equity. The ecological crisis is in large part a matter of treating nature's diversity as dispensable, a process that has gone hand in hand with the view that a large portion of the human species is dispensable as well. To reverse the ecological decline we require an ethical shift that treats all life as indispensable (Kothari, 1994).

There is the view that the language of sustainability is not well-suited for carrying the concerns that Kothari has articulated, but whether or not one agrees with Kothari's language and sentiments, it is possible that the present disorder regarding the human relationship to nature will not be successfully addressed until we have developed a richer set of positive visions regarding the proper human relationship to nature. These visions must go beyond the bloodless futures of scientific forecasters, the technological futures of cornucopians, and the single focus futures of those who are interested only in rainforests, women, or American family incomes. What is needed are simple and compelling stories that show us how to practically participate in creating the future in our daily lives, and how to engage in ongoing dialogue with others about how our everyday actions help to produce global realities. Articulating these visions is not the job of academics alone, but also requires the efforts of writers, artists, and people from all walks of life. There is much to be learned from those who live close to nature, and the inheritors of traditions that have largely been subordinated. But until we come to terms with the importance of producing a positive vision, the best we can hope for is that we shall successfully muddle through. In these times the challenge of muddling through is an important one, and should not be taken lightly. But a stop along the way should not be mistaken for the end of the journey.

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