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CONCEPTUALIZING ECOLOGICAL SUSTAINABILITY AND ECOLOGICALLY SUSTAINABLE DEVELOPMENT IN ETHICAL TERMS: ISSUES AND CHALLENGES

by

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CONCEPTUALIZING ECOLOGICAL SUSTAINABILITY AND ECOLOGICALLY SUSTAINABLE DEVELOPMENT[1] IN ETHICAL TERMS: ISSUES AND CHALLENGES[2]

ABSTRACT

The twin concepts of *ecological sustainability* and *ecologically sustainable development* have been in circulation in international circles for about three decades. In South Africa these concepts have become cornerstones of both our new Constitution and our National Environmental Management Policy. And yet, there is still a highly intensive and wide ranging debate going on in international as well as national contexts in which both the meaning and implementation of these concepts are contested from different angles. In this article the reasons for this state of affairs are explored from an ethical perspective, and a number of proposals are made on a philosophical and policy level to respond to the contested nature of these concepts. In an overview of the historical development of the concepts of *ecological sustainability* and *ecologically sustainable development* it is shown that they have emerged from different, and to some extent mutually exclusive, contexts. The paper then proceeds to a systematic discussion of a number of "fault lines" within these concepts, in which the focus falls on certain internal tensions that make their interpretation very difficult, if not highly controversial. These tensions are associated with different ethical and ideological positions that can be assumed with regards to questions such as the following: 1. What is so valuable that it can and should be sustainable? 2. With a view to whom or what is the sustainability of this valuable something pursued? 3. How is sustainability pursued? 4. What are the criteria for sustainability? - so that the question whether and when we have reached a state of sustainability can be answered. On the basis of an overview of these "fault lines" it becomes possible to distinguish between different conceptions and different models of *ecological sustainability* and *ecologically sustainable development*. The value of this taxonomy lies in the clarification that it brings to the muddy waters of ideological posturing about the meaning and implementation of the concepts of *ecological sustainability* and *ecologically sustainable development*.

Keywords: *Ecological sustainability, ideology, South Africa, sustainability, sustainable development*

OPSOMMING

Die begrippepaar *ekologiese volhoubaarheid* en *ekologies volhoubare ontwikkeling* is nou reeds ongeveer drie dekades lank in omloop in internasionale kringe. In Suid-Afrika het hierdie begrippe hoekstene geword van ons nuwe Grondwet sowel as ons nasionale beleid vir omgewingsbestuur. Ten spyte hiervan woed daar egter 'n hoogs intensiewe en wydlopende debat in internasionale en nasionale kringe waarin die betekenis en die implementering van hierdie begrippe vanuit verskillende invalshoeke betwis word. In hierdie artikel word die redes vir hierdie stand van sake vanuit 'n etiese perspektief ondersoek en word 'n paar voorstelle op filosofiese en beleidsvlak gemaak vir die hantering van die betwiste aard van hierdie konsepte. In 'n oorsig van die historiese ontwikkeling van die begrippe *ekologiese volhoubaarheid* en *ekologies volhoubare ontwikkeling* word aangetoon dat hulle onderskeidelik in verskillende, en in sekere opsigte wedersyds uitsluitende, kontekste beslag gekry het. In die artikel word voorts 'n sistematiese uiteensetting gegee van 'n aantal "foutlyne" in hierdie begrippe, waarin die fokus val op sekere interne spannings wat nie alleen struikelblokke in die weg lê van hulle interpretasie en implementering nie, maar dit ook hoogs aanvegbaar maak. Hierdie spanning het te make met uiteenlopende etiese en ideologiese standpunte wat ingeneem kan word ten opsigte van vrae soos die volgende: 1. Wat is so belangrik dat die volhoubaarheid daarvan verseker behoort te word? 2. Met die oog op wie of wat behoort ons volhoubaarheid na te streef? 3. Hoe moet volhoubaarheid nagestreef word? 4. Wat is die kriteria vir volhoubaarheid? - sodat die vraag of, en wanneer, ons 'n toestand van volhoubaarheid bereik het, beantwoord kan word. Op grond van 'n oorsig van hierdie "foutlyne" word dit moontlik om tussen verskillende konsepsies en modelle van *ekologiese volhoubaarheid* en *ekologies volhoubare ontwikkeling* te onderskei. Die waarde van hierdie taksonomie is geleë in die verheldering wat dit bring in die troebel waters van ideologiese standpuntinnames oor die betekenis en implementering van die begrippe *ekologiese volhoubaarheid* en *ekologies volhoubare ontwikkeling*.

Trefwoorde: *Ekologiese volhoubaarheid, ideologie, Suid-Afrika, volhoubaarheid, volhoubare ontwikkeling*

CONCEPTUALIZING ECOLOGICAL SUSTAINABILITY AND ECOLOGICALLY SUSTAINABLE DEVELOPMENT[1] IN ETHICAL TERMS: ISSUES AND CHALLENGES[2]

1. INTRODUCTION

South Africa is fortunate to be one of the few countries in the world that has an environmental clause in its Bill of Rights. In the wake of the Rio Conference of 1992 and the subsequent international adoption of Agenda 21, Article 24 of our Constitution guarantees the right of everyone to an environment that is not harmful to their health or well-being, and to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that (i) prevent pollution and ecological degradation; (ii) promote conservation; and (iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

As such, this clause clearly and explicitly articulates the anthropocentric goal of "maintaining nature as *a basis of our social activities* for generations to come (sustainability of *our use* of the environment)" (Achterberg 1994b: 136, my italics).[3] In order to implement this normative vision, sustainable development has been incorporated as the cornerstone of our National Environmental Management Act (NEMA, Act 107 of 1998) that has been effective from 29 January 1999. Besides these two acts, there are at least 19 other South African acts with explicit references to sustainable development,[4] and then there are numerous regulations, by-laws and guideline documents that have been promulgated or issued to further interpret this goal in our law.

Following international trends, local business and industry display a similar kind of support for sustainability or sustainable development. There is hardly a company or corporation of note in South Africa that does not have references to sustainability or sustainable development in their vision or mission statements, or in the summary of their core values.

In spite of this widespread statutory and corporate support for the notion of sustainable development in South Africa, there are more than enough reasons to ask serious questions about our general acceptance of this concept. Bureaucrats, for instance, will tell us that sustainability or sustainable development are empty concepts, too vague or ill defined to be of any use in practical decision-making and real life policy implementation (Jacobs 1999: 22). Similarly, environmentalists will point out that the notion of "wise" or "sustainable use" is a "dangerous influence that is a threat not only to wildlife and nature in Africa, but indeed to natural resources world wide" (Patterson 1998: 63). Instead of contributing towards the protection of nature and ensuring a continued availability of resources, it is claimed that "sustainable use" is nothing but a green mask used by industry and governments to justify and continue the ruthless exploitation of natural resources as has always been done. In the same vein we often hear the warning that aims such as sustainability "are lightly professed in theory without looking at practical realization" (Achterhuis 1994: 198).

On a more radical level, and for reasons that will become apparent in the discussion below, philosophers draw attention to the fact that the notions of

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1. Unless otherwise stated where the context requires it, it is assumed within this paper that the term "sustainability" refers to "ecological sustainability", and that "sustainable development" refers to "ecologically sustainable development". This is done to avoid tedious repetition.

2. Paper read in part at the 28th Annual Conference of the Philosophical Society of Southern Africa: Durban, 22-24 January 2001. Earlier versions of certain sections of this paper were published in a *Report of the Unit for Environmental Ethics* of the University of Stellenbosch, Special Issue, Summer 2000. See also the acknowledgement at the end of this article.

3. It is not at all clear whether this clause also implies the more ecocentrically oriented goal of "protecting, maintaining and developing nature for its own sake (sustainability of nature)" (Achterberg 1994b: 136). The issues involved here will be discussed later in this article.

4. These include the Development Facilitation Act No. 67 of 1995, the World Heritage Convention Act No. 49 of 1999, the National Forests Act No. 84 of 1998, the Marine Living Resources Act No. 18 of 1998, and the National Water Act No. 36 of 1998 – to mention but a few.

sustainability or sustainable development can be seen as internally incoherent, and therefore not as valuable as policy principles as one would have thought at first glance (Jickling 1999). They will also point out that in some of its interpretations the notion of sustainable development rests on highly dubious assumptions that do not help us to curb our exploitation of nature, but rather stimulate and accelerate it (Norton 1992: 99). Furthermore, objections are often raised to the highly moralistic and therefore deterministic overtones that accompany much of the propaganda for sustainable development (Jickling 1999): it has become the latest ideology in terms of which the whole of society has to be ordered anew, totally and comprehensively.[5]

This raises the question whether concepts such as sustainability and sustainable development are really suitable to be used at all in environmental policy making and management. Should we continue to hold on to these concepts in our environmental management practices and should we further develop and refine them, or should we get rid of them as soon as we can? In this paper I would like to argue that sustainability and sustainable development are too important as concepts to merely omit from our policy framework; they should be taken as seriously as we possibly can, and to this end we should explore what the meaning of these concepts could be within the framework of a serious environmental policy. Such a serious environmental policy would be one "that aims at structural changes within society in order to achieve an enduring solution to environmental problems, or at least to create a situation in which they can be controlled" (Achterberg 1994b: 136). But at the same time I would like to sound a cautionary note about a number of internal tensions within the concept itself that often go unnoticed, and can therefore hinder and even paralyze us in our discussions about the meaning and implementation of sustainability/sustainable development. I would also like to offer a number of suggestions that may help us to move beyond the conceptual and practical impasses that these internal tensions may lead to.

As a starting point for my discussion I would like to briefly revisit the history of the emergence of the concept of sustainable development (and its counterpart – sustainability) in order to show that there have been contrasting, and to some extent even mutually exclusive discourses about sustainability/sustainable development since the inception of these concepts in the early 1970s. I will then proceed to a number of observations about some of the internal tensions that have been revealed in the historical overview, showing how they can lead to a number of different and even clashing conceptions of sustainability/sustainable development. Without making it the main theme of the discussion, our National Environmental Management Act (also known as NEMA) will be used to illustrate the points that will be made within this context. I then conclude with suggestions on both a philosophical and a policy level about possible strategies that can be followed to make sense of these internal tensions and the maze of different conceptions that they lead to. On a more philosophical level I give a number of pointers that can help us to take these tensions and differences seriously so that we can think anew and creatively, and not be paralyzed, when we discuss the goals we set for social development and environmental protection. These suggestions will partly revolve around the recognition of sustainability/sustainable development as contested concepts, and partly around a hermeneutical approach – radically conceived and linked to ideology critique – to the discussion of this concept. On a more policy oriented level I conclude with a number of suggestions that could be taken on board within the practical realm of implementing sustainability/sustainable development.

2. A BRIEF HISTORY OF THE EMERGENCE OF THE CONCEPT OF SUSTAINABILTY/ SUSTAINABLE DEVELOPMENT

It falls beyond the scope of this paper to revisit the history of the emergence of the concept of sustainability/sustainable development over the last thirty odd years in all its detail, except to mention that two

5. This objection has to do with the problem of legitimization that emerges in a liberal democracy if a government chooses to support the normative notions of sustainability or sustainable development. According to liberal political theory, the state then looses its neutrality, opting for a particular notion of the good life. The challenge that environmental ethics and philosophy then faces, is to demonstrate that a liberal democracy can indeed legitimately pursue the goals of sustainability and sustainable development. The discussion of this theme falls outside the scope of this paper, but interested readers can explore it further in Achterberg (1994b), Jacobs (1994), Wissenburg (1998) and Dobson (1999).

distinct historical contexts can be identified within which this emergence has taken place (Achterberg 1994a: 19-34). The first context is that of a realization in the 1970s amongst Western nations that industrialization and the patterns of production and consumption associated with it seriously jeopardize the continued existence of a safe, healthy, clean and diverse environment. Characterized as it was in terms of a crisis or a turning point for humanity, this realization was articulated in various reports, the most important of which were *The limits to growth* (Meadows *et al.* 1972) of the Club of Rome, and A *blueprint for survival* (1972).[6] In order to overcome this crisis, proposals were made for structural adjustments of the economy and social life in order to attain a state of equilibrium in which material growth was halted, although expansion in services enabling a higher quality of life in terms of education, cultural activities, experience of nature or enjoyment of leisure time was deemed to be in order.[7] Herman Daly, with his proposals for a steady state economy,[8] became one of the most articulate proponents of these ideas.

The second context is that of a series of United Nations Conferences about environment and development. These include the first conference which was held in Stockholm in June 1972, and the Earth Summit that was held in Rio de Janeiro in 1992. A number of reports have emanated from these conferences. The most important of these are the *World conservation strategy* (1980),[9] *Our common future* (1987, also referred to as the Brundtland Report)[10] and *Caring for the earth: A strategy for sustainable living* (1991).[11] Within this context the poorer countries of the world rebelled against Western preoccupations with the importance of the natural environment and what essential environmental policy should entail. Where the notion of sustainability within the first context predominantly called for *limits to physical growth*, the call from the second context was rather for *development (in particular of the poor) within the physical limits* of the ecological systems of the earth sustaining it. Within this second context it was emphasized that our responses to environmental concerns should never be at the cost of the legitimate aspirations of the poorer nations of the world to overcome poverty and reach a standard of living that is comparable with that of the richer countries of the world. Accordingly, development and intra-generational justice, that is equitable access to the natural resources of the world for those living at present, were seen as preconditions for sustainability/sustainable development (Achterberg 1994a: 19, 35).

It is within this second context that the Brundtland Report (*Our common future*, 1987: 43) formulated the well-known definition of sustainable development to which we also subscribe in NEMA. This definition states that "sustainable development is development that meets the needs of present generations without compromising the ability of future generations to meet their needs". What is often forgotten when this definition is quoted, are the following two concepts that are implied in it:

- The concept of needs, in particular the essential needs of the world's poor, to which overriding priority should be given; and
- The idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs.

Within the framework of this definition and its two qualifications, *Our common future* adopts a substantively anthropocentric approach to sustainable development.[12] In terms of this approach, nature is considered to be of value only in so far as it can be utilized as a resource for humans. Environmental prob-

6. First published as vol. 2, no. 1 of the *Ecologist*, 1972.
7. Ideas like these can be traced back to John Stuart Mill's *Principles of political economy* (1848: 752-756). Cf. Achterberg's (1994a: 22-23) discussion of it.
8. See Daly (ed.), *Toward a steady-state economy* (1973).
9. The *World conservation strategy* of 1980 is a joint publication of the International Union for Conservation of Nature and Natural Resources (IUCN), the United States Environmental Programme (UNEP) and the World Wildlife Fund (WWF, which has since then changed its name to the World-Wide Fund for Nature).
10. This is a publication of the World Commission on Environment and Development (WCED).
11. This is a follow-up to the *World conservation strategy*, and has been published by the same three organisations responsible for the 1980 publication.
12. However, it is true that certain phrases, particularly in Chapter 2 of this report, suggest a marginal acknowledgement of the intrinsic value of nature.

blems are simultaneously conceptualized as management problems: they can be overcome through better management and/or technology. Since the only concept of limitations explicitly acknowledged in *Our common future* is that of the state of technology and social organization, it also implies that natural capital, i.e. natural resources, can be exchanged with human and financial capital (Norton 1992: 99). Since legitimate questions can be asked as to whether increases in financial and human capital can, in all cases, really balance (or compensate for) the loss of nature,[13] a softer approach to sustainability/sustainable development has been adopted in recent years. In this approach the intrinsic value of nature, that is, the value it has independent of its use value to humans, is explicitly acknowledged.

This softer approach can be found in *Caring for the earth. A strategy for sustainable living* (1991), which is the follow-up of the *World conservation strategy*. In this report the ideals of sustainable development are further refined into a strategy for *sustainable living*. Mention is also made of a strategy for a *sustainable economy*. It furthermore focuses on quality of life, and not only on survival issues. Holding on to the notion that an activity is sustainable if it can be maintained indefinitely, sustainable development is defined in *Caring for the earth* (1991: 7) as improvement in the quality of human life, in as far as it is possible within the boundaries of the carrying capacity of the ecosystems on which it is dependent. A sustainable economy would be the result of sustainable development. As such, a sustainable economy would keep its natural resource base intact, but it can continue to develop by adapting it to change and by improvements in knowledge, organization, technical efficiency and "wisdom" (cf. Achterberg 1994a: 29).

Elaborating on the vision articulated for sustainable development in the *World conservation strategy*, nine principles are proposed in *Caring for the earth* that should form the ethical platform (or basis of values) of sustainable living. These are:

- Respect and care for the community of life (This is an ethical principle that defines a duty of care for other people and all forms of life, now and in the future);
- Improving the quality of life;
- Conserving the vitality and diversity of the earth;
- Minimizing the exhaustion of non-renewable resources;
- Keeping within the carrying capacity of the earth;
- Changing personal attitudes and practices, in accordance with an ethics for sustainable living;
- Enabling communities to care for their own environments;
- Forming a national framework for the integration of development and "conservation"; and
- Forming a world alliance to implement sustainability on a global scale.

It is acknowledged in *Caring for the earth* (1991: 12) that these principles, values and duties are not new and that they have been articulated in many of the world's cultures and religions for centuries. They also reflect many of the statements that have been made at United Nations conferences and in reports about the need for equity, the participation of all stakeholders in decisions impacting on their well-being, conservation of nature, and economic efficiency as prerequisites for sustainable development. In short: these principles reflect an essential support for the principle of respect for life in general, emphasizing the importance of nature and ecosystems – including human life. The challenge for sustainable living from this perspective is therefore not to justify it; rather it is to implement it into the lives of individuals and nations in concrete actions and practices.

Another point to stress from the perspective of *Caring for the earth's* integration of the two historical contexts mentioned above, is that the Earth Summit of June 1992, the Rio Declaration and Agenda 21 represent a large step backwards to a strong anthropocentric interpretation[14] of sustainable development (Achterberg 1994a: 30). In fact, in its emphasis on people in our concern for sustainable development, as well as the eradication of poverty and justice in

13. Achterhuis (1994: 202), for example, argues that the Brundtland Report could, "after a short lived profit, lead to long term accelerated destruction of both humanity and nature".

14. The softer interpretation of sustainable development in *Caring for the Earth* can be seen as a form of weak (or enlightened) anthropocentrism – a position that is widely accepted amongst moderate environmental ethicists. See Norton's (1984) positive evaluation of enlightened anthropocentrism.

the distribution of the world's resources, the Rio Summit and its declarations does not really add anything new to what was already articulated in the *Brundtland Report*.

This, however, does not mean that the Earth Summit was a failure. It at least registered a remarkable moral consensus amongst the political leaders of the world about the importance of sustainability/sustainable development, as well as a commitment – in principle at least – to a demanding programme of action and policy formulation aimed at achieving sustainability/sustainable development in the 21st century. According to Achterberg (1994a: 35) the Earth Summit also confirmed a commitment to a political ethics of egalitarianism in terms of which all people should be treated equally in terms of care and respect, regardless of the nation, culture or generation in which they find themselves. As such, the moral vision of the Earth Summit resonates with the "egalitarian platform" that represents the most widely accepted and respected position in contemporary political philosophy. In the Rio documents, this is captured in a concern not only for the most vulnerable people in the world, but also in its emphasis on international as well as inter-generational justice.

To summarize then, it can be stated that within both the historical contexts briefly discussed above we can discern the assumption that *structural adjustments* will be required in order to achieve sustainability or sustainable development. Within industrialized societies it was realized that the structure of the industrialized society, the fundamental pattern of production and consumption and the values informing and perpetuating it, should be radically changed. A reduction in consumption (implying an "economy of enough") and a drastic change in lifestyles would be required (Achterberg 1994b: 143). Mere adjustments in individual life-styles and values would be inadequate to make the difference that is required to establish a state of sustainability/sustainable development. In addition, it was also realized by both rich and poor nations that issues of *international justice*, that is the distribution of wealth between those living now, as well as joint decision-making about it, should receive serious attention in structural and institutional terms.

As such, the core ideas of sustainability and sustainable development incorporate an ethic, that is: a moral imperative that goes far beyond merely encapsulating scientific statements about physical limits and ecological carrying capacity – which we in any case cannot escape. Sustainability and sustainable development rather challenges us to make certain moral choices. Broadly speaking, the core ideas of this moral challenge can be articulated as a choice for:

- Inter-generational justice (a concern for the well-being of future generations that requires of us not to compromize their abilities to meet their needs);
- Intra-generational justice (a concern for the well-being and development of the poor of the world that requires of us to ensure a more equitable distribution of resources in the world, as well as joint, participative decision-making about it);
- Environmental protection and respect for life (a concern about the manner in which we impact on natural systems sustaining our lives that requires of us to assume an environmental ethic in which an attitude of respect for nature in its own right, over and above the mere use or resource value that it has for us as humans, is fostered).

This historical overview, however, does not bring our analysis of sustainability/sustainable development to completion. Having established in broad outline the moral objectives and challenges encapsulated in the notion of sustainability/sustainable development, our understanding of these concepts still lacks a clear vision of the *assumptions* under which the moral content summarized above is arrived at (or qualified, for that matter). We also haven't reached clarity about the implications that this moral content has for the *process of implementing* sustainability/sustainable development. In short, we still have to say more about the concept of sustainability/sustainable development to be able to say what it means to take it seriously as a national policy objective. In Section 3 below a number of assumptions underlying and qualifying the moral content of sustainability/sustainable development will be discussed. In particular, the focus will fall on different interpretations that can be given of these assumptions, leading to different conceptions, and even models of sustainability/sustainable development. Since the divergent notions about *implementing* sustainability/sustainable development constitute a separate theme in its own right, issues in this regard will not be discussed here in any further detail.

3. ASSUMPTIONS UNDERLYING AND QUALIFYING THE MORAL CONTENT OF SUSTAINABILITY/SUSTAINABLE DEVELOPMENT

Taking a closer look at the historical overview given above, it is evident that the concept of sustainability/sustainable development entails much more than the *quantitative* notion of something that can last indefinitely, i.e. forever. It also entails pertinent *qualitative* elements entailing answers to value questions that cannot be deduced from a quantitative concept of sustainability/sustainable development alone (Achterberg 1994a: 36). These value questions are often not explicitly stated, nor are the answers to them clearly articulated. It is important, however, to highlight these questions, as well as the divergent answers that are (often implicitly) given to them, since they throw light on the moral dimensions of the concept of sustainability/sustainable development, as well as the different conceptions (read: ideological positions) that can be assumed with regards to sustainability/sustainable development and its implementation. The most important of these questions are the following (Achterberg 1994a: 36):

1. What is so valuable that it should be sustained?
2. With a view to whom or what is the sustainability of this valuable something pursued?
3. How is sustainability pursued?
4. What are the criteria for sustainability? – so that the question whether and when we have reached a state of sustainability can be answered.

3.1 *What is so valuable that it should be sustained?*

With regard to the first question, different answers can be given, depending on whether a human centered (anthropocentric) or a nature centered (ecocentric) stance is adopted.[15] From an anthropocentric point of view, *human life* would be accentuated as that which is so valuable that it should be maintained indefinitely. This clearly begs the question as to what about human life is so important that it should be sustained for ever – but this opens up a debate that we cannot enter into within the limitations of a paper like this one. Suffice it to submit that in debates about sustainability/sustainable development that which is valuable about human life is often linked to the notion of *quality of life*, and not merely to human survival. Sustainable development, as it has been envisioned in *Caring for the Earth* (1991: 9), would then entail an improvement in the quality of human life in terms of a variety of indicators, including that of living a life of dignity and fulfillment. Sustainable development would then entail much more than mere economic growth – however important economic growth may be as a component of development. At the same time, what is important about human life is also often strongly linked to interaction with nature, conceived of as much more than merely a collection of resources for human use (Achterberg 1994a: 36).

From an ecocentric position, that which is regarded as so valuable that it should be maintained forever is typically linked to *nature*, that is: life on earth in general, and not only human life. But also in this case, sustainability aims at much more than the mere survival of an impoverished and degraded nature. The objective is rather to ensure that a rich and diverse nature continues its existence in a state with as little human induced damage as possible (cf. Achterberg 1994a: 36-37). From this point of view then, notions like the integrity of nature, its characteristic diversity, and human dependence on nature are emphasized.

The difference between these two positions is far from ideologically neutral. In debates about the implementation of sustainability/sustainable development it often leads to different interpretations of the question as to how much of nature needs to be conserved in order to achieve sustainability/sustainable development. According to Michael Jacobs (1999: 31-32), this constitutes one of the major fault lines within the concept of sustainability/sustainable development, placing anthropocentrists and ecocentrists in the debate in a position of confrontation with one another. On the anthropocentric pole of the divide the emphasis will be on the conservation of the resource value of nature. Accordingly, anthropocentrists would not be disturbed if nature, conceived of as natural capital, were successfully converted into human or financial capital. For them, sustainability would simply entail a state in which the

15. Strictly speaking, this two-way split represents only two positions in environmental philosophy/ethics amongst many. For an illuminating overview of the wide spectrum of these positions, consult Fox 1995, chapter 6.

total stock of capital in the world is maintained. We can therefore legitimately sacrifice nature if we can compensate for that by achieving important human goals, such as raising the general level of welfare in society or, increasing the total value of the economy by generating growth in our stocks of financial capital. Ecocentrists, however, would argue that this anthropocentric notion constitutes a weak or minimalist form of sustainability in which no limits are really placed on the exploitation of nature to satisfy human needs and wants. Instead, ecocentrists would argue for a strong or robust form of sustainability in terms of which nature is valued for its own sake, and as far as possible saved from being made totally subservient to human needs and wants. From this point of view, strong or robust sustainability would entail a state in which the "natural capital" of the world is kept intact, i.e. the regenerative and creative systems of nature are preserved in order to continue functioning indefinitely.

If we place the notion of sustainable development that is supported in NEMA within the context of the observations made above, it is clear that our national policy framework about environmental matters is dominated by an anthropocentric view that gravitates towards a minimalist interpretation of sustainability/sustainable development. It is true that NEMA clearly states that the principle of sustainable development requires numerous things of us, including that disturbance of ecosystems and loss of biodiversity should be considered in any development proposal; that pollution and degradation of the environment, as well as disturbance of landscapes and sites where the nation's cultural heritage is found, should be minimized or avoided; that the production of waste must be minimized or avoided; that non-renewable resources must be used responsibly; that the precautionary principle should be applied; and that negative impacts must be anticipated and prevented, and if they cannot be prevented, they must be minimized or remedied (DEAT 1999: 6).

From a fairly strong anthropocentric point of view, however, the principle that is literally stated first in NEMA is that environmental management must put people and their needs at the forefront, and must serve their interests fairly (DEAT 1999: 6). As is explicitly stated in its preamble, NEMA is therefore firstly about people, and not about conservation of nature in the narrow, conventional sense of the word. Although reference is made within NEMA to the notion of placing limits on our exploitation of nature, this is put within the larger frame of the management of natural resources for the benefit (health and well-being) of humans. While NEMA is in many instances a large step forward in the development of our national environmental policy framework, it seems from this perspective, then, that there is still room to improve it – in particular in the direction of explicitly articulating the notion of natural limits, so as to effectively protect the vitality and diversity of our natural heritage against the onslaughts of that which is often presented to us as development and economic growth, but in reality often entails organized and institutionalized unsustainability.

So, in the further development of South African environmental policy, the dual question as to how much of nature should be conserved, and for what reasons, constitutes one of the serious challenges that will have to be negotiated. In fact, sharp questions about the differences between weak and strong sustainability, as well as the differences between mere survival and quality of life, and the question whether nature should be considered for its own sake or merely instrumentally, i.e. for the sake of humans, will have to be addressed in more detail if we would like to legitimately claim to have a serious environmental policy that can make a difference to current unsustainable practices and attitudes.

It should be noted, however, that NEMA scores higher in terms of the second value question noted above, namely, with a view to whom or what is the sustainability of the health and well-being of humans pursued? This has to do with the choice made in NEMA for people, and, stated in more particular terms, for the choice made for the development of the poorest sectors of the South African society – in particular those that can be identified as the victims of the system of apartheid.

3.2 *With a view to whom or what is sustainability pursued?*

As it has been the case with regards to the first question, answers to the second one differ from one another, depending on whether an anthropocentric or ecocentric stance is assumed. In both cases, however, these answers can be strongly related to the goal of *justice* (Achterberg 1994a: 37-38), conceived of as fairness. From the historical overview

given above, it is evident that the notions of sustainability and sustainable development are strongly linked to that of a fair distribution of resources and livelihoods, in the first place between rich and poor countries living now (intragenerational justice), and also between present and future generations (intergenerational justice). The basis of this notion of fairness clearly has to do with that which we find so valuable that we want to sustain it indefinitely. In fact, if we are serious about sustaining indefinitely that which is so valuable to us, it will entail that we also hand it down to future generations. At the same time it would be arbitrary if we do not make that which is of enduring value also available to those on our planet who are poor and therefore struggle for survival.

Contrary to this anthropocentric interpretation of sustainability and sustainable development, it is pointed out from an ecocentrist position that it would be equally arbitrary to pursue sustainability or sustainable development only for the sake of humans (Achterberg 1994a: 37). From this point of view it is argued that we cannot justify that humans are the only species that deserves not only to live, but also to thrive and flourish. We cannot justify that other species and the ecosystems within which they live are nothing but resources that are available for human use. The point being made in this regard, is that other species and natural systems should also be seriously considered, for their own sake, if we want to claim that we have a serious system of sustainability or sustainable development. Formulated differently: ecocentrists press upon us that the integrity of nature for its own sake should also receive a central place in our notion of sustainability or sustainable development – which means that a rich and diverse nature forms an integral part of that which is so valuable that we would like to see that its existence is continued indefinitely, with as little damage to it as possible.

Taking a closer look at this notion of justice as it is extended to both future generations and non-human life, a new set of fault lines can be recognized in the notion of sustainability/sustainable development. Within a more anthropocentrically oriented position it is possible to distinguish in the first place between a non-egalitarian and an egalitarian notion of sustainability/sustainable development (Jacobs 1999: 32 - 33). In an egalitarian interpretation of sustainability/sustainable development the emphasis falls on efforts to raise the living standards of the poor and the destitute, while national and global resources should be redistributed in favour of poor countries and individuals. On the other hand, proponents of a non-egalitarian interpretation would strive to maintain their own living standards, placing emphasis on the protection of resources and nature, with no or non-committal mention of national or global resource distribution. Whereas the egalitarian interpretation will call for a reduction in consumption of global resources, a non-egalitarian interpretation would reject the challenge to significantly change consumption patterns and international economic relations characterizing the industrialized world. Where egalitarians in this regard would typically argue that the ecological footprint of northern countries should not invade the limited ecological space appropriated by countries in the south, non-egalitarians will tend to defend an "imperialist" regulation of resources in the south, e.g. forests.

Other tensions that should be considered with reference to the notion of justice and access to resources is that the goal of human survival will in certain circumstances clash with considerations of both quality of life and integrity of nature. At the same time, the goal of quality of life can clash with that of integrity of nature. The fact of the matter is that the use of resources required to ensure or maintain the integrity of nature for its own sake or for the sake of human preferences generates opportunity costs that could undermine the goals of quality of life as well as human survival. The converse is of course also true. Furthermore, the claims made on resources in order to ensure a fair distribution between generations living now (intragenerational justice) may jeopardize our ability to ensure a sound resource base for future generations (intergenerational justice), and *vice versa* (Achterberg 1994a: 38).

The tensions between the different poles of this set of fault lines are also not ideologically neutral. Achterberg (1994a: 38) points out that these ideological differences can be placed, as mentioned above, on a scale ranging from a minimalist to a robust interpretation of sustainability/sustainable development. Within this context, a minimalist interpretation would maintain that sustainability/sustainable development should only focus on the narrower issue of survival, while a robust interpretation would acknowledge that a broader scope of issues should be considered, including that of quality of life, the needs of future generations, and the integrity of

nature for its own sake.[16] The problem that Achterberg (1994a: 38) has with the minimalist interpretation, is that it reduces sustainability/sustainable development either to a question of survival, or to maintaining the *status quo* with regards to resource distribution. Quality of life, future generations and the integrity of nature are then relegated to optional extras. As he sees it, the notion of sustainability/sustainable development confronts us with a much more radical question than that of merely maintaining the current situation. It rather challenges us to ask: *What kind of life/lives, characterized by which quality, and combined with what nature, deserves to be sustained (provided that they are at all possible on our planet).* It is clear, therefore, that value questions regarding quality of life, the importance of future generations and the integrity of nature should be addressed prior to that of indefinite duration per se.

In the light of these considerations, it is evident that South Africa's National Environmental Management Act has opted for a broad, robust, and egalitarian interpretation of sustainability/sustainable development. It is egalitarian in so far as a clear preference is articulated throughout the Act to address the development and environmental needs of the poor and the vulnerable in our society. This can be appreciated as a genuine effort to address the dismal legacy of apartheid that has created, along racial lines, one of the most skewed distributions of resources between sectors of society, combining it with various forms of environmental injustice in which the poor and the vulnerable were exposed and subjected to the hazards and burdens of an industry and commerce mainly geared towards the consumption patterns of a relatively affluent sector. At the same time, however, this means that less resources are available, if at all, to ensure and maintain quality of life, as well as to seriously consider future generations and the integrity of nature.

In the further development of our national environmental policy, special attention will therefore have to be given to articulating in concrete local terms what the mutual relationship between justice, quality of life, the importance of future generations and the integrity of nature entails within South Africa. Otherwise we may find that we try to sustain things with little or no enduring value.

3.3 *How is sustainability pursued?*

As I have indicated above, the question of implementing sustainability/sustainable development is such a vast one, that a separate treatise can be devoted to it alone. However, for the purposes of conceptualizing sustainability/sustainable development it should be pointed out that implementation here has to do with *integration*, in theory and practice, of environment and economy, as well as development on the one hand and environmental management and conservation on the other (Achterberg 1994a:38). The importance of integration is acknowledged in the different historical documents pertaining to sustainability/sustainable development; therefore I do not have to dwell on its importance within this context. The central point emphasized in them is basically that this integration should take place on both a policy and an institutional level, and that this should lead to a real transformation of current institutions, practices and personal lifestyles.

Against the background of the discussion thus far it is clear that different interpretations, and therefore ideological positions with regard to sustainability/sustainable development should be expected here as well, depending on how much or how little emphasis is placed on integration. An informative example of this point can be found in Michael Jacobs' discussion of the "fault line", created in the notion of sustainability/sustainable development by different emphases placed in the process of environmental policy and decision-making on *participation* (Jacobs 1994: 34 - 35).

On the one extreme of the ideological divide, a commitment to full participation can be discerned where it is conceived of as something with intrinsic value. According to this bottom-up interpretation of sustainable development, full participation is a good in its own right. Accordingly, not only the setting of objectives, but also implementation is made subject to participative processes. On the other end of the spec-

16. Jacobs (1999: 35-38) makes a parallel distinction. As he sees it, the scope of the subjects addressed under the theme of sustainability/sustainable development is often narrowed down to the conservation of nature alone, while a broader interpretation of the scope of the subject field will include an array of social issues as well - including that of social development, job creation, poverty relief, access to information, and access to resources, to mention but a few. In the latter case, issues of "social sustainability" and "cultural sustainability" will also form part of the area of consideration.

trum, a top-down stakeholder interpretation of sustainable development can be found, according to which participation is only something with instrumental value: where it is not required, it is not espoused. Within this context, participation is typically only required for the implementation of sustainability/sustainable development; not to decide about objectives. However, if participation is required to determine objectives, it usually takes the form of consultation. In these consultative processes, participants are usually restricted to the major stakeholders of society: academics, specialists, business leaders, and representatives of local government and large environmental NGOs. Usually, members of the public are not involved. The bottom-up interpretation of participation, on the other hand, emphasizes the importance of involving much more than just an elite group of officials and experts. Ordinary members of the public and community organizations should also be involved.

With regard to tensions about participation, Jacobs (1999: 34, 35) makes two salient points. Firstly he argues that the top-down conception of participation often serves as a smokescreen for government inaction. It often happens that governments decide on the objectives, leaving the responsibility of implementing sustainability/sustainable development to everyone else (businesses, individuals, voluntary organizations), everyone other than the central government itself. Secondly, he points out that the ideal of full participation can create problems: it can become a goal in itself, elevating whatever emerges from participative, multi-stakeholder socio-political processes to the level of unquestionable interpretations of sustainability/sustainable development.

In terms of this perspective, it is heartening to note that South Africa's NEMA makes provision for integration through various participative processes.[17] In fact, civil society participation in environmental governance is treated in NEMA as one of the pillars of our environmental management policy (DEAT 2000: 1,2). For instance, NEMA makes provision for:

- The National Environmental Advisory Forum to advise the Minister of Environment Affairs and Tourism, amongst others, on appropriate methods of monitoring compliance with the principles in Section 2 of the Act;
- Environmental Management Co-operation Agreements that provide a mechanism for the Minister, provincial MECs and municipalities to enter into agreements with any person or community for the purpose of promoting compliance with the principles in Section 2 of the Act;
- Provisions on the protection of whistle-blowers who protect the public from prejudice or harassment for disclosing information on environmental risk, in good faith, and using the required procedures;
- Provisions that relax legal standing and enable any person or group of persons, in the public interest of protecting the environment, to seek appropriate relief for a breach or threatened breach of a provision of NEMA;
- Provisions that facilitate private prosecutions of environmental offenders; and
- Provisions for compulsory public participation in scoping studies and environmental impact assessments.

The question remains, however, whether these provisions are adequate to create a framework within which full public participation can take place, and, if so, whether the nature and level of participation within this framework is adequate to ensure that the full spectrum of issues underlying the conceptualization and implementation of sustainability/sustainable development can be debated in depth. Whereas this framework for participation is to be appreciated as a step in the right direction, I doubt whether it establishes a space for effective participation or for discussing the really crucial questions about sustainability/sustainable development. My contention is rather that the ideological clashes identified in the discussion above are mostly repeated in the channels created by NEMA for public participation. To confirm this, we have to look no further than the history of public participation and the debates about

17. Besides the fact that NEMA itself is the end product of a two-year consultative process (CONNEPP) in which the whole of the South African society participated, the following mechanisms for integration can be mentioned: 1. Integrated Environmental Management Procedures (see Chapter 5 of NEMA); 2. The Committee for Environmental Co-ordination, an interdepartmental committee, responsible for promoting integration and co-ordination of environmental functions by the relevant organs of state; 3. Environmental Implementation Plans (EIPs) and Environmental Management Plans (EMPs).

controversial development proposals, characterized as they mostly were (or are) by highly intense adversarial confrontations. Another concern in this regard is that the structures for public participation created or supported by NEMA predominantly envisage participants fulfilling a reactive role, that is: people taking action "on behalf of the environment" when a development has already been proposed by others, or when someone else is about to breach, or has already breached, a principle of NEMA, or stands to break, or already has broken, an environmental law. For the further development of environmental policy in South Africa it seems expedient, therefore, that we create contexts and platforms within which we can effectively debate the value choices we make in support of policy objectives such as sustainability/sustainable development. Central questions that will have to be answered in this debate would include the following: Should we only take survival issues into consideration, or also quality of life issues when we have to determine what is so important that it should be sustained indefinitely? What weight should be given to nature for its own sake, and how much of that nature should be conserved when we have to decide for the sake of whom or what we should strive to attain sustainability/sustainable development? To what extent should we take the notion of justice on board in our deliberations about sustainability/sustainable development, and to what extent, if at all, should we extend it to future generations and non-human life?

Special attention will also have to be given in these debates to articulate in concrete local terms what kind and what levels of participation we need and can afford in the process of integration. Part of this debate should also focus on questions regarding the kind and level of transformation we need in institutions and personal lifestyles in order to attain sustainability /sustainable development. After all, transformation also forms part of integrating sustainability/sustainable development in our individual, institutional and societal lives. Discussions like this, however, would be in vain if we have no clear picture of the criteria that we should use in order to recognize when we have reached a state of sustainability/sustainable development.

3.4 *What are the criteria for sustainability/sustainable development?*

As in the case of the previous three questions, the jury still seems to be out on the question with regards to the criteria that we should use in order to ascertain when we have reached a state of sustainability/sustainable development. It seems as if we haven't successfully overcome many of the problems and uncertainties with regards to criteria. A clear case in point is the quandaries we are faced with when we adopt the Brundtland Report's criteria for sustainability/sustainable development. According to the Brundtland Report, a situation is sustainable if the next generation inherits from us at least as much capital as we have inherited ourselves. What is referred to here is the total stock of capital that is available to humans, which includes not only "natural capital" but also financial capital and human capital (e.g. amenities and education). Stated in economic terms, sustainability is "an intertemporal relationship between human needs and human productive capacity" (Norton 1992: 98). What this implies, formulated in less technical terms, is that sustainability is achieved if future generations are as well-off or richer than present generations. So, as long as we can balance human welfare over time, we have a sustainable system. We do even better if we can improve human welfare over time and leave future generations richer than we presently are. However, as we have already indicated above, this implies that no limits are put on the nature or scale of human activities by the environment itself. As Norton (1992: 99) has pointed out, the Brundtland Report assumes that "[a]ny limitation on use of the environment may in principle be overcome by some new breakthrough in technology or social organization".

This conception of what a state of sustainability entails has been severely criticized by many – in particular for its failure to develop any robust notion of natural boundaries that should never be exceeded. According to Norton (1992: 99, 108), this denial of natural limits not only contradicts the obvious fact that the stocks of any given resource are finite, and that some are quite limited, it also hides this denial behind a highly optimistic confidence in the infinite intersubstitutability of resources.[18] Drawing on mainstream economic thinking, proponents of this notion argue

18. This notion of the "fungibility of resources across uses and across time" (Norton 1999: 125) is well developed in the work of mainstream welfare economist Robert Solow.

that entrepreneurs will always find cheaper alternatives for any resource as it becomes more and more scarce, and therefore more and more expensive to acquire. The same applies to new methods of recycling and disposal that will be developed as it becomes more and more expensive to dispose of waste and pollutants. The crux of the issue in this regard, however, is that all values are hereby reduced to a single (monetary) scale that makes it possible to interchange, and therefore trade off any value with every other one, regardless of the impacts that it may have on the health and integrity of the ecological systems supporting the activities required for human needs satisfaction. As such, this criteria of sustainability/sustainable development leaves us no leeway to work with the notion of non-negotiable moral constraints that should be placed on human economic activities.

So, in so far as the principle of the infinite intersubstitutability of resources is built into the Brundtland Report's definition of sustainability/sustainable development, we clearly do not have a *neutral* definition of sustainability/sustainable development to work with (Norton 1992: 99). In so far as NEMA subscribes to this definition without any substantive qualifications, the same applies to the criteria for sustainability/sustainable development adopted (albeit implicitly) in South Africa's national environmental policy framework. This of course confronts us with another vexing question, namely whether it would be at all possible to develop a neutral definition – as the Brundtland Report intended to do. From the discussion above it seems not to be possible. In the light of this, our challenge then seems to be a complex one, namely, to develop alternative criteria for a state of sustainability/sustainable development to those developed in the Brundtland Report, and at the same time to recognize that they will also not be neutral (read: "purely scientific and universally applicable"), but rather will entail on a substantive level certain fundamental moral choices with regard to an array of crucial questions – as we have seen above. In addition, part of this challenge is to provide a plausible justification for these value choices, as well as their applicability in particular contexts and circumstances.

It is tempting to discuss and compare various efforts[19] that have been made in order to develop alternative criteria of sustainability/sustainable development. However, for our purposes it will suffice to take a brief glimpse at one or two examples of such alternatives, noting that the formulation of these criteria will vary in terms of their specificity, although they will always be normative, incorporating implicitly or explicitly a number of value choices. On a very general level, Norton (1992: 106) has defined his criteria for sustainability/sustainable development as follows:

> *Sustainability is a relationship between dynamic human economic systems and larger, dynamic, but normally slower-changing ecological systems, such that: (a) human life can continue indefinitely; (b) human individuals can flourish; (c) human cultures can develop; but in which (d) effects of human activities remain within bounds so as not to destroy the health/integrity of the environmental context of human activities.*

In turn, he defines the crucial terms of health/integrity as follows – and it is important to note that we are dealing here with a normative definition, not a neutral one (Norton 1992: 107):

> *An ecological system has maintained its integrity if it retains:*
>
> (a) *the total diversity of the system, the sum total of the species and associations that have held sway, historically; and*
>
> (b) *the autonomous processes (systematic organization) that maintain that diversity, including, especially, the multiple layers of complexity through time.*

According to Norton (1992: 107) "integrity" can be used if an ecological system satisfies both conditions (a) and (b) of the definition given above. "Health" will be the appropriate term if only condition (b) can be satisfied.

On a more specific level, Weterings and Opschoor (1992), for instance, have formulated general criteria for sustainability as they apply to resource depletion, pollution and environmental degradation respectively (cf. Achterberg 1994a: 39 – 40). With regard to resource depletion, their criteria read as follows (my translations from the Dutch):

19. Cf. the "physical stock" approach of Allan Holland (1999), or the "equal opportunities" approach of Brian Barry (1999). See also Young (1993), Weiss (1989), and Attfield (1999: 181-185).

... there should be no absolute depletion. For non-renewable resources reserves should be kept at (or brought to) a level that is adequate for utilization for a period of 50 years or more. For renewable resources, human impact should be relatively smaller than the amount of that resource that can be replenished in an undisturbed natural system.

With regard to pollution, their criterion reads as follows:

... there should be no accumulation of pollutants, or persistent impacts (from pollutants) on future generations.

Their criterion for environmental degradation is the following:

... that the loss of ecosystem functioning ("areaal" in Dutch) per time unit should not be more than can be replenished or repaired naturally or artificially.

It is not appropriate to discuss the merits or demerits of these criteria here, neither to go into their assumptions and implications. On a conceptual level, however, it is important to point out that all of them take natural thresholds into account and that they are not dependent on the notion of the intersubstitutability of resources, technology and human organization (Achterberg 1994a: 40). It should also be noted that another ideological divide emerges here that is related to the extent to which the notion of natural boundaries are accepted or not in a particular interpretation of sustainability/sustainable development.

In the further development of our national environmental policy, it seems therefore essential that special attention will have to be given to articulate in concrete local terms what the criteria for sustainability/sustainable development should be. We should also pay special attention to the place we allocate within these criteria to the notion of natural limits, i.e. the notion of non-negotiable, moral constraints on human activities.

4. CONCEPTIONS AND MODELS OF SUSTAINABILITY/SUSTAINABLE DEVELOPMENT

From the discussion thus far it is evident that sustainability/sustainable development is not only a highly complex moral notion, but also a highly contestable political concept. Like many other political concepts such as democracy, liberty and social justice, it seems as if the meaning of sustainability/sustainable development is up for grabs (Dobson 1999: 6). While everyone may agree in broad outline on the core notions of the concept as they have been summarized in Section 2, a political and ideological battle exists between different conceptions of sustainable development, depending on which position is adopted in terms of the four questions discussed in Section 3. According to Michael Jacobs, these different interpretations occur along different fault lines that represent internal tensions within the concept of sustainability/sustainable development itself. On each one of these fault lines two principally opposing and competing conceptions (or ideological positions) of sustainability/sustainable development can be found, with a continuum of possible positions between the two polar extremes (Jacobs 1999: 25 – 31).

In terms of Jacobs' analysis these fault lines have to do with:

- The degree of environmental protection that is envisioned to attain sustainable development,
- The emphasis placed on equity as a prerequisite for sustainable development,
- The measure and nature of participation required to attain sustainable development, and
- The scope of the subject area covered by the concept of sustainability/sustainable development.

As we have seen in terms of Achterberg's analysis of sustainability/sustainable development, this taxonomy of fault lines can be linked to fundamentally different answers that can be given to the four crucial value questions discussed above.

Taken together, these different answers make it possible to distinguish between different *conceptions* of sustainability or sustainable development. In Section 3 these conceptions were identified in terms of a weak or a strong interpretation of sustainability/sustainable development; a minimalist or a robust interpretation; a non-egalitarian or an egalitarian interpretation; a top-down or a bottom-up interpretation; and a narrow versus a broad interpretation. However, these conceptions do not have an internal logical connection amongst them. They function independently from one another, although it is true that in practice the same person may hold on to one set of

interpretations that, together, can form a distinct *model* of sustainability or sustainable development.

It often happens, for example, that the same person will combine the strong, robust, egalitarian, bottom-up and broad interpretations of sustainable development. This generates what Jacobs (1999: 38) refers to as the *radical model* of sustainable development, and is typically found amongst greens, environmental activists, and development-oriented community-based organizations. On the other side of the spectrum, the weak, minimalist, non-egalitarian, top-down, and narrow interpretations of sustainable development combine to form a *conservative model* that is typically found in the circles of national governments, industry and business. In both of these models the core ideas may overlap, but they actually entail support of very different philosophies (ideologies) and practices.

The value of this overview of positions is that it can help one to draw a conceptual map, albeit a fairly crude one, to negotiate one's way through the minefield of clashes that characterize current discourse about the meaning and implementation of sustainability/sustainable development. Formulated differently: this taxonomy can help us to determine with much more clarity what is being referred to, and even what kind of politics is adopted, when people appeal to a particular conception of sustainability/sustainable development. A third way to state it, is that this taxonomy can help one to determine on which particular issues people clash when they differ about the meaning of sustainability/sustainable development or the measures proposed to implement it.

Having made these distinctions and observations, I would now like to return to the initial question that was formulated at the beginning of this paper, namely whether a concept such as sustainability/sustainable development should be used at all as a policy objective to guide environmental action on a local, national, regional and even international level. After all, what we have confirmed in our discussion thus far is that sustainability/sustainable development is a highly complex moral and political concept that is characterized by numerous internal tensions, and that it can be manipulated for various ideological purposes. If a conservative model of sustainability/sustainable development is followed, the emphasis will typically fall on the narrower issues of nature conservation and the maintenance of current patterns of production and consumption, with only minor adjustments to ensure that the resource base of our human endeavor can be maintained indefinitely. On the other hand, if a radical model of sustainability/sustainable development is followed, the emphasis will typically fall on structural changes in the economy, politics, institutions and individual lifestyles so as to ensure that a fairer distribution of resources can be achieved throughout the world and between generations, while staying within the carrying capacity of supporting ecological systems. The question then still is whether we should use a concept like this as the cornerstone of our national environmental policy. In the next two sections I venture a provisional answer to this question.

5. INTERPRETATION AND THE DISCOURSE OF SUSTAINABLE DEVELOPMENT

The discussion thus far throws light on what can be described, for lack of a better term, as the discourse (or politics) of sustainability/sustainable development. Here I will highlight only the most important aspects of this discourse.

5.1 In the first place it is important to acknowledge that the adoption of sustainable development as the central goal of our national environmental policy framework (in Article 24 of our Constitution, in NEMA etc.) has not settled the issues of the relationship between environmental protection and social-economic development at all. It only means that we have committed ourselves to a number of core ideas that we can capture in a number of principles and catch phrases, but it still leaves us with the challenge to interpret them. The implementation of sustainable development, therefore, is not merely a matter of applying an already defined concept whose meaning can be determined in clear and distinct terms and that is always ready at hand for us to employ whenever we need them. The implementation of sustainable development rather entails a process of interpretation in which certain crucial and mostly very difficult moral choices are required on a policy level.

5.2 Making these moral choices in this process of interpretation is never a neutral or a neat one; it has the character of an intense ideological battle. Far from merely entailing a number of

semantic disputations over the meaning of a word that can be overcome by agreeing on a few definitions, these contestations constitute a political struggle over the direction of social and economic development (Jacobs 1999: 26). Within ideological frameworks, attempts are typically made to discontinue the meaning of concepts like sustainability and sustainable development, leaving it only to some (and excluding others) to determine what constitutes the meaning of these terms. In extreme cases, this closure is effected by not even allowing any discussion at all about the meaning of sustainability/sustainable development. By this latter move, the impression is created that there is nothing of consequence to discuss about sustainability/sustainable development. Such a closure of discussion and the silences created by it also make it very difficult for anyone to challenge dominant notions about social and economic development, the net effect of which is that the *status quo* is kept intact, together with its skewed patterns of distribution in which some people or groups have more control over and access to resources, while others have less.

5.3 The intensity of the struggle over the meaning of sustainable development, and the difficulties in trying to implement it, stems from the fact "that sustainable development is evidently not the path of development which has been followed by the global economy, or by most individual nations, over the past fifty years; even less over the last twenty. Environmental concerns have not been integrated into economic planning and policy; the impact of current activity on future generations has [only] been assumed to be benign, not explicitly considered" (Jacobs 1999: 27; insertion by JPH).[20]

5.4 This, however, does not mean that we have to abandon the notion of sustainability/sustainable development in our policy debates. The strategic value of the notion of sustainability/sustainable development is to be found in the unprecedented combination of ideas that envisages an alternative to the trajectory of the unsustainable development path that we are currently following throughout the world. In all probability these ideas have not changed the course or momentum of unsustainable development yet, at least not substantively nor sufficiently. It can be maintained, though, that the notion of sustainability/sustainable development – even in its most conservative or minimalist interpretations – has placed a number of issues on our political agendas – whether it be our international, regional, national, or local agendas – that were not there fifty years ago, or even twenty years ago. These issues include the challenge to maintain at least the physical basis of our natural resources for present as well as future generations. Its value furthermore lies in the widespread endorsement that it has received over the last twenty years or so, in all probability because the scope of its ideas is so broad – enabling conservative governments as well as radical social reformers to subscribe to it, at least in principle (i.e. on a rhetorical level). After all: "Sustainable development appears to have the remarkable capacity to articulate, nourish and propagate quite radical political ideas while appearing respectably 'non-political'" (Jacobs 1999: 30). On the basis of this widespread support, sustainability/sustainable development can then, in the third place, also function as a set of "regulative ideals" (Benton 1999; Dobson 1999: 14) on the basis of which governments, industry, commerce and consumers can be held accountable for unsustainable actions and policies.

5.5 This leaves us with the unique opportunity to make sure that the notion of sustainability/sustainable development is kept alive and open, so that it can make a substantive difference to the "nature and salience of the political activity and debate" (Jacobs 1999: 28) we engage in with one another in order to determine the social goals we set for development and the strategies we choose to realize them. This can be

20. On the objection that this statement is not true if one takes into account what has been done by the National Environmental Protection Agency (NEPA) in the USA, or what stands in South Africa's NEMA, Jacobs would answer that these surely are bold efforts to counter the path of unsustainable development, but that the question still remains whether these efforts have been effectively integrated into economic planning and policy.

achieved by adopting an ideology-critical approach to the discourse about sustainability/sustainable development. A critical hermeneutical stance can also be of tremendous help in this regard.

5.6 Amongst many other things that ideology critique can be, it also entails an interpretation and critical evaluation of the discourse about sustainability/sustainable development in terms of the power relations that are established, justified, maintained or perpetuated by choosing certain poles in the conceptual taxonomy discussed above. A central question that should be posed within this context is whether the choice of a certain interpretation of sustainability/sustainable development has been made from the vantage point of power relations that are equal or asymmetrical, and if the latter, whether they establish or sustain relationships of domination and exploitation. Another central issue in this critical approach would be to show how these relationships of domination and exploitation are kept intact, how they are perpetuated, but also how they can be challenged and overcome (Thompson 1990).[21] In short then, from the perspective of ideology critique, we would continuously examine the positions adopted in the discourse about sustainability/sustainable development so as to determine which moral choices are made by which position, how these choices function in the service of which power relations, and whether these power relations could be justified within the contexts within which they operate.

5.7 Besides the ideology critique mentioned above, closure of the meaning of sustainability/sustainable development can be prevented by following a hermeneutical approach, radically conceived (cf. Zwart 1995: 7-8; Van Tongeren 1994: 213). Without developing this point in any depth within this paper, such an approach can briefly be described as one that is sensitive to the experience that the concepts that we have used in the past to organize our lives may prove to be inadequate to appropriately respond to changed situations. In fact, every concept that we may use to articulate something about a situation or a thing, hides certain aspects of that situation or thing in the very act of throwing some light on it. A hermeneutical approach to discourse would therefore emphasize the historical character of our debates and interpretations; i.e. that all of our concepts function within certain time horizons and within particular contexts, and that they do so in a limited and incomplete way. So, instead of trying to merely apply our already formed concepts to new situations and thereby reducing the creation of meaning to an extension of the already established, we should rather reverse our stance and constantly confront ourselves with the radical question as to whether our conceptual framework is adequate to articulate what is new or problematical about changed situations. Such an approach would compel us to actively seek out the limits of our familiar concepts, and to creatively explore either different concepts or different uses of seemingly familiar concepts. This, I believe, might further help us to change the "nature and salience of the political activity and debate" we engage in when we determine the meaning of concepts such as sustainability, sustainable development or sustainable living.

6. IMPLICATIONS FOR POLICY CHOICES AND MANAGEMENT STRATEGIES

So, how can we proceed from here? What are the implications of the above in policy and management terms? In a highly summarized and tentative form, these can be stated as follows:

6.1 The core ideas of sustainable development were first articulated as a response to the life-threatening realities of global environmental degradation. As these core ideas were discussed and further developed, it soon became evident that environmental protection and improvement in the quality of human life with-

21. J.B. Thompson's (1990) conception of ideology as meaning in the service of power and his notion of a critical hermeneutics underlie the points being made here.

in the carrying capacity of our ecosystems would require of us to address issues of distributive justice on a global and intergenerational scale, to seriously attend to a structural transformation of current patterns of production and consumption, to change our lifestyles, to consider the well-being of future generations, and to value nature, if not as a whole then certain aspects of it, as something more than a mere resource for human use.

6.2 As such, the core ideas of sustainable development radically challenge the dominant paradigm in terms of which we have organized the world's economy and its patterns of production, consumption and resource distribution up till now. Environmental degradation is caused by economic activity; that is by market forces governed by individual market decisions that are blind to their combined environmental and social impact (Jacobs 1999: 39). The core ideas of sustainable development (even under the interpretation of the conservative model) challenge us to rethink the (neo-classic economic) assumptions in terms of which these market forces operate, to reformulate or to abolish them, and on the basis of that, to steer market forces onto more sustainable paths, i.e. less environmentally destructive paths.

6.3 This implies that market forces will have to be controlled, and this in turn will require a form of economic planning and management where the goals for development and the limits of environmental impact are not determined by market forces alone, but publicly through the processes of participative democracy (Jacobs 1999: 40).

6.4 The management implications of this are that the economy should be geared to achieving a set of environmental targets that will ideally correspond to carrying capacity limits. This can only be done by various kinds of state intervention in the economy, at international as well as national, provincial and local levels (Jacobs 1999: 40) – subject of course to democratic, participative governance.

6.5 Within this framework the use of "sustainability indicators" can play a major role to circumscribe environmental targets and to define aspects of quality of life that are politically acceptable, environmentally sound, as well as achievable from a managerial point of view. To determine what these sustainability indicators should measure, how they should be measured, and what the target values of each indicator should be, will require a combination of scientific expertise as well as participative democracy. It will also require a process of contextualization so as to ensure that these indicators are relevant to the places, the circumstances, the time frames and the role players[22] to which they are applied.[23]

6.6 Within the framework of this kind of approach, participative democracy could follow the path of closure, leaning towards finding one, definitive conception of sustainability/sustainable development. This would be a disaster, since it would entail the imposition on the whole of society of an ideology serving in all probability the interests of only certain powerful sectors of society. Instead, we should strive towards keeping the meaning of sustainable development/sustainability open. This could be achieved by taking seriously the principles of context, place, time, situation, limitations and ideological bias when we articulate, interpret and consider the goals we set for social-economic development and conservation; and when we assess what people have to say about what they find problematical (or acceptable, for that matter) about specific situations in which they have to live or make a living.

7. CONCLUSION

The analyses, conclusions and suggestions made above confronts each one of us with the radical question: whether we have ever really confronted ourselves with the complexities of articulating the

22. I.e. interested and affected parties.

23. For more details about this, see Bryan Norton's conception of "scientific contextualism" and "adaptive management" (Norton 1991 and 1992).

meaning of sustainability or sustainable development in a manner that appropriately and creatively responds to a highly problematic state of affairs, namely unsustainable development, unsustainability, or unsustainable living – call it what you like. I would like to venture that we have not, and that we have up till now – to a very large extent – only paid lip service in our responses to the challenges that we try to articulate with concepts such as sustainable development and sustainability. In fact, what we have done up till now is to adopt a conservative or minimalist model of sustainability that pretty much leaves the world as it is. I think it is high time that we move beyond this conservative/minimalist model in the direction of a radical interpretation of sustainability and sustainable development, confronting ourselves with the multidimensional question: what it means in concrete terms, on a personal, institutional, national and international level, to live within the limits of supporting ecosystems, to work towards a fair distribution of resources in the world, today and in the future, and to make room for participative democracy, when we have to determine what weight we should give to environmental protection, the integrity of nature and quality of life in our thinking about social, political and economic development.

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BIBLIOGRAPHY

A blueprint for survival. 1972 (By the editors of the *Ecologist.*) Harmondsworth, England: Penguin (First published as vol. 2, no. 1 of the *Ecologist*, 1972).

Achterberg, W. 1994a *Samenleving, natuur en duurzaamheid. Een inleiding in de milieufilosofie.* Assen: Van Gorcum.

Achterberg, W. 1994b Can liberal democracy survive the environmental crisis? Sustainability, liberal neutrality and overlapping consensus. In: *Ecology, technology and culture. Essays in environmental philosophy.* Edited by Wim Zweers and Jan J. Boersema. Cambridge: The White Horse Press.

Achterhuis, H. 1994 The lie of sustainability. In: *Ecology, technology and culture. Essays in environmental philosophy.* Edited by Wim Zweers and Jan J. Boersema. Cambridge: The White Horse Press.

Attfield, R. 1999 *The ethics of the global environment.* Edinburgh: Edinburgh University Press.

Barry, B. 1999 Sustainability and intergenerational justice. In: *Fairness and futurity. Essays on environmental sustainability and social justice.* Edited by Andrew Dobson. Oxford: Oxford University Press.

Benton, T. 1999 Sustainable development and accumulation of capital: Reconciling the irreconcilable? In: *Fairness and futurity. Essays on environmental sustainability and social justice.* Edited by Andrew Dobson. Oxford: Oxford University Press.

Daly, HE. (Ed.) 1973 *Toward a steady-state economy.* San Francisco: Freeman.

DEAT. 1999 A user guide to the National Environmental Management Act.

ttp://www.environment.gov.za/nema/guide.html

(accessed on 2 January 2001) (DEAT = Department of Environment Affairs and Tourism).

DEAT. 2000 National Environmental Management Act (NEMA).

http://www.environment.gov.za/nema/index.html (accessed on 22 December 2000).

Dobson, A. 1999 Introduction. *Fairness and futurity. Essays on environmental sustainability and social justice.* Edited by Andrew Dobson. Oxford: Oxford University Press.

Fox, W. 1995 *Toward a transpersonal ecology. Developing new foundations for environmentalism.* A Resurgence Book.

Goldsmith, E *et al.* 1972 *A blueprint for survival.* Harmondsworth: Penguin Books.

Holland, A. 1999 Sustainability: Should we start from here? In: *Fairness and futurity. Essays on environmental sustainability and social justice.* Edited by Andrew Dobson. Oxford: Oxford University Press.

IUCN, UNEP, and WWF. 1980 *World conservation strategy. Living resource conservation for sustainable development.* Gland: Switzerland.

IUCN, UNEP, and WWF. 1991 *Caring for the earth. A strategy for sustainable living.* Gland: Switzerland.

Jacobs, F. 1994 Can liberal democracy help us to survive the environmental crisis? In: *Ecology, technology and culture. Essays in environmental philosophy.* Edited by Wim Zweers and Jan J. Boersema. Cambridge: The White Horse Press.

Jacobs, M. 1999 Sustainable development as a contested concept. In: *Fairness and futurity. Essays on environmental sustainability and social justice.* Edited by Andrew Dobson. Oxford: Oxford University Press.

Jickling, B. 1999 Beyond sustainability: Should we expect more from education? *Southern African Journal of Environmental Education*, No. 19, 1999: 60-67.

Meadows, DH *et al.* 1972 *The limits to growth. A report for the Club of Rome's project on the predicament of mankind.* New York, NY: Universe Books.

Mill, JS. 1848 *Principles of political economy.* In: *Collected works of John Stuart Mill*, Vol. III. Toronto: University of Toronto Press, 1965.

Norton, B. 1984 Environmental ethics and weak anthropocentrism. *Environmental Ethics*, 6 (Summer), 131-148.

Norton, B. 1991 *Toward unity among environmentalists.* New York: Oxford University Press.

Norton, B. 1992 Sustainability, human welfare and ecosystem health. *Environmental Values.* Vol. 1, No. 1: 97-111.

Norton, B. 1999 Ecology and opportunity: Intergenerational equity and sustainable options. In: *Fairness and futurity. Essays on environmental sustainability and social justice.* Edited by Andrew Dobson. Oxford: Oxford University Press.

Patterson, G. 1998 *Dying to be free. The canned lion scandal and the case for ending trophy hunting in Africa.* London: Viking.

Thompson, JB. 1990 *Ideology and modern culture. Critical social theory in the era of mass communication.* Cambridge: Polity Press.

Van Tongeren, PJM. 1994 Moral philosophy as a hermeneutics of moral experience. *International Philosophical Quarterly.* Vol. XXXIV, No. 2, June 1994: 199 - 214.

WCED. 1987 *Our common future.* Oxford: Oxford University Press.

Weiss, EB. 1989 *In fairness to future generations. International property law, common patrimony and intergenerational equity.* New York: United Nations University, Japan and Transnational Publishers.

Weterings, RAPM and Opschoor, JB. 1992 *De milieugebruiksruimte als uitdaging voor technologieontwikkeling.* Rijswijk: Raad voor Milieu- en Natuuronderzoek. [The utilization of the environment as challenge for technology development. Rijswijk: Council for Research on the Environment and Nature.]

Wissenburg, M. 1998 *Green liberalism. The free and green society.* London: UCL Press.

Young, MD. 1993 *For our children's children. Some practical implications of inter-generational equity and the precautionary principle.* Canberra: Resource Assessment Commission.

Zwart, HAE. 1995 *Weg met de ethiek? Filosofische beschouwingen over geneeskunde en ethiek.* Amsterdam: Thesis Publishers.