

Is there a meaningful definition of sustainability?

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Abstract

Although the concept of 'sustainable development' has been hailed for its reconciliatory potential, it has failed in practice to resolve enduring conflicts. Exploring the evolution of the concept—from its 19th-century antecedents through Brundtland to contemporary 'Panglossian' interpretations—the paper argues that difficulties of implementation are not transient but have deep roots. No conception of sustainable development can be adopted without making fundamental ethical and political choices, but the debate about such choices is nevertheless of great importance. It is argued that we should abandon our search for a singular, consensual definition of sustainability, but try as best we can to make progress in the absence of consensus.

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...when concepts (and hence the words that refer to them) become politicized, a struggle over meaning and morality takes place. When to classify is to decide, rival moral judgements contend for supremacy. (Wildavsky, 1993, p. 47)

Introduction: a paradox

Fifteen years after the Brundtland Report, *Our Common Future* (WCED, 1987), popularized the concept of sustainable development, it has become difficult to ignore a striking paradox. On the one hand, the power and the promise of Brundtland's idea lay in its *reconciliatory* potential—in its insistence that growth and a high-quality environment need not be mutually incompatible. It was welcomed, and has since been widely endorsed. On the other hand, conflict between environment and development has, if anything, intensified in the intervening period, a process that can be observed at all scales from the local to the global. There is no noticeable

outbreak of consensus in any major policy arena, and trends in production and consumption continue to move in a generally unsustainable direction. This paradox implies, at very least, an implementation deficit—a failure in the short term to find ways of making a broadly consensual concept operational. But it might also point to more fundamental problems, arising from contradictions within the concept of sustainable development itself, famously defined by Brundtland as 'meeting the needs of the present generation while not compromising the ability of future generations to meet their needs' (WCED, 1987, p. 40). These issues are explored in what follows, which takes the form of a journey through four eras of sustainability. It begins in pre-Brundtland days, traces developments through initial post-Brundtland optimism to our current somewhat perplexing situation, and finally takes a cautious look into the future.

Antecedents

The first of these eras is by far the most extended, covering two centuries or more of antecedents to the modern concept. In many essential elements, sustainable development is not a new idea. It echoes, for example, concerns for

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'prudent resource use' articulated by the 19th-century American conservationists of soils, water and forests, as well as the long-established axiom of 'maximum sustainable yield'. The views of the forester Gifford Pinchot, for example, certainly have resonance—about a century ago, he was advocating a practice of conservation that:

...recognises fully the right of the present generation to use what it needs of the natural resources now available, but ... recognises equally our obligation so to use what we need that our descendants shall not be deprived of what they need. (Pinchot, 1967, p. 80)¹

In the 20th century, the first major report to use the term 'sustainable development' in an essentially similar way was the *World Conservation Strategy* (IUCN *et al.*, 1980). In the preparation of this report, the concept of 'sustainable development' had proved attractive not least because it provided a way out of an impasse: representatives of developing countries were unwilling to co-operate in any promulgation of the 1970s' discourse of 'zero growth'.

The promise of Brundtland

We might ask why, after all that had gone before, Brundtland's exposition so gripped popular and political imagination at the end of the 1980s. One answer, perhaps, lies in the two decades of deeply polarized debate that followed the 'environmental revolution' of the 1960s and early 1970s, when the 'world of global equilibrium' starkly advocated in *The Limits to Growth* (Meadows *et al.*, 1972) seemed irreconcilable with a future of material prosperity for all, as envisaged by technological optimists. Out of critique, counter-critique and often acrimonious debate, came a process of learning, and with it more nuanced understandings of relationships between economy, society and environment. By 1987, sustainable development, with its apparent ability to reconcile previously polarized positions, was an idea whose time had come. Brundtland's central and compelling message was that:

Environment and development are not separate challenges; they are inexorably linked. Development cannot subsist upon a deteriorating resources base; the environment cannot be protected when growth leaves out of account the costs of environmental destruction. (WCED, 1987, p. 37)

¹ We find a clue to our present paradox in the unresolved dispute between such proponents of prudence and some of their prominent critics, particularly those for whom non-human nature was much more than a 'resource' for human use (for further discussion, see Hays, 1987; Evernden, 1992).

The implication was that with sufficient human ingenuity, all of the world's population, now and in future, would be able to enjoy growth and prosperity without the disastrous 'overshoot and collapse' so graphically predicted in *The Limits to Growth*. It is not difficult to see why this message fell on receptive ears, but two things are worth noting, for both are relevant to our paradox: one is Brundtland's emphasis on 'needs'; the other is the anthropocentrism inherent in her definition of sustainable development—it is *human* needs, the needs of present and future generations, that are the central issue for concern.

In its broad generality, Brundtland's concept promised to square the circle: all that remained, it seemed, was to set about interpreting and implementing sustainable development in specific sectoral and geographical contexts. This task was embraced with some enthusiasm. The political scientist, Maarten Hajer (1995, p. 60), notes that as new discourses become prominent, a process of 'discourse structuration' occurs, when 'the credibility of actors ... requires them to draw on the ideas, concepts and categories of a given discourse'. Certainly, by the early 1990s, the credibility of politicians and many other actors required them at least to genuflect towards sustainable development. The diffusion and take up of the concept was remarkable and, throughout numerous institutions, strategies began to proliferate.² In this era of promise, then, sustainable development seemed to meet everyone's requirements, and to offer a pragmatic way forward.

The struggle for meaning

Initially, perhaps especially in the developed world, it was the environmental dimension of sustainable development that was most strongly emphasized. The rationale—and it retains considerable power—was that economic and social development had for too long left vital environmental considerations out of account. If only on 'past deficit' grounds, therefore, moving towards sustainability must mean more explicit and greater attention to environmental protection and integrity. In this vein, interpretations of sustainable development based on the metaphor of 'environmental capital' became particularly influential (see, for example, Pearce *et al.*, 1989; Pearce and Turner, 1990; Bateman, 1991; Pezzey, 1992; Foster, 1997; for an overview and discussion see Owens and Cowell, 2002, especially Chapters 3 and 6). These linked Brundtland's axiom about the needs of present and future generations to the established economic

² A student writing an essay for me in 2001 found that there were 25,828,583 web pages on this subject.

theory that well-being³ depended on the availability of various forms of capital. Fairness to future generations, it was argued, demanded that the productive potential of a stock of capital—including ‘natural capital’ as well as the more familiar infrastructure and skills—should be maintained or enhanced over time. On the grounds that many natural systems provide vital and/or irreplaceable functions, there was an additional criterion that such ‘critical environmental capital’ should be handed on to our descendants more or less intact.⁴

In the first half of the 1990s, these interpretations proved alluring. English Nature (1993), for example, declared that it would oppose practices that adversely and irreversibly affected critical natural capital, which the agency defined in terms of assets that were highly valued, and either essential to human health or life support systems, or irreplaceable or unsubstitutable (see also Shepherd and Gillespie, 1996). The UK Government (1994), in its first strategy for sustainable development, seemed to concur, acknowledging that in some instances, ‘a site, or an ecosystem, has to be regarded as *so valuable* that it should be protected from exploitation’ (para 3.15, emphasis added).

It rapidly became apparent, however, that to operationalize the concepts in this model—indeed, probably any attempt to move beyond Brundtland’s consensual but vague definition—would raise not only scientific questions, but profound ethical and political dilemmas. To take the most obvious example, how should we decide which aspects of the environment were ‘so valuable’ that they must be protected in all but exceptional circumstances? Such decisions would not only test our limited knowledge of interactions between the human and non-human worlds, but would clearly demand judgement. Not surprisingly, therefore, the question of how much ‘environmental capital’ should be removed from the arena of trade-off was open to intense dispute, with proponents taking up positions on a spectrum from ‘weak’ to ‘strong’ sustainability. Advocates of the former acknowledged at least the instrumental importance of environmental functions and services (echoes of Pinchot here), and most conceded some degree of criticality (accepting, for example, a limit to trade off when it came to assets like soils). Those at the other end of the

spectrum favoured a much more expansive critical category; they inclined towards greater precaution (how could we know what might be crucial for life-support or economic development—or what careless actions might damage such assets?), and they deemed many natural (and cultural) environments ‘valuable’ for intrinsic as well as human-instrumental reasons.

It will be clear, of course, that even weaker interpretations of sustainability present challenges for vested interests—a point to be considered further below. But just as significant is the way in which promising algorithms lead quickly into treacherous ground. Trying to operationalize the ‘environmental capital’ model soon exposed divergent views on enduring and fundamental questions. Should sustainability entail maximizing human preference satisfaction over time? Or should our actions be guided by certain axioms or obligations—matters of social or environmental justice—which can trump aggregative welfare calculations? When making such choices, to whom or what should we attribute ethical standing, and why?⁵ And inevitably we confront the question of whether all *human* claims have equal moral value: sustainable development may be couched in terms of needs (as in the Brundtland definition), but markets and neo-liberalism resist distinctions between needs and demands, and eschew judgements about preferences. We sense these dilemmas when damaging the natural world feels *wrong*, even when it can be rationalized in utilitarian terms;⁶ when we become entangled in ‘livelihoods versus nature’ controversies; and when we feel tensions between liberal instincts and a strong sense that some preferences might simply be better—more constitutive of a sustainable society—than others. Furthermore, these enduring questions have been freshly exposed, rather than reconciled, by our attempts to interpret sustainability in specific settings.

What was also apparent by the mid-1990s was that sustainable development defined in terms of protecting environmental capital—especially in its ‘stronger’ forms—would be incompatible with growth that placed ever greater demands on resources and ecosystems. The stark polarities of the 1970s had receded but conflicts were far from resolved. If sustainable development was not to be a Trojan horse (Owens, 1994)—let in through the gate by unsuspecting governments but concealing a threat to prevailing patterns of production

³ Usually defined in terms of preference satisfaction; in the context of this discussion, we might assume that ‘prudent preferences’ would recognize the important contribution of natural capital to human welfare.

⁴ Non-critical assets might be traded against other forms of capital, though some analysts maintained that in addition, there should be no net loss of environmental assets *overall*. Application of this ‘constant natural assets rule’ called for environmental compensation when losses of significant non-critical environmental assets were involved.

⁵ Acknowledging intrinsic (or at least non-instrumental) value in nature might justify more protection than simply considering the ‘services’ it provides to humankind. So might particular assumptions about the interests or rights of our descendants.

⁶ In the sense that the overall gains in welfare outweigh the losses. Often, of course, development that serves vested interests cannot even be rationalized in this way.

and consumption—it had somehow to be tamed and redefined. By this stage, it was no longer possible for dominant interests to *reject* the concept. Rather, they needed to capture it to ensure that growth and development remain at the core. Thus, from around the mid-1990s onwards, we see a vigorous re-insertion of the economic dimension of sustainability, followed by inclusion of social considerations, alongside environmental protection. The UK Government was now at pains to stress that ‘achieving all these objectives at the same time is what sustainable development is about’ (DETR, 1998, p. 3)—a definition that might have excited Dr Pangloss,⁷ but whose limitations in terms of practical politics are readily apparent.

The point is not, of course, to deny the validity of any of the three objectives, nor to dismiss the possibility that they might sometimes be simultaneously achieved. It is that in the real world, even when we apply our best efforts, they do often conflict: as Isaiah Berlin (1969, p. 167) famously argued, ‘not all good things are compatible, still less all the ideals of mankind’. Without rules for adjudication in these circumstances, ‘Panglossian’ definitions of sustainable development are at best facile. At worst, given prevailing structures of power, they simply ensure that environmental considerations continue to be subordinated to other goals.

The third era, then, has involved a struggle over meaning, and if we have learned anything since Brundtland, it must be that there is no singular definition of sustainable development upon which all can agree. Indeed, we can see the force of John Rawls’s (1972, p. 130) assertion that ‘by itself a definition cannot settle any fundamental question’. Rawls made this point in his seminal *A Theory of Justice*, from which we might also borrow an important distinction, that between a concept—the broad meaning of a term—and a conception, which must include the principles required for implementation. Concepts—justice, liberty, democracy and sustainability—can be broadly consensual, while different conceptions remain in profound dispute. Thus, as we have tried to make sustainability operational, we have discovered that different ethical and political premises lead to different rules and outcomes. Progress, in this third era, is slow not because (or not only because) we are witnessing an ‘implementation deficit’—a natural time-lag in the application of principles that are widely agreed—but because we are engaged in a contest over divergent *conceptions* of what it means for development to be sustainable. It is this divergence that best explains the paradox identified above.

⁷ For whom (in Voltaire’s *Candide*) ‘all was for the best in the best of all possible worlds’.

Progress without consensus?

The odd thing, perhaps, is not that progress has been slow, but that anyone should have expected the quest for sustainability to be a consensual or straightforward project. Indeed, the more important the concept, the less likely it is that harmony will prevail. Dahl (2000) observes that after 25 centuries we still struggle over the meaning of democracy; similarly, any student of current affairs can identify divergent conceptions of justice, and the conflicts to which they continue to give rise. Inevitably, perhaps, as Bagehot (1856, p. 287) maintained, ‘the path of great principles is marked through history by trouble, anxiety and conflict’. Nevertheless, it is arguable that we have moved, gradually, towards stronger versions of democracy and more robust conceptions of justice. In a similar way, we might hope to progress—in the fourth era—towards a more sophisticated theory and practice of sustainability.

We have few palatable options but to try to move forward on two fronts: by seeking greater knowledge and understanding of natural environments and the social world; and by engaging in dialogue about values—about what we believe to be good and right—addressing the question that Ulrich Beck (1992, p. 28) poses: ‘How do we wish to live?’ Vigorous debate, argument, challenge and counter-critique, even if at times they seem futile and inconclusive, should be seen in a positive light, as part of the vital process of interpreting the concept of sustainable development in terms of workable conceptions. We must hope, however, that the quest for sustainability will take considerably less than 25 centuries; if we wish to maintain our tenancy of the planet, we do not have the luxury of so much time.

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