Understanding what sustainability is not – and what it is

This paper argues that the policy principle of ecologically sustainable development – first and famously articulated in the Brundtland Report of 1987, *Our Common Future* – is an impossible principle. As a guiding principle, it demands that we must simultaneously maximize three different things: social justice, ecological sustainability and economic development. However, this is impossible to do. Despite the principle – and the closely associated idea of 'triple bottom line accounting' – being nonsensical, it has been maintained because it serves a number of other ends. It provides psychological comfort, it helps to maintain the *status quo* of business-as-usual neoliberal capitalism and it provides status-rewarding employment for the professional class. For true ecocentric sustainability on 'spaceship' Earth, we need to reject 'sustainable development' and build an ethically founded eco-socialism.

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Citation

Lynch T and Khan T (2020) Understanding what sustainability is not – and what it is. *The Ecological Citizen* **3**(Suppl B): 55–65.

Keywords

Eco-socialism; ecological economics; limits; sustainability; sustainable development

After the last 30 years, as soils have continued their catastrophic depletion, the oceans their plastic filled acidification, the biosphere its continued warming, and antibiotic denying superbugs propagate, no-one should be in any doubt: our civilization may not survive the environmental conditions it is in the process of creating for itself. We may argue as to what is the primary driver of our disastrous, potentially catastrophic, environmental impacts – 'human nature,' capitalism, hierarchy, industrialization, patriarchy, anthropocentrism, and so on – and certainly this is a question of the utmost importance. But we may also ask why it is that the *policy principle* that was developed and championed, both locally and globally, as a mean of managing and reducing these impacts has not had any real mitigating effect – indeed, arguably, has had exactly the opposite effect.

This internationally recognized principle – presented first in the Brundtland Report (World Commission on Environment and Development [WCED], 1987) as "a central guiding principle for the United Nations, Governments and private institutions, organizations and enterprises" (United Nations, 1987) – is that of *Sustainable Development* (SD), or, as is sometimes preferred, *Ecologically Sustainable Development* (ESD).

The argument

In what follows we shall argue that (E)SD is, as a policy principle, an *impossible* one. This is not because it sets the bar too high, or asks too much of us. For, in itself, it asks us nothing – and it asks us nothing precisely because it is a *nonsensical* principle. If the principle is defended with the claim it has not really been understood, implemented and followed, we argue in response that it *cannot* be understood, implemented and followed in the first place.

To make our case we must, naturally, explain how it has come about that (E)SD has been presented as such a policy principle and for so long, for irrationality cannot explain itself. Why, and for whom, is an impossible policy principle useful (even essential)? What forces and interests have been served and furthered, indeed often created, by such an impossible policy principle? And why is it that the impossibility is not recognized? Answering these questions will throw light on the principal driver of our ecological destructiveness as it grinds onwards, even as the consequences of that destructiveness already surround us. But it will do much more, for it will let us start

to see just what real sustainability might mean, or, rather, what it *must* mean, if it is to shape and inform our lives together for that end.

Introducing (ecologically) sustainable development

The origins of the (E)SD principle lie in the 1970s, and particularly in the response of the United Nations to the emerging idea (and evidence) for the 'limits to growth' thesis – a thesis most fully and forcefully articulated by a body of economists, scientists and system theorists in a report under that title (Meadows *et al.*, 1972). The United Nations' initial response to an emerging reality that, on the face of it, might be taken as impugning the idea of economic growth and development, and so the project of poverty alleviation and elimination in 'developing countries,' came in the very first United Nations Conference on the Human Environment (held in Stockholm, Sweden, in 1972), with this declaration (United Nations, 1972):

> A point has been reached in history when we must shape our actions throughout the world with a more prudent care for their environmental consequences. Through ignorance or indifference we can do massive and irreversible harm to the earthly environment on which our life and well being depend. Conversely, through fuller knowledge and wiser action, we can achieve for ourselves and our posterity a better life in an environment more in keeping with human needs and hopes [...] To defend and improve the human environment for present and future generations has become an imperative goal for mankind.

In the service of this declaration, in 1983 the United Nations commissioned the ex-Prime Minister of Norway, Gro Brundtland, to gather together 22 people (economists, scientists, politicians, diplomats and business people) representing 21 nations, both 'developed' and 'developing,' as members of a World Commission on Economy and Development (soon to be better known as 'The Brundtland Commission'), with the following terms of reference (United Nations, 1983):

1. to propose long-term environmental strategies for achieving sustainable development to the year 2000 and beyond;
2. to recommend ways in which concern for the environment may be translated into greater co-operation among developing countries and between countries at different stages of economic and social development and lead to the achievement of common and mutually supportive objectives which take account of the interrelationships between people, resources, environment and development;
3. to consider ways and means by which the international community can deal more effectively with environmental concerns, in the light of the other recommendations in its report;
4. to help to define shared perceptions of long-term environmental issues and of the appropriate efforts needed to deal successfully with the problems of protecting and enhancing the environment, a long-term agenda for action during the coming decades, and aspirational goals for the world community, taking into account the relevant resolutions of the session of a special character of the Governing Council in 1982.

In 1987 the Brundtland Report appeared. It was entitled *Our Common Future*, and it gave conceptual content to the term 'sustainable development' – a term which had first appeared as a phrase in the International Union for the Conservation of Nature and Natural Resources' *World Conservation Strategy* (1980). *Our Common Future* defined 'sustainable development' (which it often paraphrased as "ecological and economic sustainability") as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987: 43).

What is (E)SD?

Examining this definition, (E)SD would thus seem to involve the following:

"The origins of (E)SD principle lie in the 1970s, and particularly in the response of the United Nations to the 'limits of growth' thesis."

1 a focus on human needs (*development that meets the **needs** of the present without compromising the ability of future generations to meet their own **needs***);
2 the assumption that such needs provision can only be satisfied by continuing 'development' (***development** that meets the needs of the present without compromising the ability of future generations to meet their own needs*);
3 the claim that satisfying present human needs must be – and so (presumably) can be – satisfied in ways that do not undermine or prevent future generations from meeting their needs (*development that meets the needs of the present without compromising the ability of **future generations** to meet their own needs*).

Elaborating on this, we can see that (E)SD involves a core conception of *social justice* – it is a matter of universal, indeed, intergenerational, human needs satisfaction; that it presupposes that adequately meeting such needs is a matter of a *continuing developmental process* (understood, roughly, as "an evolutionary process in which [...] human capacity increase[s] in terms of initiating new structures, coping with problems, adapting to continuous change, and striving purposefully and creatively to attain new goals" [Peet, 1999: 77]), and – though this implication only becomes apparent as the Report develops – that this developmental process is crucially a matter of *economic development* ("economics and ecology must be completely integrated in decision making and lawmaking processes not just to protect the environment, but also to protect and promote development" [WCED, 1987: 37]). In the words of the Commission's Mandate (WCED, 1987: 356):

> The Commission is confident that it is possible to build a future that is more prosperous, more just, and more secure because it rests on policies and practices that serve to expand and sustain the ecological basis of development.

Understood in this way – with ecological sustainability a matter of "the ecological basis of development" – (E)SD may seem to be nothing new. After all, the standard justification of liberal (or, more recently, neo-liberal) economics as morally and socially desirable, and so its role as a 'guiding principle' in all areas of human life, takes pretty much the same form, which we summarize as follows: *It is the economic development engendered by the competitive activities of agents in free markets which allows the continuing and expanding satisfaction of human needs through time.*

Here we have needs, we have economic development, and we have intergenerational justice. Given this, it is not unreasonable to think (E)SD involves nothing more – and nothing less – than the progressive unleashing of the beneficence of the 'invisible hand' of *laissez-faire* across more and more areas of human life – now with ideas like 'natural capital,' 'ecosystem goods and services,' 'carbon markets' and so on.

Of course, the Brundtland Report understood – or presented – (E)SD as something *more* than just an expansionist version of the traditional defence of free markets. Such traditional defences were seen as inadequate in so far as they failed to note, or adequately emphasize, the *mutual dependency* of the economy and the environment in our productive attempts to satisfy human needs. They did not, it was argued, properly take into account ('efficiently price') so-called 'negative externalities.' In the words of the report: "We have in the past been concerned about the impacts of economic growth upon the environment. We are now forced to concern ourselves with the impacts of ecological stress" (WCED, 1987: 5). Still, it is obvious that rectifying this inadequacy is merely to complete the traditional justification of liberal economics, for it furthers the 'efficiency' of market pricing, and does so in pursuit of economic development.

Understood in this way (E)SD assumes its familiar form. Thus (Victor, 2006: 91):

> A healthful environment [...] provides the economy with essential natural resources. A thriving economy, in turn, allows society

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> to invest in environmental protection and avoid injustice such as extreme poverty. And maintaining justice [...] ensures that natural resources are well managed and economic gains allocated fairly.

This formulation captures the three core aspects of (E)SD: the economic, the environmental and the social. And as these three aspects are brought together in the *one* 'guiding principle,' (E)SD becomes a matter of so-called 'triple bottom line accounting.' This idea was first explicitly formulated by John Elkington in 1994 in an article entitled "Towards the sustainable corporation: Win–win–win business strategies for sustainable development"; an article which "look[ed] at the ways in which companies can turn the environment game into one in which they, their customers, and the environment are all winners" (Elkington, 1994: 91).

After all, a guiding principle has to be, first of all, before we do anything, a *principle*. As it is meant to direct our actions, and at the most basic policy level, it must (like any useful signpost) direct us towards a goal. And as that goal is social justice, ecological sustainability *and* economic development, these must come together in the principle. It is, in other words, either 'win–win–win' or no principle at all.

> "Who could honestly reject the promise of a 'win-win-win' situation? Certainly not the United Nations General Assembly."

Who – whichever value most concerned them – could honestly reject the promise of a 'win–win–win' situation? Certainly not the United Nations General Assembly, which endorsed the Brundtland Report, and, among many other organizations and groupings, the International Council for Local Environmental Initiatives (ICLEI), an association of 900 local government jurisdictions in nearly 70 countries, which, in 2007, decided to implement it by endorsing 'triple bottom line' as the standard accounting measure of (E)SD. Most recently, in 2015, the 2030 *Agenda for Sustainable Development* was adopted at the United Nations Sustainable Development Summit with this as its very first line: "This Agenda is a plan of action for people, planet and prosperity" (United Nations, 2015).

Why (E)SD cannot be a guiding principle

If (E)SD as captured by 'triple bottom line accounting' was able to function as the United Nations recommended – that is, as "a central guiding principle for the United Nations, Governments and private institutions, organizations and enterprises" – then there could be no better job than that of 'Sustainability Officer.' After all, this would appear to be a job that no-one (at least, no-one who was rational and morally concerned) could object to, and to be pursuing goals that are mutually satisfying for all. Who could not love such a job, and the general acclamation it would seem to entail? The trouble is that there is no such job on offer, and nor could there be.

The reason that this is – indeed, must be – the case was first pointed out by Von Neumann and Morgenstern in 1953, and reiterated in 1972 by Garrett Hardin in his epochal essay "The Tragedy of the Commons." It is surely surprising (to put the best spin on it), that few in the sustainability development business seem to have noticed. Hardin, when thinking about whether Jeremy Bentham's utilitarian goal of "the greatest good of the greatest number" (a matter of the joint maximization of merely two ends) might be achieved, answered (Hardin, 1972: 1243):

> No [...] It is not mathematically possible to maximize for two (or more) variables at the same time. This was clearly stated by von Neumann and Morgenstern, but the principle is implicit in the theory of partial differential equations, dating back at least to D'Alembert (1717–1783).

The relevant passage in Von Neumann and Morgenstern (1953) appears on p 11 of *The Theory of Games and Economic Behavior*:

> A guiding principle cannot be formulated by the requirement of maximizing two (or more) functions at once. Such a principle, taken literally, is self-contradictory. (In general one function will have no maximum where the other function has.)

While the language may be technical, the point is not. Just as one cannot maximize two different ends at the same time (maximum population and maximum happiness for Hardin), nor can one, even more impossibly, simultaneously maximise all three legs of the triad of (E)SD. It follows from this it is *literally impossible for (E)SD to be a guiding principle*, and so for 'triple bottom line accounting' to amount to anything more than obfuscation.

What is not impossible, of course, is maximizing a single function or a weighted average function. As Von Neumann and Morgenstern (1953: 11) continue: "If some order of importance of these principles, or some weighted average is meant, this should be stated." But it was precisely such a lexical ordering or dependence on a weighted average that (E)SD was supposed to overcome, for neither lexical ordering nor a weighted average can deliver a 'central guiding principle' that promises to deliver a 'win–win–win' outcome. Giving one principle lexical priority means that that principle *always* wins, while any weighted average involves negotiating *trade-offs* between the relevant principles. The first approach *can* give a 'guiding principle for action' – Maximize economic growth! *or* Protect the environment! *or* Pursue social justice! – but it is certainly not (E)SD. The second approach gives only a space for the usual, pre-principle, politics of conflict and negotiation that (E)SD was supposed to transcend.

If (E)SD cannot be a guiding principle, why has it been presented as such?

You might think that an impossible guiding principle – given its impossibility – cannot have a point or function at all, but this is *not* so. Of course, it cannot be what it says or claims to be. But there are many *other* things it might be, and many other things it might be doing. And it might even be the case that it can only be what it is, and do what it does, insofar as it manages to lay claim to do the impossible.

Without any claim to completeness – nor any claim as to their relative importance, or possibilities of com-presence – we can think of the following functional possibilities – all of them compatible, indeed, reinforcing: and so, in this, unfortunately, exactly unlike (E)SD.

In the first place there might be a *psychological* function or point. An impossible guiding principle might offer to those who avow it great psychological relief, just as it may be psychologically comfortable for people generally to believe that there are competent people able to do – indeed, are doing – the impossible... Here moral heroism may take its last empty stand.

True, it would be nice, both for agents and audience – indeed, quite lovely – if (E)SD *was* a guiding principle. If we could maximize economic development *and* poverty alleviation *and* protection of the natural environment, then we should set about doing so, and justifiably feel good about it. The belief, then, that we can do these things promises both the psychological relief of stress reduction and the positive reward of doing three good things all at once and in the same action or process. The psychological attractiveness of this can hardly be underestimated. Indeed, such stress relief and positive reward will be all the greater to the extent that we are haunted by the (repressed) fear of the impossibility of the whole project, and aware of the potentially catastrophic results that acting on the principle is meant (impossibly) to avert.

In the second place, not unrelated, there might be a *social* or *political* function or point. Thus, one function of (E)SD as a guiding principle might lie in its role in holding together three different constituencies in a (here, trilateral) 'process.' The 'as long as they/we are talking' phenomenon might – whatever else might be said (and well said) against it – generally be thought better than fighting; and certainly it will seem so to those whose stake in the *status quo* would be threatened by any open conflict.

In the third place there might be, as it were, various *professional* functions of (E)SD as a guiding principle, and especially for our budding 'Sustainability Officer.' For

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instance, while it is impossible to maximize more than one of the triad, economic growth/environmental protection/social justice, that does not mean that there might not be a *job* in it – indeed, as we saw with our prior psychological and social considerations, one that may present itself as a stress-reducing, status-rewarding job. Naturally, just how much of this is available may depend on whether one is asked to *do* the impossible, or simply to *think* about doing it. Merely thinking about ways to do the impossible means that there is an endlessly empty logical space waiting to be filled by ever new ways of failing, while actually trying to do it, and repeatedly failing, can soon become dispiriting.

(E)SD, then, may, in all its impossibility, ground itself in the psychological, social and political, and professional functions. But why *does* this psychology, personal, political and professional, payoff? What does this impossibility make *possible*?

"There are good reasons for the suspicion that (E)SD serves as ideological cover for the politics and economics of 'business as usual' neoliberalism."

Why economic development dominates (E)SD

As Finger and Chatterjee pointed out in their pioneering 1994 book *The Earth Brokers*, there are good reasons for the suspicion that (E)SD serves as ideological cover for the politics and economics of 'business as usual' neoliberalism: a useful displacement of real concerns and real issues into impossible projects and an equally impossible, because empty, moral heroism that operates entirely on the level of the symbolic, whilst leaving the operations of capital accumulation and market dominance essentially untouched – even strengthened by a 'legitimacy effect.' It would, of course, be unnecessarily cynical to think that it is perceived as so by all those who participate in (E)SD policy deliberations – and certainly for those whose fundamental concern is with the ecological or social justice legs of the triad. But what is true, as we will now show, is that the 'economic development' element of the (E)SD triad is, in present circumstances at least, better equipped than the other legs to assuming that lexical priority a guiding principle demands, and better equipped to strongly dominate any weighted average approach.

In the first place it is better off in a 'technical' sense. The point is a familiar one, even if its impact on (E)SD is not always appreciated. For economics has a language – that of *money* – which is 'universal' in the sense that it can be used to commensurate absolutely everything and anything. Using various technical measures – such as shadow pricing and contingent valuation surveys – anything whatsoever (*ipso facto* anything to do with environmental and social justice matters) can be assigned a money value. Assigning such value(s) gives the appearance that not only is 'triple bottom line accounting' (E)SD possible, it is realizable through the already familiar techniques of Cost–Benefit Analysis.

It may be said, in defence of Cost–Benefit Analysis, that the mere fact of money commensurability does not, of itself, imply that the economic development leg of the (E)SD triad will either lexically squeeze out the other elements, or be strongly dominant in any weighted average, but the fact is that it has a natural and well-nigh unavoidable tendency to do so, and for comprehensible reasons.

In the first place, while shadow pricing and contingent calculation surveys may enable us to assign a money value to environmental and social justice matters, they do so only indirectly and against the background of market determined prices. The values they assign, for all their being specified in money terms, are not determined directly by the operations of the market, but are, instead, *as-if* determinations. They are thus 'soft' with a softness that can only be removed by the 'hardness' or 'rigour' of genuine market determination: that is to say, by being completely swallowed up by the hard monetarism of the economic element of the (E)SD triad. After all, a real dollar is – whatever else we might think of it – worth more than a merely imaginary, *as-if*, dollar.

It is, presumably, just this fact, however vaguely recognized, that leads to the well-known fact that many people simply refuse to participate in contingent valuation

surveys when the topic is a matter of environmental or social justice concerns. They know that the 'technical' devices are in fact substantive on a policy level, even if not in real dollar terms, and that even to posit a money value for something is thereby to invite it to be treated solely as an economic good or harm whose value is whatever the market determines (*cf.* Frey and Pirsher, 2019).

The second reason for thinking the economic element of (E)SD will demand lexical priority or dominate any weighted average lies in the way the 'technical' point points us to the realities of socio-political power. For real, not *as-if*, wealth gives economic power that feeds into, infuses and so delivers social and political power in a way that a concern for social justice or ecological values does not. If the common talk when it comes to (E)SD is of 'stakeholders,' the fact is that some stakeholders are more so than others. For while one meaning of the term is 'someone who has an interest in the success of a plan, system or organization,' the dominant meaning – and the one that explains the rapid rise and proliferation of the term from the 1980s onwards – is 'a person or company that has *invested* in a business and *owns* part of it.' These stakeholders – the ones with real, not notional, dollars – have real, not notional, political power, and so, despite talk of 'triple bottom line' (E)SD accounting, their views invariably carry more weight in policy deliberation and formation than the views of other groups.[1]

The third reason for the lexical priority and domination of the weighted average of the 'development' leg of the triad is that (E)SD – in virtue of its conjoining sustainability and development in terms of "the needs of the present" – indexes sustainability to *present* conditions. This does two, connected, things. First, it tends to an inevitable, presentist (if, often, unconscious) partiality when it comes to needs specification, as well as tying the idea of the "needs of future generations" to that focal specification; and, second, it does so from a context, from a world, in which our needs have already been thoroughly formed and informed by a capitalism that is built on, and so fosters, ever new 'consumer needs.' To the extent, then, that (E)SD implies talking, not fighting, any idea of the need for a radical re-evaluation of human needs, or of the necessity of radical economic revolution, is off the table, and is so from the start.

What should we conclude about (E)SD?

(E)SD is not – and cannot be – a 'guiding principle' as was intended by the Brundtland Report. Rather (E)SD appeals to three distinct goals – economic development/social justice/environmental health – which cannot be simultaneously maximized. It is, therefore, an impossible guiding principle. Of course, the three concerns have underlying practical and functional interdependencies, but such functional interdependencies do not constitute them as a unity. Indeed, if they did, there would be no need for talk of (E)SD in the first place.

So why was (E)SD proposed as a guiding principle, and why has it continued its zombie existence? On the available evidence, and on the most basic and encompassing level, it provides an ideological cover for business-as-usual neoliberal capitalism,[2] it offers psychological relief through wishful thinking, and it offers some the chance or opportunity of a professional placement and career. What it does not do is provide a pathway to sustainability.

What is sustainability really?

If there is no sustainability in (E)SD, that does not mean there is nothing to sustainability. It means, rather, that 'triple bottom line' accounting is nonsense. And it also means, given the situation and place we are in, that any attempt to replace 'triple bottom line' (E)SD with a lexical priority ordering, or weighted average interpretation of (E)SD, will tend (indeed, will tend *irresistibly* as the last 35 years ought to have shown us) to see established – so real, rather than notional – economic power continue on in its established and preferred pathways, even if, tragically, the

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end result is foreseeably that of collective disaster.

To avoid such a catastrophe, what must be done when it comes to policy deliberation and determination? How can sustainability be understood and utilized on a collective level so that it does more than simply provide cover for destructive neoliberal capitalism? And, on the personal level, offer more than the empty consolation of a collusion that disguises itself in wishful thinking and purely professional rewards?

It is fortunate that there is a way of doing this, and a way that was first proposed in 1966, long before the Brundtland Commission formalized the impossible nonsense of (E)SD. It was, in fact proposed by an economist – Kenneth Boulding – whose ambition was to 'internalize' both economic and equity concerns into a foundational and basic concern for a conceptually well-formed understanding of sustainability (Boulding, 1966).

"Economics is the economics of sustainability, and the ethical is the ethics of sustainability."

Spaceship Earth sustainability

Boulding argued that making sense of sustainability in such a way that it internalized economic and equity concerns, rather than set them up as separate, and so never fully commensurable in policy deliberation, meant thinking of the Earth system as – in a non-technical sense (for it has, and as a biosphere requires, solar energy inputs) – a *closed* environment, as opposed to that open environment presupposed by traditional economics (Boulding, 1966):

> The closed earth of the future requires economic principles which are somewhat different from those of the open earth of the past. For the sake of picturesqueness, I am tempted to call the open economy the "cowboy economy," the cowboy being symbolic of the illimitable plains and also associated with reckless, exploitative, romantic, and violent behavior, which is characteristic of open societies. The closed economy of the future might similarly be called the "spaceman" economy, in which the earth has become a single spaceship, without unlimited reservoirs of anything, either for extraction or for pollution, and in which, therefore, man must find his place in a cyclical ecological system which is capable of continuous reproduction of material form even though it cannot escape having inputs of energy.

Considered this way, sustainability is both the fundamental concern, and is all encompassing. It is not that everything else (economic and ethical) is subordinated to it, but, rather, that they must be understood in terms of it: economics is the economics of sustainability, and the ethical is the ethics of sustainability.

This means that the most fundamental ethical–economic concern, now indexed not to the merely occurrent – and so 'timeless' – present, but to an endlessly sustainable present, is that of *needs provision*, where such needs are not (as with 'consumer needs') to be further and endlessly added to, but are general and basic. Such needs will include things like breathable air, potable water, adequate shelter and food, fertile soil and adequate genetic stock. These basic material needs will not, of course, be all the needs in play, for there are needs of humanity and sociability (needs for contact and companionship, for security and a level of novelty, for meaningful activity and recreation) though, again, these needs are superstructural on the materially basic needs and their continual sustainable provision.[3]

In a "spaceman economy" (and in a way that helps us to see further what sustainable needs provision implies) what is crucial is not, as it is for us today, Gross National Product, but *stock maintenance.* Boulding (1966) puts it this way:

> In the cowboy economy, consumption is regarded as a good thing and production likewise; and the success of the economy is measured by the amount of the throughput from the "factors of production," a part of which, at any rate, is extracted from the reservoirs of raw materials and noneconomic objects, and another part of which is output into the reservoirs of pollution [...] By contrast, in the spaceman

> economy, throughput is by no means a desideratum, and is indeed to be regarded as something to be minimized rather than maximized. The essential measure of the success of the economy is not production and consumption at all, but the nature, extent, quality, and complexity of the total capital stock, including in this the state of the human bodies and minds included in the system. In the spaceman economy, what we are primarily concerned with is stock maintenance.

Understanding sustainability in terms of stock maintenance means, of course, that what we are presently engaged in (and what (E)SD was meant to allow to continue its 'development') is manifestly not sustainable, but disastrously unsustainable. Thus, we have our first imperative: move from unsustainability to spaceship sustainability. An imperative that includes (for it must) questions of a sustainable population size in the context of enduring needs provision.

Basic needs and sustainability

If Boulding's understanding of sustainability is to be properly appreciated, and the temptation to read things like 'stock maintenance' in a standardly economistic way avoided, it is important to see that his understanding of needs has two connected dimensions, both of which bring out the way 'spaceship Earth' thinking and 'ecocentric' thinking ultimately converge in 'spaceman' economics.

The first dimension is that the basic needs in question are *holistically* determined by our place and history in the biospherical 'spaceship' on which we now live, for they have arisen as essential to our being through the "play" of natural selection in the encompassing ecological "theatre" (Hutchinson, 1965). As such they are constitutive of what we might call our 'species being,' where that being is – as ecocentrism argues – *relational*, and all the way down.

The second dimension follows from the first. For our basic needs are relational in two intertwined ways – to the wider ecological theatre itself, but also to our fellow species members as a naturally selected reproductive unit ('species') in that theatre. It follows from this that needs *provision* is a matter both of what 'stock' is available and of how we together (as a group, as a species) go about drawing on this stock. This means, as a matter of praxis, that *genuine sustainability is a matter of mutually realizing holistically determined basic needs*. It is this 'mutual realization' condition that allows us to develop – as Boulding in his essay does not develop – an understanding of the *politics* of genuine sustainability.

The politics of sustainability

The politics of sustainability, and so of basic needs provision, is not something unfamiliar or novel – however unfashionable, even impossible, it may be in a 'cowboy economy.' It embodies an essential, because constitutive (so 'eternal') conception of social justice. Indeed, a conception of social justice that has a long pedigree, for it can be discerned in traditional hunter–gatherer communities and social commons regimes of the kind Elinor Ostrom (1990) studied, though she herself never seems to have clearly drawn the conclusion. Social justice in a sustainable 'spaceship' is a matter of *from each according to ability, to each according to need*. This formula is, of course, one that characterizes *socialism*, both 'Utopian' and 'Scientific.' And it does something that is not done – indeed, arguably, could never be done – with any conception of justice that is grounded in individual *rights*, for it internally connects needs and obligations in a relational and holistic way that the latter, with its individualistic focus, cannot do.

A modest proposal

Considered as a 'spaceship,' and so, as a sustainable, economy – where this means simply an economy that sustainably meets relationally constituted basic human needs – there is no real dispute, given our circumstances, as to the general policy framework implied. As one of the most

"Social justice in a sustainable 'spaceship' is a matter of *from each according to ability, to each according to need.*"

important writers in the post-Boulding tradition, the Chinese economist and world systems theorist, Minqi Li (2008), neatly summarizes:

> The technical requirements for climate stabilization are clear. The global energy infrastructure needs to be fundamentally transformed to be based on renewables. Much of the world's economic infrastructure will have to be changed accordingly. Agriculture will need to be reorganized to follow sustainable principles and to be freed from dependence on fossil fuels for fertilizers and machineries. The entire transportation system will have to be re-built, with railways and public transportation operated by renewable electricity playing prominent roles. The scale of the world economy will need to be reduced in accordance with the emissions reduction objectives. All of these need to be accomplished without undermining the basic needs of the world's population.

"Let us – for there is no sustainable alternative – build for ourselves a socialism that internally connects holistically conceived basic human needs and obligations."

As we have seen, the only way that this might even conceivably be done requires a conception of sustainability that internalizes ecology and economics into a universal understanding of holistically conceived, and so relationally constituted, basic human needs. This is not something (E)SD can do, claiming, as it does, that economic developmentalism and social justice and ecological sustainability are different 'functions' that can be jointly realized. It is, however, something that can be done in terms of that socialist justice of 'from each according to ability, to each according to need.'

It is, perhaps, the last, 'socialist,' requirement for real sustainability that leads so many of us today – and pretty much everyone of the elite capitalist class, and the upper middle classes of "university professors, engineers, technicians, managers, financial analysts, and other professionals" (Li, 2008) that make up the majority of those who form the mainstream environmental movement – to commit not to real sustainability, but to the impossible variety that may deliver (especially to these people) psychological easement, moral self-regard, and a job, and so to the inevitable catastrophic consequences of (E)SD.

And so our modest proposal: given that (E)SD is an impossibility as a guiding principle, and that it is an impossibility capitalism demands, let us – for there is no sustainable alternative – build for ourselves a socialism that internally connects holistically conceived basic human needs and obligations. There is no other way when it comes to real sustainability. And one thing we can be sure of, and that may support us in our project, is that, unlike (E)SD, this project is not impossible from the start. ■

Notes

1 None of this is surprising, given that stakeholder theory arose as a theory of the firm in capitalism. As one popular presentation has it, "Stakeholder theory [...] stresses the interconnected relationships between a business, its customers, suppliers, employees, investors, communities and others who have a stake in the organization" (http://stakeholdertheory.org/).

2 Indeed, by appearing to reconcile ecological sustainability and business or economic development, it tends to deepen the hold of the latter insofar as it encourages scholars, policymakers, and, of course business leaders, to look favourably on the idea of so-called 'public-private partnerships' – an idea and approach institutionalized in (E)SD at the World Summit on Sustainable Development in 2002.

3 Nor do these needs of humanity and sociability imply, as is intimated in the Brundtland Report ("Sustainable development requires meeting the basic needs of all and extending to all the opportunity to satisfy their aspirations for a better life" [WCED, 1987: 44]) – that every generation has a need for an ever increasing 'standard of living.' What is sought, as Boulding says, is not this, but "quality of life." And there is no reason to think this demands ever more 'development.'

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