

## Book Review

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*Bankrupting Nature: Denying Our Planetary Boundaries.* Andres Wijkman and Johan Rockström, New York: Routledge, 2012.

*Bankrupting Nature: Denying our Planetary Boundaries* by Andres Wijkman and Johan Rockström emerges from the original report of The Club of Rome's *The Limits to Growth* authored by Meadows and colleagues in 1972. This book demonstrates that an economy built on the continuous expansion of material consumption is utterly not sustainable. Based on the increased evidence of an uncanny correlation between escalating rates of global economic growth and environmental degradation, this book continues to raise worldwide awareness of environmental problems created as a result of anthropogenic activities. *Bankrupting Nature* demonstrates that political leaders are still in deep denial about the magnitude of global environmental challenges and resource constraints facing the world. The authors state that the challenges of sustainability cannot be met by simply tinkering with the current economic system, but will require major changes in the way members of political and corporate elites and the general public perceive and address environmental and social issues. As reported in a recent press release by The Club of Rome (2012), this volume lays out a blue-print for a radically new economic paradigm that links economics with ecology, arguing that this is the only way to generate growth in the future.

The aims of the book are manifold: to “critically examine the relationship between human beings and nature and the threats we pose to the complex natural systems on Earth” (p.1); to outline a “well-articulated vision of what kind of society we want to see in the long term” (p. 7); to “draw attention to some promising paths towards a more sustainable use of land, water, and nutrients” (p. 54); to “highlight the issue of population growth in climate change negotiations” (p. 83); and to focus on changes “that will make the financial sector a constructive force in overall efforts towards a more sustainable society” (p. 147).

The authors introduce the concept of ‘planetary boundaries’ as a powerful explanation of the limits of the planet to sustain continued economic and population growth. Wijkman and Rockström focus on cultural and lifestyle issues as well as the economy, “because these are the areas where the key changes must occur in order to address the serious threats to the biosphere” (p.1). The authors question whether today’s political system is at all prepared to take on the long term challenges posed by globalization, population growth, climate change and the over-consumption of both finite and renewable resources (p.2).

In discussing population growth, Wijkman and Rockström state that “The biggest gains from significantly lower birth rates would be the combination of a better quality of life for

both women and children and a greater potential for stabilizing the climate” (p. 84). Wijkman and Rockström express their concerns for reducing child and mother mortality and increasing the wealth of poor nations (p. 80) as well as concerns for providing for the “two to three billion new citizens that will be born during the next forty years” (p. 81). On the one hand, they find that efforts to improve human health are crucial, as are measures to support job creation and access to modern energy; on the other hand, they also find that efforts to reduce number of births should be given high priority (p. 82).

The authors place particular emphasis on importance of reproductive health, including family planning and school attendance for girls. In addressing long-term effects of population growth, the authors state:

Some people claim that the size of the world population has no importance for sustainability because of the low resource and carbon footprints of the poor. While such an argument may be valid in the short-term perspective – global consumers have until now accounted for by far the greatest amount of pollution and resource depletion – it totally misses the point in the longer term. All people born on this planet have the right to decent living conditions. This is what governments ought to prioritize. From such a perspective it is obvious that the prerequisites for achieving sustainability will be more favorable the sooner the world population stabilizes (p. 82-83).

Here, the authors mount a clever attack on the current socio-political manipulation of environmental issues by the dominant power elites. This includes cases of politically motivated strategies for discrediting climate change science as well as the short-termism in the system that supports most currently existing energy policies (p. 142). The authors provide many useful and practical ideas with regards to the reformation of financial sector, based on their discussion of “growth dilemma” which implies consideration of impossibility of de-growth (given current structural constraints) coupled with the attempt at the transformation of the economic system (p. 149). A strong plea is made for abandoning GDP growth as the key objective for development and focusing instead on a limited number of welfare indicators. Wijkman and Rockström question the “trickle-down” concept and replace it with one of sufficiency.

*Bankrupting Nature* asserts that despite clear threats, power elites including politicians and corporate leaders have still not done enough to combat environmental problems. Since the publication of the first report of The Club of Rome, a global think tank and center of innovation and initiative, the general message that biodiversity protection requires drastic measures, including the curbing of economic growth and population have proved to be unpalatable to political leaders. While empirical evidence is accumulating to support the prediction that the values predicted by the limits-to-growth model and actual data from the

turn of the century are very close as evidenced by empirical studies such as Hall and Day (2009), and Turner (2010), the limits-to-growth debate seems overshadowed by the new optimism of 'sustainable development' and the refusal of power elites to address population growth and the rise of consumerism.

In addressing the question as to why political and corporate elites as well as the general public seem unwilling to acknowledge the fact that humanity is "living far beyond its means" (p. 4) and consistently ignore any calls for radically altering the systems of production and consumption, Wijkman and Rockström offer explanations such as the lack of adequate education, an unwillingness to change habits, and powerful business interests which strongly defend business as usual models and the like.

The book is helpful in raising awareness of the issues as well as presenting possible solutions. Wijkman and Rockström provide support for the concepts of the 'circular economy' and the 'cradle to cradle' framework. The idea of the circular economy refers to a restorative industrial system that mimics natural processes and promotes a life cycle in which no materials are wasted. Material flows are of two types, biological nutrients, which are biodegradable and technical nutrients, which are designed to circulate for endless reuse.

In their 1976 research report to the European Commission "The Potential for Substituting Manpower for Energy", Walter Stahel and Genevieve Reday (1977) sketched a vision of a circular economy and its impact on job creation, economic competitiveness, resource savings and waste prevention (<http://www.product-life.org/en/cradle-to-cradle>). This framework was later adopted by William McDonough and Michael Braungart (2002) and recently popularized by Ellen MacArthur Foundation (2012). According to the Cradle to Cradle (C2C) model, that is opposed to "cradle to grave" (from creation to disposal), eco-efficiency only works to make the old, destructive system last longer. As opposed to these models, McDonough and Braungart propose a production system based on effectiveness, not efficiency. Instead of just minimizing the damage, such innovative thinking addresses the question of how contemporary waste and depletion of resources can be avoided. Wijkman and Rockström propose that such a framework, in combination with curbing population growth, can lead to a more sustainable future.

Furthermore, Wijkman and Rockström propose a reformation of the tax system: namely by raising taxes on resource use and reducing those on labour, and insisting that the new system should be based on business models where revenue is earned through performance and high-quality service and extending product- life. A pre-condition would be to introduce mandatory reporting by major companies, in particular bank and financial institutions, on how their activities affect the environment.

There are also some issues within the book itself that do not have easy solutions. Among these are the unresolved paradoxes that crop up throughout the book; another related issue is the practicality of the concerns raised and the applicability of the authors' prescriptions given the constraints of the current socio-political and economic system.

One such moral dilemma is Wijkman and Rockström's call for rich countries to hold back their material growth in order to leave room for a rising living standard among poorer nations. Would the expansion of wealth to include the most dispossessed not lead to more natural resources being consumed, since at present the poor are much more numerous than the rich? In other words, the moral imperative to reduce poverty threatens to transgress the environmental imperative to decrease consumption. To quote from another book on population, *Life on The Brink* (2012):

In a globalized world, where 'the end of poverty' has become largely synonymous with the dissemination of a modern high-consumption standard of living, overconsumption and overpopulation are a seamless whole. Consider the rapid escalation of global trade, the worldwide expansion of car culture... and the swift rise of meat consumption in formerly poor countries. Such trends should dispel any lingering notions that overconsumption can be dealt with while ignoring overpopulation, or vice versa (Crist and Cafaro, 2012:7).

In addition, Wijkman and Rockström have a tendency to uncritically adopt the anthropocentric terminology of UNESCO and The World Bank, repeating phrases such as "natural resources" and "ecosystem services" as if they are unproblematic. While the book starts with the ambition to "address the serious threats to the biosphere" that result in "displacing and eradicating countless species and ecosystems" (p.1), the possibility of inherent values or rights of non-human species and deep ecology perspectives is not discussed. In fact, the authors (probably unintentionally) seem to support an entirely anthropocentric vision that perceives the "living biosphere and natural resources as the prerequisites for prosperity and development in the future" (p. 1). Wijkman and Rockström are careful not to tread on any questions that might be considered politically incorrect, such as the implications concerning the rhetoric of "feeding" humanity in relation to the plight of billions of plant and animals needed *daily* to satisfy growing human needs. As Eileen Crist reflects, the question posed in relation to human population and natural resources should be framed differently from the conventional "What is the maximum number of people for whom Earth can provide resources without severely degrading those resources for future people?" The question we should be asking instead, she retorts, should be

How many people, and at what level of consumption, can live on Earth without turning Earth into a human colony founded on the genocide of its non-human

indigenes? The latter is rarely posed because the genocide of nonhumans is something about which the mainstream culture, including the political left, observes silence (Crist, 2012:145).

This is the kind of ethical question that could have been more congruent with the title of Wijkman and Rockström's book. Wijkman and Rockström avoid the question of how much biodiversity is actually needed for humanity to sustain itself. It is questionable whether a purely economic approach to biodiversity conservation is adequate to address the loss of those species not used for consumption, entertainment and medical experimentation. For example, "left over species" might be driven to extinction without jeopardizing the survival of the human species. Thus the economic capture approach that puts a price on nature that does not fully address the relationship between human beings and nature as Wijkman and Rockström claim.

Another example of unresolved paradox is that of cooking stoves:

Equally important would be to improve access to modern energy, mainly the availability of electricity and replacement of inefficient stoves. The relationship between access to modern energy and lower birth rates is unequivocal (p. 83)

The author of this review is familiar with the research on this subject. As in the case of adopting an anthropocentric perspective on natural resources, Wijkman and Rockström seem to accept the mainstream notion that increasing wealth will automatically lead to fewer birth rates and more environmental responsibility. The use of old-fashioned cooking stoves may be statistically correlated to being poor, but this correlation may be quite coincidental and may confuse the cause with the symptom. One might as well argue that since most people with brown eyes are poor, changing the eye color to blue would provide a solution to poverty. Only in the case of cooking stoves, providing more electricity would mean demanding that more resources be consumed. While the authors argue that the crisis will be exacerbated by the combination of climate change, ecosystem decline and resource scarcity, in particular crude oil, the example of stoves presents an odd case of logic. Yet another concern in the case of 'modern' stoves is that the same people will be made even more dependent on benefactors of 'progress', and more alienated from the traditional practices that sustained them for generations before colonial regimes and development agencies entered the stage. Last but not least, linking advances in modern technology with lower birth rates might be justified in some national contexts, but the reverse argument could also be made – as in the case of better medical technologies actually ensuring that more people survive into reproductive age, and thus the total population continues increasing.

As for the issue of practicality, *Bankrupting Nature* is not likely to appeal to power elites that seem to be enamoured by the more optimistic rhetoric of successfully combining social, economic and environmental interests. *Bankrupting Nature* seems somewhat naïve in the assumption that if the knowledge of the problems as well as prescriptions for solutions are provided, the right decisions will follow.

While the authors speak of a radical restructuring of social and economic systems, they only explore more conventional solutions, such as saving energy, recycling and the phasing-out of fossil fuels. For example, the authors do argue in favor of a circular economy that decouples wealth and welfare from resource consumption, and moreover they rightly criticize recycling as downcycling, and they critique the assignment of monetary value to natural capital. However, this point is lost throughout the book in somewhat contradictory claims that actually support eco-efficiency and recycling. This is a rather 'safe' perspective. Perhaps the book would have profited from a bolder approach by critically addressing the role of neo-liberal democracy.

In regard to population the authors criticize donor countries for not doing enough to support the education of girls and reproductive health services, yet they do not go far enough in addressing the urgency of the problem. The authors seem to repeat the all-too familiar wisdom that if child mortality is reduced, fertility will be reduced as well. While this is true of some countries, it is not necessarily true of others, such as countries in Sub-Saharan Africa, where complex social and cultural factors may play a role. For example, in explaining the major barriers to contraceptive use around the world, William Ryerson argues that just as essential as providing access to wide-spread contraception is addressing the motivations for having many children, such as the traditional desire for large families, religious opposition and unwarranted fear of health side-effects. This conclusion contrasts with the more common idea that contraceptive use remains low in developing countries primarily due to unavailability of contraception (Ryerson, 2012:256).

While the Environmental Kuznets Curve hypothesis and post-material value theory suggest that environmental awareness and care increases along with wealth as more basic human needs are satisfied, critics such as Dunlap and York (2008) argue that material saturation level in wealthy societies is too high to be considered sustainable and that moreover, environmental concern is shared by both poor and rich nations. It is questionable however whether human equality and prosperity as well as population growth can be achieved with the present rate of natural degradation. Which international or local policies are going to be adequate and legitimate in addressing these issues in an ethical climate where birth limiting policies in non-authoritarian regimes are hardly conceivable, and global trade seems practically unstoppable? Can liberal democracy in its present form genuinely be

counted on to drastically limit consumption, stabilize human population and combat climate change?

As the authors themselves say, 'we need planetary solutions' (p. 184). But while discussing these issues, the authors are simply not prepared to address the corresponding ethically loaded questions. Yet without answering these questions this book will fail to stimulate political and corporate leaders to think about hard choices. The most important question still needs answering – how can the political elites be convinced to make the necessary changes given the current political, social and economic status quo?

Neither the power elites nor the general public will heed the warnings if no hard financial or political incentives are provided. The "World Scientists' Warning to Humanity" (UCSUSA1992), signed by 1,700 of the world's leading scientists and the majority of the Noble Prize laureates, begins with: "Human beings and the natural world are on a collision course". Unfortunately this warning seems to have fallen on deaf ears.

In other words, while the issues addressed by Wijkman and Rockström are extremely important, the chance that their book will change 'business as usual' practices is very small. This is not a plea for a radical departure from conventions or a call for revolutionary policy recommendations for addressing the limits-to-growth. Rather, on the part of this reviewer, it is a gentle lament that *Bankrupting Nature* is not an even stronger and bolder book than it is.

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