

SUSTAINABLE BUSINESS

A Plea for the Ecological Embeddedness Mindset AND the business management for sustainability.

Remarks at a Seminar of Kontrei Traveller, Paarl, South Africa - May 18, 2010

Elwil P. Beukes
Professor of Economics
The King's University College
Edmonton
Canada

A: Economy and Environment - The ecological embeddedness mindset

It is now common practice to talk about “ecological challenges”, the need to “green” some activities, “eco-efficiency”, or even just to “use a little less pesticide” for the environment’s sake. I want to suggest that the issue of how we live in the world given to us, in our times confront us with much more than the need to merely say that things seem a little worrying, or even to actually build in some consideration for our “footprint” on the world around us.

News today is awash with overwhelming amounts of scientific data about the parlous physical condition of much of the world we live in and the steadily worsening trends in ongoing change processes. Think of extinction of species, massively dying coral reefs, peak oil and phosphate, climate change. Even if we discount the severity of estimated negative impacts by 30%, or even 50% (as unwarranted sop to those who deny that anything worrying is happening), we cannot avoid a very direct conclusion with immense consequences.

What follows simply cannot be put across softly: ***We can no longer proceed with the way we make a living*** as if the different sides or elements of our lives and contexts have no connection with each other; as if they do not have ever-increasing impacts on each other. For too long (more than two centuries) humans have steadily increased numerically; improved our technical abilities; subjugated ever larger parts of nature to providing us with means; and cultivated the belief that life (more specifically, material life) tomorrow should always be quantitatively better than today. We have now reached, or are rapidly moving into, the phase in human history where the limits of the earth’s carrying capacity for this manner of doing will not allow us to carry on as before.

If this compact statement of where we have arrived can be accepted without further data or argument, what fundamentally needs to be done is very obvious: We need a **new mindset** – a new way of understanding – for how we practically live from day to day on this planet. This can be called an ecological mindset. To cut through the variety of definitions, the term ‘ecology’ could simply be understood as ‘the study of the relationships between organisms, and their interactions with each other, in a common environment’. For the current purpose, the study part is not so important. The focus should fall on the relationship and interaction part.

So what then is an “ecological mindset”? As here intended, it should be seen broader and more abstract than merely considering a specific set of relations and interactions between some organisms in an environment. Seeing that a “mindset” is referred to here, it must focus on what we as humans think about how we are situated in this world. Such a way of thinking proceeds purposefully from the realisation that everything material (and often also non-material) is connected to everything else in ways that we cannot really wrap our minds around adequately. The carefully woven web of a spider provides a mental picture of what this means. All parts of the web are intricately related and connected and the rings on the inside are embedded in those lying more to the outside. If anything touches or disturbs the web at any point, this effect is felt throughout the whole web. The message of these notes is that humans have by and large let go of, or chose to ignore, the reality of our life as a complex embedded one with consequences that cannot forever be pushed aside. What follows will attempt to tease out the practical implications of this view.

Economy and environment: the past

But first, a short excursion into how we got to where we are now in our way of relating with nature and each other can be helpful. Our more narrow-focused view of life essentially gained a hold with the rise of modern thinking after the 15th century Renaissance and ensuing 18th century Enlightenment. This period in history gave rise to modern scientific thinking in Western societies, the rise of commerce and trade, and the development of systematic thought about material provisioning – called Economics.

Scientific thinking became characterised by the method of theoretically isolating aspects of the natural (and non-natural) world from the whole of which it formed an unbreakable part. These isolated aspects (e.g. the chemical side, the biotic side, the legal side) were then investigated by digging deeply into and making mental models of what each contained. What this meant is that the picture of a world – and life in it – was cut up into separate pieces, looked at individually. In addition, the essential character or purpose of each element was identified, e.g. material provisioning as Economics, mobilising power as Politics, the life within organisms as Biology, the working of energy as Physics. The implication was further drawn that if humans applied the regularities discovered through science to everyday life, we could essentially create an earthly paradise. Although this kind of specialisation resulted in very useful and practical insights, it also contributed to a fragmented view of life and left the relation of parts to the whole as something to be dealt with by everyday practice.

A particularly important and very influential element of the development of modern thinking is what happened in the investigation of economic life. The 18th century Scottish philosopher Adam Smith, saw in the then budding rise of commerce and trade the working of a surprising mechanism. He called it the “invisible hand” and suggested that the interaction of people for their material benefit in markets, if left on its own, would not result in a dog-eats-dog world with increasingly ferocious battles for existence. Instead, Smith argued, it would lead to the achievement of harmonious co-ordination of supply and demand, with producers specialising in their production in what consumers wanted to buy. Furthermore, the long run evolution of society on this basis would give rise to ever-increasing abundance – called economic growth. The latter process really took off and accelerated on a continuously rising track with the 19th century Industrial Revolution.

Now, far be it from us to see the specialisation of production, the application of knowledge in production technology and the ensuing growth in material provisioning, as negative developments. All of these, together with the growth and application of useful knowledge in all the other aspects of life, contributed tremendously to what we today call our quality of life. It allowed us to live a much richer and fuller life in which we could enjoy and give free reign to an abundant diversity of possibilities. Unfortunately the isolating element in the evolution of life since the 18th century, both in understanding the world and organising our activities, also left us with a ticking time-bomb, a danger that would only become apparent with the passing of time.

The problem arose from the fact that the insulated application of knowledge – for our purpose, especially focussing on the working of markets and the accompanying economic growth – was not viewed as embedded in the natural and cultural context of which they formed part. The limits and feedback effects of this embeddedness thus escaped attention or, when noticed, were regarded as problems to be solved with newer technological fixes. But the essential free reign for pursuing economic (and technological) growth through uncontrolled markets, irrespective of its “side effects”, was never questioned. The outcome of this wilful neglect forms the core of the bulk of the major issues facing humanity today, issues that were briefly alluded to above.

What went wrong?

The major impact of the tendencies shown above is on our economic lives. It is to this that we turn to see how the application of an isolating and focus-reducing way of thinking has made us unable or unwilling to see the basic blind spot in our thinking about material provisioning. Two sides of what went wrong with economic thinking and practice must be highlighted.

The first is that the idea of seeing markets in a theoretically simplified way, where only the price of inputs and outputs are relevant for making decisions, tells us way too little of their full impact. What is not realised (or ignored) is that markets give us far less than the necessary and relevant

information about the full effects of economic actions. They only tell us what monetary terms were agreed on for the making of transactions. Admittedly useful to a degree for deciding about the allocation of resources, these price signals guide us in making decisions that have impacts far beyond the immediate monetary gain or loss of participants. Money does not give us information about ecological and social systems; it only gives information about financial systems.

What market pricing leaves out is proper information about the wider and very important other effects of decisions: effects on our air and watersheds, our soil and river systems, our climate, our bodies and health, our society and interpersonal relationships, our cities and steadily deteriorating rural areas, the breakdown of stability worldwide and the outbreak of conflicts based on environmental shortages. All these are providing the real information that our prices should be giving us but don't. The result is that we are losing our living systems, social systems, cultural systems, governing systems, stability, and our constitutional health, and we're surrendering it all at the same time. The actually massive inefficiencies of our current economic and industrial systems are today not more apparent because they are masked by a financial system that gives improper information. This is a classic case of "garbage in, garbage out." In this case the "garbage in" is what money tells us, what prices tell us, what limited-focusing markets tell us.

The second issue relates to what our so-dearly-held commitment to economic growth – understood as pure material goods expansion – has led us to. Because we are holding on to the belief that we are not only entitled to but capable of ever-increasing levels of material provisioning, we refuse to confront the possibility that we are in many parts of the world experiencing un-economic growth. (I leave the need for increased material provision for the large number of desperately poor unattended. It does not detract from the argument here pursued.) Un-economic growth – introduced by economist Herman Daly – simply means that the expansion of economic activity on a macro scale can arrive at a point where the overall increase in stuff actually detracts more from our well-being as humanity than it adds to it. It is growth that increases costs (negatives) faster than it increases benefits (positives).

Is un-economic growth possible? In micro-economic (small scale) activity it is easy to see that growth – that is, increasing an activity in the firm or the household – could become un-economic. Of course it can. The whole idea of micro-economic thinking is seeking an optimal level of some activity. It is recognised with no argument that as the amount of small scale production increases, eventually the increasing costs of each additional unit will become as large (and eventually larger) as the steadily diminishing benefit of every additional unit produced. If growth or increase of activity proceeds beyond that, it's seen as un-economic in all standard economic reasoning. Optimisation is the essence of micro-economic reasoning, and that implies stopping at some point. So the rule for small scale economic decisions, which is drilled into all who had a first course in Economics, can be aptly called the 'when to stop rule'.

But what happened to thinking about expansion on the macro-economic (or large scale) level? While at the foundation level of economics – micro-economics – the idea of un-economic growth is fundamental and non-controversial, when one gets to macro-economics this is left out of consideration altogether. All activity (good or bad) is merely counted and added up into what is called Gross Domestic Product or GDP – everything is just aggregated. What is even more important is that GDP is regarded as approximate indicator of overall human well-being. Pursuing ever higher levels of GDP is thus the only way forward, and there is no reason to suppose that economic growth cannot continue forever. It is the path to continually increasing happiness for all. Here there is no longer a 'when to stop' rule, no longer any question of an optimal level of overall economic activity.

Economy and the environment: Present Mindsets

What lies behind the inability to see that un-economic growth can also happen on a macro scale? To address this question ***two views of the relation between the economy and environment*** have to be introduced.

The first sees the economy as a sub-system of a larger ecosystem, as embedded in a larger context. The larger ecosystem is finite, non-growing and does not get added to. There is an inflow of solar energy into the larger system and an outflow of heat energy radiated from the larger system. As that solar energy is absorbed and changed in nature (into what is called natural capital), it holds up and energises all the bio- and geochemical cycles that support life. It creates all the green stuff we use, and it makes all the natural cycles move. As part of the larger system, the economy must then be seen as connected to and dependent on the larger system. Because it

is a part of something larger, the economy is completely embedded in and functions as an “open” sub-system of the natural environment. It’s open with respect to both matter and energy that it draws from the larger system. It takes in highly useful matter and energy from the ecosystem and expels less useful waste matter and energy back to the ecosystem and lives off the difference between the two. The essential point to note is that the economy in effect causes the degradation of materials and energy. So we start with depletion, we end with pollution. There is no way we can avoid that anymore than we can stop eating and eliminating waste. It is a natural part of the economy.

What happens with economic growth is that the economy in its physical dimensions grows by changing what used to be green stuff (or natural capital) into brown stuff (or human-made capital). The tree is cut down in the forest and converted into a table, leaving one less tree in the forest, adding one more table to your house and so on. But as this kind of activity grows, there’s an encroachment on the rest of the ecosystem, which is a cost – we have to sacrifice things in order to have what we have. As we expand the brown (human-made) flow, we reduce the green (natural capital) flow. If we are wise, we can keep doing that as long as the additions to the brown flow are not greater than the subtractions from the green flow in terms of its usefulness to us. But at some point, well before occupying all of the green space and turning it into brown stuff, we will come to an optimum, a point beyond which further growth is going to be un-economic. Increasing activity beyond this point reduces ecosystem services by more than it increases economic services and growth. Stopping further encroachment on the environment follows from the realisation that the scale of the economy then will have become optimal relative to the ecosystem.

A simple way to envisage the above is to see the larger ecosystem as a box which takes in energy from the sun and eventually radiates it out again. Within that box is an “egg”, representing the human economy. This egg is what produces our daily bread. It is essential for the egg’s healthy functioning that it remains within the boundaries or limits of the box. But what happens with economic growth is that the size of the egg keeps on increasing while the ecosystem box does not expand. As innovative humans, we can lengthen the box’s capacity to support a growing egg by implementing technological innovations. But a point will be reached where the growing economy egg’s demands bump into the unyielding limits of nature’s box. This happens when the amount of natural capital we draw from nature’s box and the amount of waste we return to it, exceeds the capacity of nature to deal with (or process) one or both. Daly describes this as the situation when the earth is “full”, or when we have filled up and exploited all the useful space nature provides for human activity.

There is, secondly, a very different view to the one presented here. It argues that the whole conception of the relation between the natural and the human (particularly the economic) system is different from the one depicted above. In this view – arguably the unspoken but predominant one among those in power – the economy is not a sub-system of a larger ecosystem that’s open and finite. Instead it is exactly the other way round. **The economy is the total system and the ecosystem is a sector of it.** In this view the idea of ‘ecosystem’ refers to the extractive sector of the economy. It refers to natural resources and waste disposal and argues that we can substitute human-made capital for scarce resources and recycle waste faster as the economy grows. This is a picture of the economy growing into the void. Economic growth in this vision does not entail encroachment on anything else. There is no opportunity cost, nothing has to be sacrificed as the economy expands, so who could be against growth? Growth does not increase the scarcity of anything else or ultimately deplete anything. In fact growth relaxes scarcity within the world’s economy, implying that the idea that there is anything problematic with growth or that the earth can in any meaningful sense be regarded as becoming too “full” for further expansion, is utter nonsense.

Economy and the environment: Future. A personal choice for....

It is very difficult to argue across the two paradigms explained above. It’s like Ptolemy and Copernicus arguing back and forth. These are contrasting perspectives about the whole, about how we perceive all of our contextual reality. One can present evidence but basically it’s a matter of how we want to look at it. This is the point made previously with regard to the fundamental importance of gaining an ecological mindset, when looking at our current economic situation.

What is the upshot of what has been presented so far? This can be put as a question that is very important for how business, in any sector of our diversified economies, should in future be run. The question is: Can we quantitatively grow our way to an environmentally sustainable world? It

should be clear that my answer is “No”. Those who want argue “Yes”, have to respond to further questions: After we have grown our way to an environmentally sustainable world, then what? Will we then be willing to stop growing or keep on growing? What do we want to sustain? A state of the world, or the process of economic growth?

My answer entails that we should endeavour to sustain that sub-system of the world that is called the “economy” in a state that contributes to and is compatible with genuine human well-being and ongoing care for that which was gifted to us as “earth keepers”. A way of understanding this is to think of nature not as something we have inherited from the past but rather as something we have on loan from our children and want to leave to them in the best possible condition. In order to apply new thinking, the task is to retrace some of the steps that led us to loose sight of the life-sustaining interdependence of all aspects of our world and life on it, to do our best to enrich our understanding by reconnecting the parts, and to bring that insight home to the way in which we manage our livelihoods.

It is appropriate then that we finally turn to the idea of sustainable business and enterprise. It seems best to start with remarks about a new and fuller understanding of prosperity – one that goes beyond the conventional and severely reduced one of mere material plenty. Prosperity has undeniable material dimensions. It is perverse to talk about things going well where there is inadequate food and shelter (as is the case for billions in the developing world). But it is also plain to see that the simple equation of quantity with quality, of more with better, is false in general. A fair and lasting prosperity cannot be isolated from material conditions, though. Human capabilities to live well are bounded on the one hand by the scale of the global population and on the other by the finite ecology of the planet. These have to be taken seriously.

But an even more central insight is that the requirements of prosperity go way beyond material sustenance. Prosperity has vital social and psychological dimensions. To do well is in large part about the ability to give and receive love, to enjoy the respect of your peers, to contribute useful work, and to have a sense of belonging and trust in the community. In short, an important component of prosperity is the ability to participate meaningfully in the life of society. Given the situation of an increasingly “full” earth, the possibility must therefore be explored that humans can flourish while at the same time consuming less, but differently. The rediscovery of the practical meaning of “enough” is a basic step to take on this journey. It would be foolish to think that it is easy to achieve. But it should not be given up lightly. It offers the best prospect we have for a lasting prosperity.

In terms of the confronting the nature and structure of market economies, we have to remain aware that the system we all operate in, exerts enormous pressure for the production and consumption of novelty. The profit motive stimulates a continual search by producers for newer, better or cheaper products and services. This fact understandably features large in the tourism industry. But if used smartly, it can also be a positive handle to interest a new, ecologically aware and responsible clientele in responsible tourism.

At the same time we must also recognize that the relentless pursuit of novelty creates an anxiety that undermines well-being, both social and environmental. This happens when consumers are at the mercy of never-satisfying comparison with those around them; when firms must relentlessly innovate or die; when institutions are skewed towards the pursuit of pure materialistic consumerism. All of these leave no room to take ecologically responsible decisions. The ‘iron cage of consumerism’ is a system in which no one is free. It’s an anxious and ultimately pathological system.

Addressing it is vital, but far from simple – mainly because of the way in which material goods and services are so deeply woven into the fabric of our lives. Simplistic exhortations for people to resist consumerism are destined to failure. For this reason, changing that which businesses with an innovative, ecological mindset can offer, will play a substantial role in addressing the currently mostly unenlightened logic of consumerism.

In this process of pursuing new things, responsible businesses need to be clear about the practical questions they should address to meet the business challenges and opportunities associated with an ecological mindset. Some of the key questions appear to be the following (following Simon Zadek):

- How is the freedom and capacity of the enterprise to make decisions that bring its operation in line with social and environmental goals, assessed and expanded?
- How is a business' willingness and ability to engage with all stakeholders (especially its workers and suppliers) assessed and used in ways that allow decisions for broader well-being and co-responsibility?
- How is the firm's social and environmental performance measured, so that there is clarity about the choices and trade-offs to be made, as well as about the direct relationship of such choices to the decisive operational and strategic decisions for the enterprise?
- How is relevant information and knowledge for decision-making gathered and applied in the enterprise, both for internal purposes and in relation to external stakeholders (such as potential customers and investors)?
- How is a framework of ecologically mindful incentives (and penalties) created and supported by all involved in the enterprise, so that this will keep it aligned with its economic, social and environmental goals?
- How does the enterprise go about explaining and concretely realising its ecologically mindful values and purpose to all its stakeholders in order to ensure their acceptance and to deepen an enduring sense of why this approach makes most sense?

To sum up: the basics of these notes, the following: Working and living from the perspective of a broader ecological mindset recognizes and brings to life the critical interdependence between the production and use of human-made capital and the maintenance and supply of natural capital. We have arrived at the point where it will be only through recognizing this essential relationship with the Earth's valuable resources that businesses, and the people they support, can continue to exist and flourish.

Paul Hawken provided an incisive set of fundamental questions to be asked to secure our livelihood in accordance with the physical and cultural carrying capacity of our world: What would our economy look like if it fully valued all forms of capital? What if our economies were organized not around the abstractions of mainstream economics and accountancy but around the biological realities of nature? What if Generally Accepted Accounting Practice booked natural capital, human capacities, social coherence, and cultural integrity not as free amenities in inexhaustible supply but as finite and integrally valuable resources for our livelihood? What if in the absence of a rigorous way to practice such accounting, businesses and consumers started to act as if such principles were in force? These choices are possible. Such an economy would offer a stunning new set of opportunities for well-being to all of society in all parts of the world.