

**Exploring Resilience and Prosperity as Pathways  
Towards Integrated Sustainability  
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**An emblem of change**

I'd like to start this story with a short, unfolding tale about my close friend and neighbour Lisa Groom who runs a family business from our home community of Beechmont in the mountains of South East Queensland, Australia.

Currently Lis is the sole director of International Park Tours (IPT), an eco-accredited walking tour company that hosts trips to national parks and cultural hot spots around the world and in Australia. IPT started organically about 34 years ago after Lisa's father Tony undertook a study tour to some of the United States' most iconic national parks. When he returned home, friends began to ask if he would take them on walking tours to places he'd been, word spread and a terrific small business was born.

For well over 20 years, Tony, his wife Connie, and IPT, in a sense hitched a ride on the rise of the baby boomers and their access to levels of cash and time that opened up nature-based travel and enterprise. At the same time, international travel became more efficient, safe and affordable. Times were good for IPT. I remember having dinner with the Grooms about 15 years ago, where we all commented on what a stable, low risk business the family had created. It subsequently weathered the surprises of the Australian dollar's deregulation and international out-of-the-box public health and safety scares like mad cow disease and foot and mouth disease in the mid-1990s. It successfully upgraded its communications, marketing and administrative technology to the computer and virtual worlds. It also noticed that its client base was ageing alongside Connie and Tony.

Early in 2000 Lis took over the business and the array of tours on offer steadily increased. Each year Lis and the IPT staff were careful to identify rising interest in new destinations and they created meaningful tours that their guests loved. Lis was also aware of the rise of eco and sustainable tourism and began to develop IPT's capacity to step more lightly on the Earth in all its activities. Indeed, in late 2008, IPT was awarded Advanced Eco Accreditation with Australia's peak ecotourism industry association, Ecotourism Australia.

At the same time, however, Lis was becoming increasingly aware of a number of emerging external threats to the business. IPT's client base continued to age and the business had difficulties consistently attracting younger guests. From the early 2000s there was a rise in international terrorism, fears about biosecurity and global health issues seemed to be regularly in the news, fluctuations in oil prices occurred and spikes throughout much of 2007-08 cascaded into increased costs for international air travel. Climate change mainstreamed and carbon calculating began within the travel industry. And then there was the economic crash in mid to late 2008. Seemingly overnight, the boomers' retirement nest eggs and super funds flatlined and their discretionary income dried up. Despite IPT's diligent efforts to broaden its client base, diversify its tours and

become a model eco-efficient business, 2008-09 presented it with so many external shocks that something had to be done fast for the business to remain viable. Lis is now in a process of simultaneously minimising risks and vulnerabilities in IPT's existing operations, adapting the business so it can function in rapidly-changing circumstances and transforming what they do and how they do it.

Lis is without doubt, one of the bravest people I know because she is looking business transformation square in the eye and standing her ground. She knows the IPT of 30-plus years is no longer viable and is busy transitioning as calmly and gracefully out of business-as-usual to something new. She is connecting closely with her homeground – South East Queensland's Scenic Rim Region and its diverse, vibrant local tourism and hospitality operators – and bringing the business closer to home at every level. She knows from her research into peak oil, climate change and energy descent, that the IPT of old is not built for a brave new world of energy constraints and climate uncertainty and she is revisioning the business to prepare for a global transition. She doesn't yet have a clear picture of the new IPT and is exploring the ideas and language of living systems, ecology, Permaculture principles and localisation to help imagine a relevant enterprise for a different world.

I tell this story about Lis and IPT because I believe they are emblems of our way forward as businesses, local economies, communities, regions and indeed, the whole human enterprise. As we reach the limits to growth in the natural systems that entirely sustain us and as we reach the limits of the economic system that sustains some of us, we are all embarking on a journey that involves *mitigation* of risks, *adaptation* to changing circumstances and *transformation* to a new type of world as we realise we cannot go on as before. To my mind, this is a journey towards creating resilience and prosperity in our lives, our businesses, our industries, our communities. This discussion paper is my way of coming to better understand and articulate what this process may involve and why we need to take our first steps now.

## ***Part One - Resilience***

### **Introducing resilience**

Resilience is a great word don't you think? At first glance it seems marvellously self-explanatory, particularly when applied to individuals who can weather the storms of life or quickly pick themselves up when they're knocked to the ground.

The concept of resilience has emerged in the field of ecology as well as human psychology over the past three to four decades.

In the area of the natural sciences, resilience refers to the ability of living systems to continue to function and maintain their form in the face of unexpected shocks. For example, it's the capacity of a rainforest to survive a cyclone and though it may lose stands of mature trees and suffer wind damage, over a period of time it is able to support

the emergence of new rainforest growth and restore itself as a fully functioning rainforest ecosystem.

Resilience in this natural systems sense is a term that helps us remember we are an integral part of living systems. Our human, social and economic lives are embedded in living natural systems that supply us with clean air, clean water, fertile soil, energy, pollination, a stable, life-giving atmosphere and so on. We humans are ourselves living systems that embody a huge number of self-organising processes. We don't have to remember to breathe, pump our hearts and blood, activate our immune systems, see or hear. Our incredible living bodies and brains self-organise to do a myriad of activities that keep us functioning and whole. We are living, breathing social and ecological systems. We are constantly changing, adapting, adjusting to our environment. We are not linear machines and neither is our world. The Earth – Gaia – is a self-organising, self-regulating, complex, adapting, living system. Over the past 30 to 40 years, science has caught up with this fact and now it's our turn to recognise this vital fact too – as family members, business operators, employers, employees, community members, civic leaders, educators, students...as members of the human community. We are both made up of small-scale systems and we are connected to and an integral part of many, many larger interconnected systems.

### **Tectonic stresses**

All around us the evidence is well-and-truly in that the Earth's capacity to provide resources and particularly energy, to an ever-growing and all-consuming human civilization, as well as to absorb our myriad of wastes, is reaching its limits. The alarm bells began to be sounded in the 1960s through the courageous work of scientists and thinkers including Rachel Carson, author of the seminal book "Silent Spring" (1962), Paul Ehrlich, author of "The Population Bomb" (1968) and the Club of Rome's "Limits to Growth" (1972).

In more recent years the majority of climate scientists around the world have been vividly mapping human-induced climate change and from early 2000 a number of highly-credible geologists, some from within the oil industry itself, have been warning of the approaching peak of global oil production and an emerging energy crisis. Each of these issues in and of themselves are huge challenges for humanity and yet there is more...Professor Thomas Homer-Dixon of Toronto University's Department of Political Science, in his 2006 book "The Upside of Down: Catastrophe, Creativity and the Renewal of Civilization" coined the term "Tectonic Stresses" to describe the convergence and synergising of five ecological and social phenomenon:

- *“population stress arising from differences in the population growth rates between rich and poor societies, and from the spiraling growth of megacities in poor countries;*
- *energy stress – above all from the increasing scarcity of conventional oil;*

- *environmental stress from worsening damage to our land, water, forests, and fisheries;*
- *climate stress from changes in the makeup of our atmosphere;*
- *and, finally, economic stress resulting from instabilities in the global economic system and ever-widening income gaps between rich and poor people” (2006, p 11).*

Not only are we living in a time where each of these major, external, global threats have to be faced singly, but where they are increasingly and tightly connected to each other and producing ecological, social and economic shocks and fractures that are impossible to fully predict and prepare for. Homer-Dixon’s premise is that the impacts of these tectonic stresses may well trigger the collapse of energy-dependent human civilization as we know it, but at the same time create the conditions for creative renewal and innovation if we prepare now.

Scientist and MBA corporate executive Chris Martenson describes the depth of tectonic stresses in his marvellously clear theory of the three compounding ‘Es’ – Economy, Energy and Environment – all of which are underpinned in our globalised and free market world by exponential growth. In his internet training program called “The Crash Course”, Martenson describes the curve of exponential growth as akin to an ice hockey stick where a period of very slight and continuous growth suddenly turns a corner and radically skyrockets. He links exponential (or compounding) growth first to the global free market economy which is built entirely upon an assumption of continuous and increasing financial and material growth.

Martenson points out that a growth economy, in fact anything at all that grows – requires energy. In the last 150 years our increasingly industrialised economic growth has been entirely built upon cheap, abundant and accessible carbon-based energy mainly in the form of petroleum and coal. And here’s the crunch...over the past decade, oil geologists beginning with outspoken leaders like Dr Colin Campbell and now increasingly mainstream industry players have identified that global oil production is now or will shortly, begin peaking. First predicted in 1956 by M. King Hubbert, a research geologist with Shell Oil, then taken up by the US’s Carter Administration in the early 1970s, peak oil now appears to be coming home to roost around the globe. About peak oil, Thomas Homer-Dixon says:

*“I don’t mean we’re going to run out of oil – at least not any time soon. Oil will be around for a long time to come. But we are going to run out of the cheapest oil – that is, the most accessible oil – as it becomes harder to find, costlier to produce, and more concentrated in politically volatile parts of the world. It will take much more energy to get this oil in relation to the energy we get from it (the inevitable EROI, or energy return on investment). The global economy will have to adjust to permanent oil scarcity, and the transition from today’s world of oil*

*abundance to tomorrow's world of scarcity will be marked by new oil shocks, far more disruptive than those of the 1970s and '80s" (2006, p85).*

When peak oil is translated into consequences for business and life as we know it, we are already on a slippery downhill slide. Our growth economy has no way of growing further without cheap, abundant, high quality and accessible energy. As a result, Chris Martenson poses two key questions we all need to ponder:

- What happens if we don't have the energy for economic growth anymore?
- How do we transition from a growth economy to a non-growth economy?

Martenson and Homer-Dixon have also noticed that the natural environment is reaching its limits to provide for and accommodate humanity, best symbolised by climate change and the atmosphere's destabilisation as humanity continues to spew massive amounts of CO2 into the air. Carbon in, in the form of oil and coal means carbon out in the form of greenhouse gases. And it's not only global warming and climate change that are at issue here. It's water scarcity, the decline of soil health and fertility, deforestation, overfishing and ocean destruction...the Earth's miraculous systems and cycles of life simply cannot meet the exponentially increasing demands of humanity nor process our exponentially growing wastes.

Martenson sums up the situation when he says, "We've got an economic system that must grow by its very design, that's coupled with an energy system that can't grow, that's underpinned by depleting natural resources. There are a number of predictable and unpredictable factors in this configuration but hoping and relying on the future being the same as the past is not useful" (VoiceAmerica Talk Radio "Compounding Effect: Economy, Energy and Environment", May 11 2009).

If we haven't prevented the tectonic stresses that are now upon us and we can't accurately or fully predict our future then what should we do? Let's begin here by reviewing the notion of resilience at a deeper level.

### **Resilience is more than eco-efficiency**

*"What is your version of sustainability? Is it summed up by the catch phrase 'reduce, reuse, recycle'...Are you impressed by notions of ecological footprints and living within the carrying capacity of the land? Are you striving for a 'factor four' improvement for the future in which we double the production from half of the input? Or maybe we should be aiming for a factor ten?"*

*These approaches encapsulate some of the more mainstream thoughts on sustainability, and they all revolve around the notion that the key to sustainability lies in being more efficient with our resources. If we can be clever enough with the way we do things we can live within the carrying capacity of our environment.*

*...this kind of efficiency will always be an important part of any approach to*

*sustainability. But, by itself and of itself it is not the solution...by itself and of itself it has the potential to actually work against sustainability. Why? Because the more you optimize elements of a complex system of humans and nature for some specific goal, the more you diminish that system's resilience. A drive for an efficient optimal state outcome has the effect of making the total system more vulnerable to shocks and disturbances"* (Walker and Salt, 2005, pp 8,9).

Holy cow! Could this hypothesis from ecosystem and resilience scientists like Brian Walker possibly be true? Could it be that 20+ years of concerted resource optimisation and eco-efficiency efforts by sustainability leaders in business, government, science and community in the name of long-term sustainability have not actually addressed the urgent requirement for humanity to revise and reinvent its place in the world? Could this version of sustainability possibly have taken us down a track and into a paradigm that in and of itself is not actually going to be of comprehensive and lasting value? Could it even be detrimental to our efforts to create long-lasting human civilization by making our businesses, economies and communities more brittle and therefore *less* resilient to external threats? Currently eco-efficiency and resource optimisation is *the* main game in town and catchment. If your business, your household, your community are not focused on reducing resource use like electricity and water, increasingly reusing materials and resources like water and paper, recycling things you can't reuse and implementing innovative technology to run your businesses and households more efficiently, then you're rapidly becoming a social pariah.

There are of course, other sustainability pathways that have been walked and are still being walked – paths that were forged by pioneer naturalists like Henry David Thoreau, Ralph Waldo Emerson and John Muir in the 18<sup>th</sup> and 19<sup>th</sup> Centuries. There are communities embedded in voluntary simplicity and frugal material use such as the Amish. There are contemporary deep ecologists including Australia's John Seed and American Joanna Macy who understand and love the intrinsic value, complexity and beauty of landscapes and ecosystems and the inter-dependence between society and ecology. And for millennia, indigenous people right around the world have honoured, respected and successfully (sustainably) lived within the Earth's natural systems and cycles. These are the people who understand that all life is intimately connected and that 'whatever befalls the Earth befalls the children of the Earth.' To date, these pathways and people have been marginalised by the mainstream – their impassioned, deep stories are yet to be heard and understood by society's powerbrokers – though resilience science now seems to be quantifying what was previously intuitively known by those closely connected to nature in all her forms.

So here we are, early in the 21<sup>st</sup> Century, increasingly embedded in the efficiency-optimisation-sustainable-management paradigm which seems to assume that complex social and ecological systems are like machines that can be fixed in linear ways. In this context, I suggest we have two sets of tectonic stresses bearing down upon us. One is Thomas Homer-Dixon's tectonic cocktail of interconnected, synergised energy, climate,

resource, economic and population seismic shifts – undiminished by 20 or more years of eco-efficiency.

The other is the recognition that we are part of a *living system* – a social-ecological system that is not a machine that can be driven, optimised, made more efficient or fixed...but a complex, multi-layered, multi-dimensional, evolving, adapting and sometimes transforming system. Despite hundreds of years of scientific endeavour we still know very little about how this system and the many systems around and within it, actually work, nor what triggers transformation in this extraordinary system called the Earth, the only known habitable planet in our solar system. Unlike our indigenous forebears, this lack of knowledge has made us arrogant, contemptuous and very, very dangerous to ourselves.

Brian Walker examines the shortcomings of eco-efficiency and resource optimisation within social-ecological systems when he overviews the situation in Australia's Goulburn-Broken catchment area in his illuminating book "Resilience Thinking" (2005). He puts the Goulburn-Broken story forward as a living example of the inability of eco-efficiency alone to create social-ecological resilience.

In its almost 200 years of European settlement (following at least 10,000 years of Aboriginal habitation) one of the most fertile regions of Australia and one of our key food and dairy production areas, is almost out of surface water while simultaneously drowning in an underground flood of salinity. The people of the region are amongst the most resource efficient farmers and irrigators in the world and an extraordinary amount of research has gone into optimising this region's agricultural practices. Walker proposes though, that the root cause of the Goulburn-Broken water problem has been "the radical alteration of the natural ecosystem" specifically its rivers, waterways and groundwater (hydrology) "through the clearing of most of the native forests and woodlands in order to farm" (2005, p 41). At the same time, he suggests that 150 years of optimising a complex ecosystem has brought about an ecological brittleness leading to collapse in the region's landscape. The economic system too is now at its most vulnerable as the dairy and horticultural industries attempt to efficiently compete in an increasingly volatile, globalised marketplace. Walker says:

*"The Goulburn-Broken story demonstrates the critical importance of understanding the underlying variables that drive a social-ecological system, knowing where thresholds lie along these variables, and knowing how much disturbance it will take to push the system across these thresholds. To ignore these variables and their thresholds, to simply focus on getting better at business as usual, is to diminish the resilience of the system, increase vulnerability to future shocks (droughts, wet periods and economic fluctuations) and reduce future options. Being more efficient is not by itself a pathway to sustainability. Because resilience was not being consciously factored into the management of the region, greater production efficiency has actually reduced the possibilities of the system being sustainable"* (Walker and Salt, 2005, p52).

## Thresholds

One of the most important things that resilience ecologists have learned is that living systems have thresholds or tipping points. Remember that ecological resilience is all about the ability of a system to maintain its function and form in the face of disturbance or shock, as well as its ability to recover its form or function after disturbance. It is now understood that when key factors within the system – variables which are like the bedrock that maintain the form and function of the system – are disturbed beyond their capacity to function or recover, the whole system can flip into a different form. The point at which this occurs is known as a threshold or tipping point. Some of Brian Walker's key points about thresholds are these:

- *“Once a threshold has been crossed it is usually difficult (in some cases impossible) to cross back.*
- *A system's resilience can be measured by its distance from these thresholds. The closer you are to a threshold, the less it takes to be pushed over.*
- *Sustainability is all about knowing if and where thresholds exist and having the capacity to manage the system in relation to these thresholds” (Walker and Salt, 2005, p63).*

On a large scale, we can see that both the Goulburn-Broken ecological system and its regional social-economic system have crossed interconnected thresholds that mean the region as a whole is transforming into a new form or system that is likely to be driven by salinity. Incredibly, the seeds of this process were sewn over 100 years ago with the clearing of native vegetation which in turn radically altered the foundational hydrological systems, both above and below ground. No matter how efficient the social, economic and business systems have become in recent decades, the underlying key variables and their thresholds went unseen and as such, many systems in the Goulburn-Broken region are now in transition into new forms.

Returning to our earlier rainforest example, it's fair to say that while a rainforest can usually recover from the impacts of a cyclone, if it is simultaneously impacted by prolonged drought, it may never recover its previous form but cross a threshold to become, perhaps, a system driven by weed infestation. It radically changes form because it has crossed a tipping point from which it may not recover.

There is one key point I'd like to reinforce about resilience here, particularly in relation to business and community – both social-economic systems. Our world is changing. Economically, ecologically, energetically we are crossing thresholds that are exploding at the rate of knots up the vertical shaft of that Chris Martensen hockey stick. The point Martenson makes about exponential growth is that once you turn that corner or cross that threshold: 1...2...4...8...16...32...64...128...256...512...1024...2048...4096...8192...

6384...32,768...there's no turning back and time has a tendency to speed up through these changes so that before most of us even know there is a problem, we have crossed a threshold and our old system is in rapid transition to a radically different one.

As we prepare for our short-term future – the next 20 years – it is essential that we create personal, family, business, community and economic systems that will be resilient within a world with substantially less energy, far fewer and less reliable natural resources and ecosystem services, and impacted by many more external shocks and disturbances. As Martenson says, “the natural environment doesn't do bail outs” (VoiceAmerica Talk Radio “Compounding Effect: Economy, Energy and Environment”, May 11 2009).

Eco-efficiency alone is not going to cut it I'm sorry to say. We are no longer going to be able to have our optimised cake and eat it too. We are entering a world of visible constraints and confronting shocks that require us to start minimising our impacts, adapting to disturbances and transforming to greater resilience with creativity, collaboration and commitment.

This is the bad news. But if we start now: right here, right now, perhaps there will be time to begin the transformation process ethically, gracefully and elegantly for ourselves, for our children's and for our descendants' sake.

## ***Part Two - Prosperity and Participation***

*“The prevailing vision of prosperity as a continually expanding economic paradise has come unravelled. Perhaps it worked better when economies were smaller and the world was less populated. But if it was ever fully fit for purpose, it certainly isn't now.*

*Climate change, ecological degradation and the spectre of resource scarcity compound the problems of failing financial markets and lengthening recession. Short-term fixes to prop up a bankrupt system aren't good enough. Something more is needed. An essential starting point is to set out a coherent notion of prosperity that doesn't rely on default assumptions about consumption growth”* (Sustainable Development Commission, 2009, p 30).

The excellent, thorough and thought provoking report by the UK's Sustainable Development Commission “Prosperity Without Growth” (2009) searches for a vision of prosperity where “...it is possible for human beings to flourish, to achieve greater social cohesion, to find high levels of wellbeing and yet still reduce their material impact on the environment” (2009, p 30). Its findings are based upon numerous studies that include human wellbeing and happiness indicators; triple bottom line sustainability indicators; consumer behaviour and consumption data; work and employment statistics; ecological economics and ecosystem services frameworks; psychological, philosophical and spiritual research; carbon footprint calculations; poverty rates and growth; population growth data; human health and disease data; rates of development of green public

infrastructure; labour productivity data; the value of social capital and community health; and so on.

The report sets out to determine whether a low growth, no growth, or stable state economy is a feasible transition goal for the human enterprise, given our precarious energy, resource and economic situation. Tim Jackson, Economics Commissioner of the Sustainable Development Commission and lead author of the report suggests that prosperity resides in our ability “to flourish as human beings – within the ecological limits of a finite planet. The challenge for our society is to create the conditions under which this is possible. It is the most urgent task of our times” (Sustainable Development Commission, 2009, Foreword).

While the foundations and components of human prosperity based on a low or no-growth economics are yet to be fully identified, researched and publicly discussed, this discussion paper introduces three themes of potential relevance:

1. Local living economy
2. Spiritual capital
3. A fourth bottom line of sustainability – participation

While there are likely to be many more components of prosperity worthy of attention, these are the three that are occupying my mind at the moment.

### **Local Living Economy**

There are some very important grassroots movements beginning to seed and flourish around the world these days, even, or especially as the peak oil and climate change vice tightens in our economies and communities. One is the community-based Transition Towns movement, born partly out of Permaculture principles that include self-sufficiency, energy descent and community creativity. Another international movement and the one I will discuss in some detail here, is emerging from the resourcefulness and entrepreneurship of small to medium enterprise and EF Schumacher’s legacy “Small is Beautiful: Economics as if People Mattered” (1972). It is called the Local Living Economy movement.

A Local Living Economy (LLE) is one where economic power resides local, place-based economies and communities, where:

- there is independent, local ownership and operation of business;
- consumers value local business ownership and local goods and services and are prepared to support this by purchasing and even investing, locally;
- local businesses work together to produce, supply and exchange locally and cooperate to ensure local needs are met as far as possible, with local goods and services;
- local independent media is healthy and active;
- local businesses pay their employees a living wage;
- government develops and implements policies that acknowledge and enable local business and economy;

- local businesses and communities connect to develop and live within the quadruple bottom line that addresses care of the natural environment (planet), care of social systems (people), care of financial viability (profit) and care of local governance and active democracy (participation).

Michael Shuman is the co-founder of BALLE – the Business Alliance for Local Living Economy, an international network of businesses and communities living the LLE ethos. He is also the author of “The Small-Mart Revolution: How local businesses are beating the global competition” (2006) and a champion of LLE as an increasingly resilient social-economic system that can help to build community prosperity while also lightening our eco and carbon footprints.

In a recent interview, Shuman outlined four arguments in support of LLEs (2009) in these days of uncertainty and emerging constraints. The first is the fact that local businesses tend not to move out of their geographical areas and as such, are usually reliable generators of wealth for local communities.

The second is that local businesses retain and circulate more money for longer in the local economy than do chain stores and multinationals. He points out that a number of research studies over the past six years have shown that between \$40 to \$60 of every \$100 spent at local businesses stays in that community. In contrast, only about \$13 to \$20 of every \$100 spent at chain stores or multinationals stays in a community.

Thirdly, Shuman says that local businesses are of a size and character that enable communities to flourish because they are walkable, small, home-based and human-scale, all of which support relationship building, social connectivity, trust and creativity. These are also the sorts of businesses that attract high-value tourism.

Fourthly and crucially, Shuman argues that local businesses have a smaller carbon footprint “because their inputs and their markets tend to be local”, thus reducing the CO<sub>2</sub> impacts of long-distance transport and high energy inputs for all manner of businesses.

Another LLE champion, Bill McKibben, draws a very powerful conclusion in his recent book “Deep Economy: The wealth of communities and the durable future” (2007) when he says:

*“Local economies can play an important role in reducing [environmental, global warming, oil dependency] problems. If we grew most of our food close to home, we’d use far less energy in the process, helping alleviate both oil shortages and climate change. But even so, it’s becoming increasingly clear that it’s too late to ward these crises off altogether. They’re coming at us very fast.*

*So here’s the punchline: the movement toward more local economies is the same direction we will have to travel to cope with the effects of these predicaments, not just fend them off. The logic is fairly clear: in a world*

*threatened by ever higher energy prices and ever-scarcer fossil fuel, you're better off in a relatively self-sufficient county or state or region. In a world increasingly rocked by wild and threatening weather, durable economies will be more useful than dynamic ones. And in both cases, the increased sense of community and heightened skill at democratic decision making that a more local economy implies will not simply increase our levels of satisfaction with our lives, but will also increase our chances of survival in a more dangerous world"* (2007, p 231).

Going local solves for pattern as US farmer, philosopher and poet Wendell Berry would say. By putting health and resilience for all at the centre of our social, economic and ecological systems - by looking after the health of the natural environment, community, workers, families, farms, animals and so on, we are then able to make clearer, more ethical and holistic choices about how to operate our businesses in ways that cascade into deep sustainability. Local economies mean small businesses; relationships between people, community, environment; shorter supply and distribution chains; minimal long-distance transport; reduced oil and energy use; reduced eco and carbon footprints; deep and integrated sustainability.

While LLE research in Australia seems thin on the ground right now (what a great opportunity for switched-on local governments to take up), I know from my own experience of helping to rebuild my home community's local economy, the process is a greatly heartening and stimulating activity in these days of dire forecasts. Here in the very creative community of Beechmont in the subtropical rainforested mountains of South East Queensland, over the past few years our small business community in partnership with our local council, has created the Beechmont Business and Enterprise Network (BBEN), a not for profit community organisation. Guided by volunteers who all own and operate small businesses, BBEN:

- produces an annual business directory booklet for all residents that encourages buying local first (it's the equivalent of our main street)
- coordinates Beechmont's community website which includes an online business directory, community events calendar, classified ads, car pooling page, community group blogs etc
- runs a weekly farmers market enterprise called B-Fresh
- hosts practical workshops about local food growing and production, sustainability and small business
- hosts networking functions for local businesses
- in mid-2009 coordinated a community process to bulk buy and install household solar energy systems.

BBEN also regularly connects with businesses and business leaders in the neighbouring villages of Canungra and Tamborine Mountain to help build regional enterprise networks and supply channels. These are miniscule activities in the grand scheme of things but they are the seeds that are preparing Beechmont for the future in positive, proactive and participatory ways.

Here on this mountain we are rediscovering and rebuilding our capacity to grow our own food, run our own businesses and scan our ecological, social, economic and political environments to identify approaching storms and opportunities. We are learning to collaborate, communicate, innovate and create. And myself and many other residents now source fresh produce, dairy products, shampoo and body care products, hairdressers, tradespeople, heirloom seeds, motor mechanics, electricians and so on, locally. We also know where the economic gaps are for enterprising start ups (we need a plumber, a human-scale general store and a cosy tea/coffee house!). We have begun our LLE journey by connecting local businesses with each other, with residents, with local government and even with visitors and tourists. This is the real life, onground work that gives me enough optimism to tell stories about resilience, prosperity and a future that could include greater meaning and purpose than shopping our way out of recession.

### **Spiritual Capital**

Dana Zohar is a scientist and business management consultant. In 2004 she and her husband Ian Marshall published a fascinating book called “Spiritual Capital: Wealth we can live by” which proposed a third type of human intelligence beyond rational IQ and emotional intelligence (EQ) which she calls Spiritual Intelligence (SQ). Based on her understanding of complex, living systems including those in the natural world and the business/economic world, Zohar suggests that “we need a sense of meaning and values and a sense of fundamental purpose (spiritual intelligence) in order to build the wealth that these can generate (spiritual capital). It is only when our notion of capitalism includes spiritual capital’s wealth of meaning, values, purpose and higher motivation that we can have sustainable capitalism and a sustainable society” (2004, p 4).

Zohar points out that our contemporary, high growth, mass consumer economic paradigm (and associated extreme petroleum dependence) is in fact only 200 years old in a history of human commerce that’s at least 40,000 years old. Based on this perspective she suggests that spiritual capital points to the need for business to understand and operate in ways that acknowledge it is part of a wider ecological and social context that also “helps to make the future of humanity sustainable as well as create wealth that nourishes and sustains the human spirit” (2004, p 28).

In a recent Resurgence Magazine article (2009) that reinforces Zohar’s proposal about the bedrock nature of spiritual capital for sustainable business and community, author and activist Frances Moore Lappe turns economic and indeed environmental ‘speak’ on their heads when she discusses the language we use to define our world. She says:

*“At the age of twenty-six, trying to understand how and why hunger could exist in our world, I discovered that our ‘efficient, modern, productive’ food system funnels sixteen pounds of grain and soya into cattle to get back one single-pound steak. On average, 56% of all energy in the US economy is wasted. Energy expert Amory Lovins calculates that 87% of the fuel energy of cars is wasted.*

*“Since what we call ‘growth’ is largely waste, let’s call it that! Let’s call it an economics of waste and destruction. Let’s define growth as that which enhances life – as generation and regeneration – and declare that what our planet most needs is more of it!” (2009, p19).*

If we accept Zohar’s and Moore Lappe’s propositions, then we have an opportunity to grow meaning and wellbeing and creativity and imagination, and transform our existing economy of waste into one of wellbeing and prosperity that is so much more than money and material goods. Another woman proposed such an economy before her untimely death in 2007-08 – Body Shop founder and green business pioneer Anita Roddick. She called it the ‘currency of imagination’:

*“We will succeed or fail according to how much imagination is in circulation. We will succeed to the extent to which we encourage human connection and conversation” (Resurgence Magazine, Nov-Dec 2008, p 25).*

### **The Fourth Bottom Line**

We all know that most businesses aim for a healthy financial bottom line where costs are covered by sales of goods and services and hopefully enough surplus is generated to reinvest into the business, provide returns to investors and so on. For perhaps the last 10 years, the term ‘Triple Bottom Line’ has come into increasing use in sustainable business circles. This refers to the aspiration of some businesses to incorporate environmental and social investment, costs and returns into their business operations and accounting systems. And so we now have the three P’s: Profit, Planet and People, being integrated into triple bottom line business.

I’d like to introduce a fourth ‘P’ to the bottom line concept, which is a crucial plank if we are to seriously understand and generate greater resilience and prosperity to our lives. That ‘P’ is Participation. To my mind it is at the heart of active, democratic governance summed up beautifully by Frances Moore Lappe’s term “Living Democracy”.

Over the past 30-40 years as mass consumption and production based on massive amounts of cheap energy, as well as global population growth have pushed civilization across economic, energy and ecological tipping points, we have simultaneously seen the dramatic erosion of democratic participation at all levels of our society. Now, however, as we begin to experience the impacts of Homer-Dixon’s tectonic stresses including energy constraints and ecological collapse, one of the most important activities we need to undertake is joined-up thinking. The challenges we face are so complex and interconnected there is now an urgent imperative to have all players at the table – families, business and industry, youth, science, education, community, policy, government at all levels. And we must learn to share again – to share our ideas and aspirations, our fears and challenges. To listen deeply to views that are different to our own. To learn together as we go – in and from action and reflection and conversation. One thing we can be absolutely sure of in these uncertain times is that no one person, organisation, institution or government has the answer or the silver bullet to the

predicaments we face. The answers lie in the knowledge, experience, skills, ideas and potentials within us all. It is essential that we create the forums that enable participation, connected thinking and innovation to occur. Physicist David Bohm (1991) called it dialogue. Business management leader Peter Senge (2004) calls it presencing. My organisation calls it courageous conversation. No matter what the name, it is founded on participation.

Currently the newly elected US president Barack Obama appears to be prioritising the development of participatory processes in that country following decades of centralised, closed government. In May 2009, the government opened up a web-based discussion about participatory models, seemingly with a view to increasing democratic capacity in the US. At the very least, the administration has allowed the word ‘participation’ to enter its vocabulary and perhaps that act alone opens up possibilities for positive change.

It is important to note here, that while we’ve discussed ecological thresholds earlier in this paper, there are also social thresholds or tipping points that once crossed, can mean the creation of new forms of social structures and processes. In a recent speech to the graduating class of 2009 at the University of Portland, social entrepreneur and author Paul Hawken, described the rise of the Abolitionist movement of the 18<sup>th</sup> Century as the first catalyst to trigger “a national and global movement to defend the rights of those they did not know.” Hawken said,

*“...for the first time in history a group of people organized themselves to help people they would never know, from whom they would never receive direct or indirect benefit. And today tens of millions of people do this every day. It is called the world of non profits, civil society, schools, social entrepreneurship, and non-governmental organizations, of companies who place social and environmental justice at the top of their strategic goals. The scope and scale of this effort is unparalleled in history”* (Speech, May 2009).

The rise of the Abolitionist movement and its eventual outlawing of slavery is a vivid example of a social tipping point and as Hawken points out, it also catalysed the development of the social movement phenomenon. Perhaps in these days of social-ecological crises we may see the evolution of that movement into multiple forms of participatory governance and participatory democracy at all levels of social organisation – surely a timely threshold that offers the potential for positive social transformation...

## **Relationship**

It is clear that one of the most urgent tasks before us is to recognise that human systems and ecological systems are closely connected and that social systems are embedded within and dependent upon ecological systems.

However, there is another level of understanding within systems thinking which foregrounds the place of relationship – literally and figuratively – within social and

ecological systems. In exploring the notion of prosperity, a discussion about relationship is vital.

Ecologists, natural resource scientists and resilience scientists are all very well aware of the centrality of relationship in natural systems. Everything is connected and systems emerge, evolve and adapt based on the connections and relationships within these systems. That's one of the reasons why systems are so complex. For example, in rainforest systems, there are relationships between the microscopic bacteria in the soil through to the trees, the plants, the animals, the insects, the birds, the reptiles, rainfall, rocks, atmosphere, sunlight and so on. And as the landscape that the rainforest is embedded within stretches north, south, east or west and the soil changes, the geology changes, local climate changes, the edges of the rainforest also connect to and overlap into the edges of different types of forest or vegetation systems. It is at these edges that things get really interesting because this is where the greatest diversity of life and relationship occurs and creativity and innovation thrive as relationships built on diversity evolve.

If we translate this understanding of relationship in natural systems to human and social systems, we can see that relationships between people are a core component of a healthy, functioning, resilient and indeed, creative and innovative society. And one of our greatest opportunities as we face this era of challenge and change, lies in better understanding how we can strengthen relationships between people and create the conditions that support innovation, creativity and collaboration in the human enterprise.

Former Zen priest Yasuhiko Genku Kimura in the article "Alignment Beyond Agreement" suggests that alignment of intention rather than agreement of opinion, is a key process in bringing people together to collaborate. He says,

*Alignment does not require agreement as a necessary condition. Alignment as congruence of intention is congruence of resolution for the attainment of a particular aim. An aim being in and of the future, means unknown or unpredicted variables inevitably enter the generative equations for its achievement. Inherent in alignment, therefore, is the spirit of quest.*

*The spirit of quest generates open and evolving dialogue-in-action. Participants of a quest bring in diverse points of view while remaining united in the same quest. When they jointly choose a course of action, they know that the choice is a tentative mutual agreement, to be modified, altered or even discarded along the way. The question is not 'who is right' but 'what is best' for the fulfillment of the intention (Kimura, no date, p 1).*

PhD researcher and scholar Karin Schianetz (2009) adds that ongoing, participatory community engagement and governance, that is the ability of government and community to work together and collaborate, is central to our capacity to live within social-ecological systems in flexible and adaptive ways. Schianetz argues that it is the knowledge of local people about our own local environment that affects this environment. Our capacity to

collectively and continually learn about our environment, to share our learnings and to apply our learnings in forms of participatory governance and co-management that will underpin increasing levels of resilience and sustainability. This is known as adaptive co-management or adaptive governance and is entirely based on the relationships between people, organisations, institutions and the natural environment.

While relationship is one of our greatest opportunities for creativity and innovation at this time in human history, it is also one of our greatest challenges and the search for, application and evolution of processes and tools to enable effective and elegant relationship building with diverse human communities is essential. This may indeed be our greatest contemporary challenge...

### **Knitting Things Together**

There seems to be increasing discussion about resilience at the moment, particularly in business circles. It appears there is growing recognition from business leaders that climate change is real, it's happening and businesses need to prepare themselves for climate shocks by becoming more prepared for approaching knock downs (Acclimatise, 2009).

However, this discussion paper attempts to dive deeper than this one issue. It attempts to point out that business and community are complex, adaptive social-economic systems that are part of much larger complex adaptive socio-ecological systems like bioregions and of course, the Earth itself. If we're serious about resilience, this is a vital point. Complex adaptive systems are not machines that can be fixed in lock-step, linear ways. And resource optimisation efforts alone with their focus on efficiencies, have the potential to imbue such systems with levels of brittleness and vulnerability that could lead to collapse. Complex, adaptive systems are self-organising, evolving, living entities that have thresholds which when crossed, can and will trigger transformation.

We must bear in mind that it is time for our assumptions about eternal economic and material growth to be unpacked and examined very closely indeed. In a world of ecological limits which humanity is now well-and-truly bumping up against, we simply cannot continue on the path of never-ending growth. It is time for us all to explore what low-growth, no-growth, stable state economies might look like and how we might transition ethically and equitably towards this type of new world.

This paper also suggests that based on deeper levels of understanding about resilience and the tectonic stresses that are bearing down upon us, our days of command and control, top-down management are over. We simply cannot continue to have centralised organisations and governance structures when knowledge, expertise, imagination and innovation are distributed throughout our communities and organisations.

All around us are emergent forms of participation that can bring diverse people together in meaningful ways that build and strengthen innovation and relationship, not only in social and economic terms but in our long-neglected connection with the living Earth.

Thomas Homer-Dixon describes this process as “cultivating a prospective mind”. He says,

*“we can’t possibly flourish in a future filled with sharp nonlinearities and threshold effects – and, somewhat paradoxically, we can’t hope to preserve at least some of what we hold dear – unless we’re comfortable with change, surprise, and the essential transience of things, and unless we’re open to radically new ways of thinking about our world and about the way we should lead our lives. We need to exercise our imaginations so that we can challenge the unchallengeable and conceive the inconceivable”* (2006, p 282).

Let us begin.

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