Designing 2050: Imagining and Building a Global Sustainable Society

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1. Contemplating a Global Sustainable Society

This essay describes the already-in-progress transformation of 21st century society into a global sustainable society and a set of proposals to help consolidate this future. The essay is in three parts and ten sections. The first part is a discussion about a current thinking about sustainability, and summarizes current trends and probable futures. The second part describes a preferred future vision of a global sustainable society and outlines some of its key characteristics. The third part delineates some strategic actions which will be required to realize such a society by the year 2050.

Global trends are already shaping the emergence of such society but this fact is not widely recognized. I believe that humanity will have developed the knowledge to achieve such a society by the year 2025 and this could be realised globally by the year 2050. The values shift to a new global paradigm under which such a society will operate is already emerging.

To enhance the probability that this transformational journey is successfully completed, new mindsets and forms of global cooperation are needed, including changes to how these global transformations are financed. The design rules and the social and physical innovations needed to consolidate such a society can be broadly described even though the majority of them are yet to be invented. By introducing and describing these emerging rules and innovations this essay also seeks to demonstrate that it is possible to nominate many of the new goods and services which will enter global markets between today and the year 2050 and, thus, to describe much of the emerging 21st century global economy.

2. Should We Be Optimistic Or Pessimistic about Our Common Future?

There are some who think that humanity is already fatally endangered by global trends including through already out-of-control climate change, over consumption, social inequity, and inter-tribal and inter-religious conflict. These include Australian medical and environmental authority Frank Fenner, and the creator of the Gaia hypothesis James Lovelock, both in their 90s, who have both reached their pessimistic conclusions after dedicating their lives to making a world where such an outcome were avoided. Lovelock concludes that humanity can only be saved by the universal adoption of nuclear energy as a primary energy source. In addition, Tim Jackson (2009) in *Prosperity*

without Growth argues that the problem is the Gross National Product (GNP) growth itself and that we need a new model for economic development, because it is impossible to 'decouple' GNP growth from resource use. Sadly he offers little in visualising a preferred future alternative scenario might be possible. Moreover, Jackson said in his 2010 Deakin Lecture that 'we have no idea about what this economy looks like' in his 2050 future and that 'we don't know what life is like in such a scenario'.[1] In this he is part of a long tradition of eco-thinkers including such luminaries as Paul Ehrlich and David Suzuki, who defined these complex problems superbly but for the most part offered little vision and proffered simple and insubstantial solutions.

In contrast most futurists by nature are optimists. They might still be daunted when contemplating the challenges required to transform our planetary society to a universally sustainable and prosperous one. However, they mostly would believe that humanity is mature and intelligent enough to accomplish whatever is necessary to realize such heroic destinations: that is, transforming from destroyer to purposeful adaptive builder. I am part of this tradition and it is my view that with some new language and some new tools we can make the current system, including our addiction to economic growth, work better and deliver an outcome we all seek; a sustainable society on our Planet.

It is not sufficient to aspire to survive when one can aspire to thrive instead. Thus, in my work I often use the word 'thrival' as an aspirational goal. Now this word does not occur in any dictionary – at least yet – but the fact I needed to invent this word says a lot about the lack of loftiness of the aspirations of English speaking people. It also helps to illustrate the relative absence of inspiring visions relating to what a sustainable society in the mid 21ˢᵗ century might look like.

Furthermore, we cannot work to realise any future that we do not first imagine and imagination in this regard is sorely lacking. Indeed it is noteworthy that genres such as science fiction are dominated more by apocalyptic than inspirational and aspirational content. What is needed is a new fictional genre we could call *ecofiction*. Hope is the best way to overcome fear and it is through imagination and vision we can generate hope. For as the Book of Proverbs has told us *where there is no vision the people perish*.

The futurist in each of us

The futurist in each of us is part prophet, seeking to answer the question what *will be* the future or the *probable future*, and part *visionary*, seeking to answer the question what *should or could be* the future or the *preferred future*. The *prophet* is the manager in each of us. The manager considers current trends and activities and prophesies the *probable future* that would result from their continuation. The manager then implements strategies to avoid obstacles and threats, overcome problems, minimize risks, and manage resources, to ensure the destination is safety, effective and efficiently reached . The *visionary* on the other hand is the leader in each of us. The leader envisions a new *preferred future* destination that is more relevant or more heroic than current *probable future* destinations and then chooses, motivates and mentors the strategic actions required for its realization.

Management therefore involves *problem centred strategic thinking*, which focuses on minimizing or eliminating current problems and those likely to emerge through this perpetuation of current trends. *Probable futures visions and problem centred strategies* in combination will result in the realisation of a merely less awful future, not a magnificent one. Leadership on the other hand involves *mission directed strategic thinking*, seeking to include in a strategy what is required to realise a preferred future. The current conversation about our global future is too dominated by management thinking. The bottom line is we cannot work to create a future which we do not first imagine. And there is simply not enough use of imagination in current discourses about realizing a sustainable future. What is needed is affirmative action for leadership thinking

If we are going to successfully imagine and build a sustainable global society then we need to visualize its core characteristics as a preferred future and then assemble the elements of a strategic mission to realise it. There are many characteristics of such a society that can already be described. And, as I will outline, many of the transformations needed to realise it are in progress.

There is already a global conversation occurring about the year 2050: it is increasingly popping up in global political discourse. International climate change negotiations use the year 2050 as a target year for emissions reductions and for the creation of a *safe climate world* – a phrase first used by Spratt and Sutton (2008). And many NGOs around the world are increasingly mentioning the year 2050 as a time when humanity should have completed transformative journeys of various kinds. The year 2050 should also be a major focus of discourse within the futures profession. A core question in any 2050 conversation is 'what does the world need to negotiate, design and implement in order to realise a sustainable society by the year 2050 and what will be the characteristics of such a society?'

The fact we are having this conversation at all is something to be celebrated for humanity is not renowned for its far sightedness. As we struggle to negotiate, design, build and implement arrangements that will achieve this result, what major goals need to be achieved if we are to create a sustainable planetary society: one which is prosperous, sustainable, harmonious and just, by that year? What should be our vision and what should be the key strategies to realise this vision?

Answering this question was the core purpose of my book *Designing 2050* (Ellyard, 2008). My shorthand description of this preferred future is a sustainable global society that is characterised by 'sustainable prosperity'. Reaching this aspired for destination requires a mission for collective global collaboration.

Humanity has not only commenced discussing aspirations for the year 2050, but is also building the negotiations infrastructure to realize it. In his lighthouse essay *The Tragedy of the Commons* Garret Hardin (1968) outlined the kind of negotiations that are necessary to achieve such a sustainable world. He suggested an essential question that should characterize such negotiations: *what forms of mutual coercion must we mutually agree upon?* This is the essence of current global negotiations such as in post–Kyoto climate treaty negotiations. It is also present in many other global dialogues such as creating a fair and free trading system through the WTO Doha Round, solving global financial crises through the G20, or achieving global nuclear disarma-

ment through the UN. The Copenhagen Climate Change Conference also recognised an additional element characteristic of such discourses. We have now become so globally interdependent with a shared fate that there no longer can be winners and losers – we will either all win or we all will lose. The pervading feeling about the Copenhagen outcome was that we all lost.

If we are to become effective shapers of the future we must change the way we think and perceive the world around us and we need a good intellectual toolkit to become more successful creators of the future: and to achieve this we all should become both more effective responders to change (or resilient future takers), and more effective shapers of change (or purposeful future makers). The major tools in this kit are management and leadership, design and innovation, and learning. However, shaping global futures is like charting a course in a 6 knot tide. Whatever our aspirations we must plan for the fact that the tide is already taking us somewhere. As it happens this tide is not taking us on to the rocks as many, including Fenner and Lovelock, fear.

3. Global Trends and Changing Paradigms

Key long-term trends, already moving humanity towards a global sustainable society in the 21st century include:
- A more integrated, interdependent, yet culturally diverse world is being created through the combination of globalisation (increasing global interaction and interdependence), tribalisation (fracturing of old nation states and empires into separate tribal entities as with the old Soviet Union and Yugoslavia) and technological innovations that increase our interconnectedness, interdependence, and our awareness of the lives and views of other cultures, and of our shared fate.
- A massive expansion of universal education that is encouraging people to look beyond tribal roots which emphasises difference and to see themselves as part of a humanity that emphasises both cultural difference and human unity.
- A substantial growth of the educated middle class through globalization. This now numbers about 1.5 billion, of which China and India accounts for 500 million. This has major implications for global paradigm shifts and the creation of a global sustainable society.
- A single integrated global market place for ideas, products and services informed by the emerging 21st century values of 'planetism' (this will be discussed shortly)
- The interdependent relationship with reciprocal obligations is becoming the dominant model in personal, business, workplace and international relations.
- A growth in communitarianism (giving priority to community rights over individual rights when these are in conflict) and a relative decline in its opposite, individualism.
- A rise in the global support for democracy, with autocratic administrations increasingly becoming international pariahs and punished for being so. The number of democracies has increased from just 12 in 1945 to 125 today.
- The increasing use of a new suite of measures which utilize growing global interdependence and international collaboration to penalize rogue nations, com-

panies and organizations. These utilize trade sanctions, customer boycotts, strikes on capital investment and the freezing of bank accounts.

- The increasing dominance of international and regional forms of governance versus national governance in shaping the future. This is illustrated by the increasing influence of the likes of the EU and ASEAN, the G20, the World Bank, WTO, and the International Criminal Court, and NGOs such as World Vision, Amnesty and Transparency International and the WWF.
- Global transnational corporations and on-line businesses are now as influential on 21st century markets, investment and trade as governments, and these have become increasingly vulnerable to judgments about whether they are good planetary citizens.
- An ever increasing number of multilateral agreements that are steadily eroding the power of national governments
- The ageing of populations as more people join the middle class and seek to have careers and families with fewer and better-educated children and more women seek more equality and democratic freedom.
- Increasing support for religion and tribalism that respects difference, and an escalating pariah status for religion and tribalism that does not.
- An evolving integrated global investment and financial system operating under one set of rules, and the gradual demise of national currencies. This will lead to the establishment of a world central bank within ten years and a single global currency within twenty years.
- The increasing proliferation of products and services which promote sustainable production, consumption, development and lifestyles
- The cultural customization of products and services in a global market place that increasingly celebrates difference and diversity within global unity. The development of what I call World Industries.
- The globalization of organized crime, terrorism and nuclear proliferation, and of the collective response by humanity to these threats.

In *The Economics of the Coming Spaceship Earth*, Kenneth Boulding (1966) discussed the need for the transformation of what he called the *cowboy economy* into the *spaceship economy*. If we try to turn the above trends into a narrative we can begin to see how paradigm shifts are transforming the world from a 'Cowboy' to a 'Spaceship' culture as first envisioned by Boulding.

The dominant paradigm of the 19th and much of the 20th century was modernism. Becoming and remaining modern through modernization has been the major driving force of change over the past 200 years. Being 'modern' was a-la-mode and desirable and its opposite – being 'old-fashioned' – was undesirable and often ridiculed: there was little respect for the old ways of doing things and we preferred new ways simply because they were new.

Modernism became deeply entrenched and it transformed the world through the forces of imperialism, colonialism, religious evangelism and the power of western science and technology. It was intensively expansionist: there were always new territories to conquer and cultural mindsets to 'modernize'. Indigenous worldviews were

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regarded as inferior and incompatible with Western modernist thinking, and modernists believe they should 'civilize' other people for their own good.

A key component of modernism was the concept of 'progress', which was short hand to describe how much of the rest of the world had been transformed into European-like status. Communities all over the world established 'progress' associations of one kind or another to promote the tide of modernity.

Most people supported 'progress' as indigenous peoples were massacred and then 'assimilated' from the 1850s to the 1950s, as beautiful heritage buildings were replaced by ugly modern apartment blocks, and as mangroves and wetlands were destroyed for coastal developments. Joni Mitchell summed up this feeling by singing in her 1970 song 'Big yellow taxi' that 'they paved paradise and put up a parking lot'.

Those born after 1970 sometimes have difficulty in understanding how earlier generations could have perpetrated so many destructive changes and called them 'progress'. By the late 1960s the limits and the dark side of modernism had become too significant to ignore.

After 1970, a successor to modernism emerged called (logically enough) postmodernism. Postmodernism provided the means for a critical deconstruction of the modernist tradition, which it replaced with a collage of modern and pre-modern forms and traditions, plus some genuinely new concepts such as sustainability.

In the postmodern era the merits of many old ways of doing things and of viewing the world are being reaffirmed. Postmodernism fosters the view that the world would be a better place if we paid more respect to pre-modern and traditional practices.

There are many examples of the influence of postmodernism in the visual arts, architecture and music. A medical illustration of the switch from modernism to post-modernism is what many people do nowadays if they feel sick. They might consult a conventionally trained doctor. However, they might also consult a Chinese herbalist, an Ayurvedic doctor, an acupuncturist, a shiatsu healer, a naturopath or a yoga master. They understand that over the centuries the world's diverse cultures have devised many ways to heal illness. They will appropriate and perhaps integrate the approaches they think will be most efficacious as their own personally customized healing solution. This is the essence of postmodernism, which involves sampling the world's cultures and other people's ideas and appropriating those most suited to your own needs. In the postmodern era we even changed our language: swamps in the modern era became wetlands. Slums in the modern era became heritage buildings. Postmodernism today seeks to amalgamate the best of the old with the best of the new, such as retro-fitting a 19th century building with 21st century spaces and technologies rather than demolishing and replacing it.

What paradigm will embody a worldview, dominate 21st-century global public opinion and express the 21st-century just as modernism expressed the late 19th and the first two-thirds of the 20th-century? Postmodernism won't do, because it is essentially a deconstruction of modernism. It is a paradigm of transformation, encouraging us to prepare for success in the 21st-century by combining the best of the old with the best of the new.

4. The Birth of 'Planetism'

A new paradigm I term 'planetism' is emerging and should be dominant by about the year 2020. This is the paradigm of the spaceship culture, the paradigm of the cosmonaut. This paradigm is already informing and shaping 21st-century global public opinion.

I believe that *planetism* will shape the 21st century in the same way modernism shaped the 19th- and 20th-centuries. People then gave their first allegiance to their tribe or nation. In the 21st-century they will give their first allegiance to the planet, to Spaceship Earth, they share with the rest of humanity.

In my work over the last 15 years I have identified nine values shifts that are characteristic of the transformation of global paradigms since the mid 20th century and emergence of planetism. Planetism will inform international public opinion and shape international agreements by 2020. Many people would be sceptical that such a global transformation could be completed by then. In fact I am not suggesting that these values will be universally held in 2020. However this is possible, even probable, by 2050.

Table 1 below presents the nine values shifts involved in this transformation:

Table 1

The Shift from 'Cowboy' to 'Spaceship' Culture

The Cowboy Culture / *Modernism (1960)*	The Spaceship Culture / *Planetism (2020)*
Priority to nation, tribe	Priority to planet
Individualism	Communitarianism
Independence	Interdependence
Autocracy	Democracy
Humanity against nature	Humanity part of nature
Unsustainable production, consumption, development, lifestyles	Sustainable production, consumption, development, lifestyles
Patriarchy	Gender equality
Intercultural and inter religious intolerance/hostility	Intercultural and inter religious tolerance/harmony
Conflict resolution through confrontation/ combat	Conflict resolution through cooperation/ negotiation.
Safekeeping through defence	Safekeeping through security

5. Imagining a 21st Century Sustainable Society

R. Buckminster Fuller in his essay *Education for Comprehensivity (1970)* said *wealth combines two factors – the physical, which is conserved, the metaphysical, which can only increase*. This metaphysical component principally consists of the sum of data, information, knowledge, wisdom, design, planning and innovation.

A sustainable society will live by the planetist values listed above and as these values spread so will the concept of such a society. Those who suggest that a sustainable society is only possible by decoupling economic growth and resource use do not give sufficient appreciation to the metaphysical component of wealth and prosperity. A sustainable society need not be a non-growth society. Furthermore, much of the

growing metaphysical component of wealth creation will help to ensure that the physical component is conserved, protected, restored and appropriately utilised.

Sustainability discussions tend to concentrate on dealing with the elimination of unsustainable practices and behaviours (problem centred strategies), such as in current debates about the implications of economic growth. What is much rarer is positively visualising, designing and building sustainable alternatives (mission directed strategies). Lessening an undesirable outcome is not the same as creating a desirable outcome and, as already stated, a sustainable society has to be imagined first before it can be created. Reducing carbon emissions is not the same as imagining, designing and building a zero carbon-emitting alternative. There is a difference between cleaner production and clean production and the mindsets we use to realise each of these differ.

6. Sustainable Prosperity

Readers will likely be familiar with the "*triple bottom line*" first suggested by Elkington (1999) in *Cannibals with Forks*. While this a significant conceptual advance, turning this into a practical process to evaluate sustainability has met with limited success because this good idea has not spawned the development of many significant management tools.

In their seminal book *Natural Capitalism* Hawken, Lovins, A. and Lovins, H. (1999) used the concept of *natural capital* as a component of *total capital* along with *human, financial and manufactured capital*. These are key capital *inputs* into the processes of development, production and consumption. While I find this concept useful and important it is only part of the equation. We also need to consider the *outputs* of development, production and consumption. Unsustainable outcomes are *outputs* (products) of these processes not *inputs*. Therefore a new language that addresses the output side of these processes is needed if we are to make significant gains in our attempts to realise a sustainable future. After consideration I decided to use the output related concepts of *prosperity and poverty* as measures. Prosperity and poverty can be used as measures of total value - as a sum of quantity, quality and complexity - of the outputs of development, production and consumption.

To operationalise this, a new language can be used to better bring economics and ecology into a single conceptual framework. Imagine a sustainable 21st century society to be one that enjoys *sustainable prosperity*.

Sustainable prosperity involves the simultaneous realization of economic, ecological, social and cultural prosperity. The modernist concept of 'progress' often meant that the creation of economic prosperity simultaneously created ecological poverty, and sometimes also social and cultural poverty. Decimating and polluting ecological systems to create ecological poverty was once acceptable if it also realised economic prosperity. These activities were often accompanied by the utterance 'you can't stop progress'. Similarly social poverty-by, for example, lessening social cohesiveness while promoting individual access to opportunity – could also be an outcome of a development process to realise economic prosperity. Likewise cultural poverty (decimating cultures through assimilation and by conscious destruction) could equally be a consequence. Forest clearance can be seen as an equivalent of 'slum clearance' where

forests with high heritage, carbon sequestration and biodiversity value are clear felled. This modernist practice still continues in many places as we cut rainforests to establish oil palm plantations or for other 'productive' purposes. As we log these forests we simultaneously realise economic prosperity and ecological poverty. Realising sustainable prosperity in forestry means creating practices and innovations that simultaneously realise economic and ecological prosperity.

A sustainable society will simultaneously realise economic, ecological, social and cultural prosperity and not increase one form of prosperity whilst impoverishing another. Ecotourism and cultural tourism is a good example. Here ecological and cultural prosperity is turned into economic prosperity without impoverishing nature and culture: this is sustainable tourism.

7. Ways and Wares

Many new innovations, goods and services will be needed in the next generation to realise a global sustainable society. These innovations will assist the innovators themselves to economically prosper by doing ecological, social and cultural good. They are already in increasing demand in global markets and a new 'planetist entrepreneurial cohort' is already commencing to provide them. These innovations, products and services will be dominant components of the global economy in the 21st century.

Furthermore, the vast majority of the products, services and technologies which will dominate global markets in the next four decades and which will realise a 21st century sustainable society, have yet to be invented. A new language for describing these innovations is also needed to facilitate their identification and creation. We cannot describe the innovations themselves but we can, in this way, describe the *purpose* of these innovations. I have coined the concept of *ways and wares* to fulfil this function.

Ways are the social innovations to what we *do*: changes to our behaviours and actions. *Wares* are the physical innovations to what we *use*: new designs, technologies, products and services. *Ways and wares* are vehicles that enable the metaphysical component of wealth creation to change society through transformations of behaviour and the provision of innovations, products and services into global markets. To illustrate; a *water conservation way* would involve shortening one's shower from 6 to 3 minutes; a *water conservation ware* would be a new low volume showerhead. Together these enable effective water conservation. The values of planetism are already informing market demands for *ways and wares* which increase interdependence, democracy, sustainability, gender equality, intercultural harmony, and security. Those who create and market these innovations will prosper economically. Many of these *ways and wares* will embody the four emerging generic technologies of cyber technology, biotechnology, nanotechnology and advanced materials technology

Ways and wares for ecological prosperity

Emerging planetist markets will demand ways and wares to create ecological prosperity by conforming to five basic design rules:

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Live within perpetual solar income: R. Buckminster Fuller (1969) first used these words in *Operating Manual for Spaceship Earth*, when he pointed out that there is 10,000 times more solar energy arriving on the Earth daily than humanity could ever expect to use. Until now we have used the product of solar income of previous eras - fossil fuels. The challenge is to devise new ways to use current, not historical, solar energy in our everyday pursuits. Solar income can be harvested directly via solar/hydrogen, solar/electric or solar/thermal systems, biologically through photosynthesis, and indirectly when solar income moves wind and water, such as with ocean currents (*solar marine hydro*). Lunar income can also contribute to sustainable energy use through tidal and wave power (*lunar marine hydro*). How many new living within solar income ways and wares can you imagine?

Turn waste into 'food': This concept was first use by US Architect Bill McDonough in his 2000 Hannover Principles and later in *Cradle to Cradle* (McDonough & Braungart, 2002). In nature there is no such thing as waste. One species' waste is another's food. In the next 40 years humanity needs to innovate numerous *ways and wares* to turn waste into industrial and natural food. How many turning waste into food ways and wares can you imagine? Many of these could be based on bio-mimicry.

Develop, produce and consume while causing 'zero net collateral damage': The concept of collateral damage was created by the defence industry to describe unintended damage cause by warfare. It can be equally be used to describe damage to environment, society and culture caused by development, production and consumption. In medicine a person with cancer who is treated with chemotherapy suffers considerable collateral damage (medical side effects) to their bodies. This is unsustainable medicine. Sustainable medicine would occur when we can treat the cancer effectively with zero net collateral damage to the body, because we are able (for example) to utilise a particular gene therapy or enzyme to kill cancer cells or stimulate the immune system to reject the cancer. In agriculture, pesticides kill many non-target organisms and create considerable ecological collateral damage (negative environmental impacts). This is unsustainable agriculture. A new form of biological pest management or the introduction of a gene that results in only the destruction of the target organism would constitute sustainable agriculture.

Just enough in place and time (JEPT): Most readers will know just in time (JIT) processing such as that that occurs in manufacturing. Ecological damage can occur when for example a water soluble artificial fertiliser is placed on a crop much of which fails to be taken up by the plant, because it is either fixed by chemical processes into an insoluble form in the soil or it is washed away in an intensive rainstorm where is causes ecological damage (eutrophication) to rivers and offshore waters. JEPT would involve placing insoluble fertilisers in the soil that are mobilised by soil microorganisms in the root zone and taken up by plant roots *just enough in place and time* so that no excess is available at any time to be lost to the plant in one way or another.

Protect, nurture, restore and sustainably manage natural systems: Imagine soil restoration ways and wares, air quality protection ways and wares and so on. For water we need four kinds of ways and wares, for water conservation, water protection,

water restoration and watershed management respectively. Imagine biodiversity conservation, biodiversity protection, biodiversity restoration, and habitat management ways and wares.

Ways and wares for social and cultural prosperity

To realise a sustainable society similar ways and wares are needed to realise social and cultural prosperity. Here are some strategies for protecting, creating and restoring social and cultural prosperity that could inform the innovation of new ways and wares.

Realising social prosperity: The creation of social prosperity and the elimination of social poverty will require ways and wares that facilitate:

- Better functioning interdependence in community, personal and political relationships, business supply chains and customer relations through activities such as loyalty schemes, and our relationship with the environment.
- Effective democracy including through transparent, free and fair elections.
- Community cohesiveness through the development of shared visions of and strategies for the future;
- Greater access to opportunity for all including the disadvantaged and disabled;
- Community collective procurement of goods and services which increases community bargaining power in markets; and
- Effective learning through a learning culture that is life long, learner driven, just in time, and customised for learners.

Realising cultural prosperity: Cultural prosperity can be realised and cultural poverty eliminated through the provision of ways and wares which:

- Create economic activities such as tourism and cultural festivals based on the celebration of cultural prosperity;
- Increase intercultural and inter religious respect and harmony and resolve conflict;
- Market cultural products and services that simultaneously celebrates tribal and cultural diversity and the unity of humanity and offers in one place culturally diverse products and services such as through world music festivals and world food halls; and
- Culturally customize innovations, products and services such as food and learning for particular cultural markets. Food is one of the ways we celebrate cultural difference. Now in a single global market imagine the ways and wares that would enable exporters to culturally customize food. In the 21st century we will need food that is both clean and green (to maintain and realise ecological prosperity) and culturally customized (to maintain and realise cultural prosperity).

Economic opportunities for innovators

Those who create ways and wares to create long term sustainable prosperity will succeed because they will get to the future first. This pathway is equally available to advanced developed countries – the old 'Global North', to emerging countries such as China, India, Brazil and Malaysia, or to least developed countries- the old 'Global South'. Least developed countries could for example customize for their own needs ways and wares created by others. Today's problems are tomorrow's opportunities.

Israel and the Netherlands are world authorities on water today, because one had the problem of learning to live with insufficient water and the other with an excess of water. They created ways and wares to solve their own problems that they subsequently exported to the world.

8. Sustainable Individualism

The realisation of a sustainable society means that the rights balance between the individual and the community needs to be tilted more in favour of the community- to create a community that is less individualistic and more communitarian. This, in turn, means that we need to consider how that we can best assess where this correct balance should lie. This can be achieved by defining what could be called *sustainable individualism*: individual behaviour that does not create net collateral damage to the community or the environment. Already the individual right to smoke in public or own firearms has been restricted in many countries because the community also has a right to clean air and safe streets: such activities cause collateral damage to the community and the environment. The individual right not to wear a seat belt has been prohibited not only because this protects individual lives, but also because individual injury places increased costs on the community. The unlimited right to sue for medical or public negligence is now similarly being limited. The community needs to be protected from excessive medical or public litigation because the community must bear increased insurance premiums if individual payouts for damages are excessive.

At the international level individual nations states need to be corralled to limit their carbon emissions because the global community suffers if an agreement based on *mutual coercion mutually agreed upon* is not reached. Many other examples could be listed. What is required in all of these cases is that individual behaviours that create zero net collateral damage to the community or the environment should be permitted and those that do not should not. In all of these cases individual rights must be subordinated to community rights.

9. Mindset Changes: Rethinking Who Is Rich and Who Is Poor

In Copenhagen last December there were those who still held the view that the poor counties should only make voluntary contributions to slowing down and prevent global warming. This is morally equivalent to saying that poor people can continue to smoke in a café if they wish simply because they are poor but for rich people this is banned. This thinking represents an extension of charity into an era when charity has already ceased to be a useful concept. Charity as a concept was created in a 19th century where dependence was more accepted, and it is ludicrous in a planetary society now increasingly based on interdependence and the reciprocity of rights and responsibilities.

In an interdependent 21st century it is best to put aside perspectives which perceive the world being divided into rich and poor nations and instead consider this division as being between rich and poor people irrespective of where they might live. Globalisation and the creation of universal market economies is spreading prosperity

widely. There are now 500 million rich people in China plus India alone while there are 80 million poor people in the USA. The perspective that requires rich countries assist poor countries without reciprocal obligations by poor countries is inappropriate in the 21st century. At the 2010 G20 Summit all nations committed themselves to halving their deficits by 2013. As such, there will be little investment available from the rich north to assist the poor south in the next 5 years.

Instead, new financial and investment mechanisms can be developed that enable rich people everywhere to support poor people everywhere. Humanitarian investment foundations can be established to operate in financial markets and trade financial instruments such as central bank bonds. These would use investment loans from the rich to buy and sell these instruments provided they utilise income derived from this bond trading to create 21st century sustainable prosperity for all. Such foundations could be given the authority to access central bank bonds on the same conditions as commercial financial institutions. In this way rich Indians could assist poor Indians with income generated from India's economic growth. I am currently working with a number of groups who are striving to put these mechanisms into place. These changes would result in the privatisation of much of the world's humanitarian investment and a lessening of the role of governments and national politics in humanitarian aid.

10. Conclusions

A sustainable society is one which lives with the values of planetism, and which has achieved sustainable prosperity. It is not a non-growth society-and it is a highly innovative society. The physical component of wealth is being conserved and the metaphysical component continues to grow massively. It lives within solar income, turns all its waste into food and behaves with zero net collateral damage to society and the environment. It is a communitarian democracy and is characterised by sustainable individualism. It innovates the necessary ways and wares; the innovations that help realise and maintain a sustainable society.

Many of the trends to create a sustainable society are already under way, but more needs to be done to consolidate these trends and realize a true sustainable society. The paradigm of planetism is emerging in the early 21st century. It is already informing government and business practices, personal and corporate values and ethics and it is shaping market demand for products and services. In particular our international culture is being shaped by planetist values, the values of the rapidly increasing global educated middle class. Innovators who wish to succeed can prosper through supplying ways and wares that grow interdependence and trust in relationships, democracy, sustainability, intercultural harmony, gender equality and security.

There are many mindset changes humanity will need to make to consolidate these global trends and these will include agreeing that all members of global society will need to contribute to global efforts to realise these outcomes, not just the rich nation states of the world. What is needed is win/win outcomes in international negotiation based on Hardin's prescription of 'mutual coercion mutually agreed upon': in such a world we all will win or we all will lose.

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We cannot work to create a future that we do not first imagine and we have not done enough imagining about what we should seek to accomplish. This could include a new literary genre that I called ecofiction and greater participation of culturally creative people in the envisioning of a sustainable society.

To finance the birth of a sustainable society we need new ways and wares to finance humanitarian investment that can operate in a borderless world, such as utilising income derived from the sale of financial instruments. In this way the rich can assist the poor irrespective of where both may live, irrespective of national governments and national boundaries. This would essentially involve the formation of a global privatized system of humanitarian investment.

By the year 2025 I believe we will know how to create a global sustainable society and we will have implemented the core international agreements to achieve it. By then planetism will inform global public opinion, dominate markets and ethics, and be the dominant paradigm in many parts of the planet. The challenge in the following twenty-five years will be to export this know-how to the rest of the planet to consolidate a sustainable society by the year 2050.

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Notes

1. Jackson's lecture at the 2010 Alfred Deakin Innovation Lectures – held in Melbourne, Australia – can be found at http://wheelercentre.com/videos/tag/deakins-2010.

References

Boulding, Kenneth E. (1966). *The economics of the coming Spaceship Earth*. In Henry Jarret (Ed.), *Environmental quality in a growing economy* (pp.3–14). Baltimore, UM: Johns Hopkins University Press.

Elkington, John. (1999). *Cannibals with Forks: The triple bottom line of 21st century business*. London: Capstone Publishing Limited.

Ellyard, Peter. (2008). *Designing 2050: Pathways to sustainable prosperity on spaceship earth*. Melbourne, Australia: TPNTXT.

Fuller, R. Buckminster. (1970). Education for comprehensivity. *Approaching the benign environment*. The Franklin Lectures. New York: University of Alabama Press. Collier Books.

Fuller, R. Buckminster. (1969). *Operating manual for spaceship earth*. Carbondale, IL: University of Southern Illinois Press.

Hardin, Garrett. (1968). The tragedy of the commons. *Science, 162*(3859), 1243-1248.

Hawken, Paul, Amory Lovins, & Hunter Lovins. (1999). *Natural capitalism : Creating the next industrial revolution*. Boston: Little Brown and Company.

Jackson, Tim. (2009). *Prosperity without growth: Economics for a finite Planet*. London: Earthscan.

McDonough, William. H, & Michael Braungart. (2002). *Cradle to cradle: Remaking the way we make things*. New York: North Point Press.

Spratt, David & Philip Sutton. (2008). *Climate code red: The case for emergency action*. Melbourne, Australia: Scribe.