

Outlooks for the 21st Century
Sustainability – Implications for Organisations

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Introduction

Determining an outlook for Sustainability in the 21st Century and what that might mean for organisations is a relatively simple task if all you want to do is scratch the surface. This would ensure that the line of reasoning follows a path not too dissimilar to the following –

“In the 1960’s people in the Industrialised world began to realise that their drive for technological improvement had a lagging negative effect. That effect was environmental degradation and species extinction. Despite concerns, the growth drive measured by the rather limited indicator of Gross Domestic Product (GDP), became ‘de rigueur’ as smaller nations began feeding the ravenous hunger of Western style (in particular US) consumption, and were swept up in the activity it generated. They simply climbed on board the ‘make more bandwagon’.

The GDP indicator ensured concerns about environmental disasters and deliberate destruction of native habitats would take a back seat, as the growth juggernaut munched its way through the earth’s finite resources. Pockets of resistance began to appear and in countries like Australia, the realisation of people power came not through the union movement, but through the late 70’s ‘Save the Whale’ campaign resulting in an almost total ban on whaling for food. This led to a similar challenge in 1982 when the Franklin River in Tasmania (1) was threatened by an industry push for a Hydro electric scheme and the collective prevented this from happening.

Around the world public awareness of ‘one-off events’ (such as thalidomide & dioxin created genetic mutations) (2), increased. Environmental damage continued as the industrialised world expanded its search for fuel for its industrial ovens and resource inputs for their products. By this time, industry groups had grown so powerful that few politicians could resist the financial donations for funding. Political funding was designed to buy the large corporations time and to ensure continued profits, for they believed that soon advances in technology would provide a cure to the damage created by this consumption mindset. Thankfully and as predicted by the Multinational Corporations’ CEO mantra, technology came to the rescue and the world lived happily ever after.”

Unfortunately for those who might agree with this simple description, there are ‘other voices’ whose interpretation of events may not seem quite as favourable.

In this paper we will discuss a number of the suggested definitions of ‘sustainability’ & ‘organisation’ and meet a ‘panel from the future’ that represent the many voices connected to the issue of sustainability and its implications for organisations in the 21st Century. The people on this panel have come together to celebrate the 100th anniversary of ‘Joni Mitchell Day’. A part of the ‘transcript’ of that gathering helps us to ‘remember’ the journey of sustainability and organisational development up to 2069. Any similarities to people yet to be born is purely co incidental!

What is sustainability?

The United Nations put the notion of ‘sustainability’ on a global stage when the UN Research Paper ‘Our Common Future’ (widely known as the Brundtland Report) defined what ‘sustainability’ meant -

“Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (3)

Over a decade later, this concept has been more fully developed by Brian Eddy who identifies that sustainability is an issue of human consumption of environmental resources -

“Sustainability is concerned with maintaining a balance of flow of goods and services across the human-environment boundary in such a way that resources are not depleted to a level in which the needs of future generations cannot be met and that outputs from the human sphere do not degrade these resources and environmental integrity” (4)

Both the Brundtland report and Brian Eddy’s more fleshed out definition fail to achieve the succinct perception of a songstress who decades earlier sang – “...you don’t know what you’ve got till it’s gone”. This is what lies at the heart of the issue of sustainability. Sooner or later, those things that we take for granted today will be gone and there will be no replacement available. Ironically, the SUV drivers may have the market cornered. As we continue to cut down forests, degrade wetlands, turn fertile soils into salt ridden wastes, create biodiversity extinction, fill our air with noxious fumes and rivers with toxic chemicals, the only vehicles likely to get us around will be ego nurturing tin cans with rugged all terrain tyres. Of course that presupposes there is enough oil to keep them running!

Phillip Sutton asks us to take one step back before we get into the ‘debate’ over sustainability by pointing out that “Sustainability is the ability to maintain something over time” and that when people talk about sustainability, they are really talking about ‘sustainable development’. Thus, “Sustainable development is the change processes in society and the economy that enables the achievement of sustainability and the effective pursuit of genuine progress”. Genuine progress is said to meet the gamut of human needs without trade-offs affecting people or nature (5).

That we’ve had to create a specific strategy to combat industrial development is a sorry indictment of those who would claim that technology holds the answer to all our ills. It is in fact the unfettered use of industrial created technology that has placed the world in the predicament it now faces. What is most disturbing about the degradation of the earth’s biosphere is that $\frac{3}{4}$ of the world’s population have to experience the negative effects caused by the other industrialised $\frac{1}{4}$.

Essentially what we have is two competing strategies plying for the hearts and the minds of the planet. The first is the approach that has been favoured by the industrialised nations – the ‘Consumption Strategy’. The second is the ‘Sustainability Strategy’.

Unfortunately only one of these strategies can win the day and the world has to choose. Either we accept that sustainability is the only way that the ENTIRE planet and all of its occupants can survive or we admit that a handful of the world’s population will destroy the viability of the planet for the vast majority, who even today, do not have access to nor enjoy the benefits from, what the consumption strategy provides. As Slaughter has already asked “What kind of world will the ‘having’ mode lead to?” (6)

Consumption proponents might be quick to highlight the ‘potential’ that developing technologies hold to enable manufacturing of ‘stuff’ to be simpler, cheaper and less wasteful. Hassa Mann, ex Mobil Oil executive and star Australian Rules football player said this about ‘potential’ – “I hate the word ‘potential’, potential is unused talent”(7). Although not said in direct relation to the sustainability ‘debate’ coming as it did during a speech to a sporting team, this somewhat prophetic statement suits this paper. Is today’s scientific talent that is being used in an attempt to further the consumption paradigm, going to waste as ‘potential’? Perhaps if used to further the issue of sustainability, much of the ‘talent’ would be realised?

Those in the consumption camp would be wise to heed the words of Clare W Graves, Professor of Psychology at Union College in the US – “Today’s solutions will be tomorrow’s problems”(8). Graves’ research led to the development of his ‘Bio-psycho-social’ model of adult human behaviour that identified the different ‘ways’ people think. These stages of thinking lead to certain beliefs about what is

deemed an ‘appropriate’ way to tackle an issue. What Graves’ research highlights is that these thinking processes become more complex allowing for greater possibilities when presented with challenges, but that each stage believes that it alone holds the key, that its particular approach to addressing the challenge is the only one suitable.

Developed further by two colleagues - Don Beck & Christopher Cowan, Graves’ model has become known as ‘Spiral Dynamics’ (9) and the stages identified by Graves, became known as ‘values’. So we now have thinking processes that represent shared ‘value’ constructs. In deference to Richard Dawkins’ ‘memes’ (10), Beck & Cowan coined the phrase vMemes, meaning ‘Values Memes’ to enable an easier understanding of the labels that define the various stages of thinking complexity. The clash between the ‘sustainability’ strategy and the ‘consumption’ strategy is a clash between differing vMemes.

Précised to a couple of points, sustainability deals with the needs of future generations, environmental integrity and consumption for human ends (in line with Sutton’s views) though reality for many suggests that we have but two choices – sustainability OR consumption.

What is an ‘Organisation’?

The term ‘organisation’ is almost a throwaway line, and for the most part, two definitions come to mind. One is likely to be the process of grouping together similar items. The other definition is likely to be a label for some form of entity like a company. The ‘authoritative’ definition in the Concise Oxford Dictionary (11) is that ‘organisation’ means ‘body or system’. We are not told body or system of ‘what’? For this paper I will say that an Organisation is a collective of people who ‘unite’ together under an agreed banner for an agreed desired outcome. The idea is that people with a desired outcome in mind, can form in such a way that their collective representation will provide them greater chances of achieving their desired outcome.

Management consultants will tell us that this definition is too simple to be useful as there is likely to be a series of uniting purposes rather than any one purpose. Fans of Abraham Maslow would point out the coming together, united for an agreed desired outcome, would go part of the way for the individual to achieve parts of their ‘self actualisation pyramid’ (12). Yet today, the McKinsey’s of the world and other similar corporate strategists peddling their wares emphasise the concept of ‘shared vision’ (13) as a means of ensuring company success. That they do so whilst arguably ignoring the complexity of variations in the human dynamic is no surprise. Graves’ theory states that ‘solutions’ proposed by one particular set of ‘values’ are unlikely to meet the full demands of the problem for all values in a system. Stuck fast within their restricted worldview, the inability of the majority of corporate strategists to assess a full system requirement leads to successive prescriptions of ‘silver-bullet’ like fixes (often repackaged ideas with ‘sexy’ new labels) to symptoms indicative of problems crying out for holistic solutions.

For the most part I believe that organisations fit into one of three categories – Representative, Regulatory and Productive. ‘Representative’ bodies aim to present a particular view. The non government and non profit groups, community organisations and their ilk exist to influence the thinking of the community to best suits their needs. ‘Regulatory’ bodies are those that set and enforce laws such as Governments, Police and army, Tax departments, courts and legal groups, and environmental protection agencies. ‘Productive’ bodies aim to produce something for the purpose of profit. Arguably some church agencies could fit into this group but typically it will be an industry or company that provide a product or service for sale. Within these bodies it is possible that individuals may share their organisations view on broad issues but may hold diverse views on aspects of what their organisation does or the way that it operates.

Regardless of their function, size or type, almost all organisations struggle with the same problem. Few display the capacity to understand how what they do fits within the whole system in which they operate,

how they influence and are influenced by that system, how individuals work within their organisation and at the same time within society and how seemingly simple problems, rarely have simple solutions.

Ken Wilber refers to the concept of Holons (14) – something that is simultaneously a self-contained thing, whilst also being a component of something larger. This could be the key to the sustainability challenge. Sustainability is not the responsibility of organisations alone. It is also the shared responsibility of those individuals who are part of those organisations.

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Moderator: Perhaps Louise Ellen Mitchell, I can start with you. Would you care to quickly explain the significance of ‘Joni Mitchell Day’?

LEM: Happy to. Joni was my great great grandmother and over 100 years ago she was what you would call a ‘folk singer’. Back then though she would have been thought of as a hard-edged artist whose songs were classified by many as subversive. Exactly 100 years ago in 1969, she released a song called Big Yellow Taxi. There are many people who say that song is the first instance of a real awakening by mainstream people in the old ‘western world’ of the limitations of the industrialised approach to development.

Moderator: We should point out that songs weren’t made available in the same way they are today. Each artist released a ‘record’, a crude form of plastic disc with rudimentary scratching on it that when played through a machine called a ‘turntable’, emitted a sound wave. We actually have a sound bite of that very song, courtesy of the Joni Mitchell Institute

Music Plays –

They took all the trees
And put them in a tree museum
And they charged all the people
A dollar and a half just to see 'em
Don't it always seem to go
That you don't know what you've got
Till it's gone
They paved paradise
And put up a parking lot (15)

Moderator: Lets bring in a member of the World People’s Union and a leading Macro Historian, John Riggs. John can you give us an overview of how the human species managed to get itself into the mess that it did and why the words of Joni Mitchell’s song were the first of many bright lights of the past century?

JR Thank you moderator. I might start by saying the significance of the Mitchell song is that most other singers of her era were concerned with a war involving a number of nations in the South East Asia region. For Mitchell to be able to see that the war on the environment was going to be more damaging displayed amazing insight.

LEM: She would be delighted to hear that John, thank you

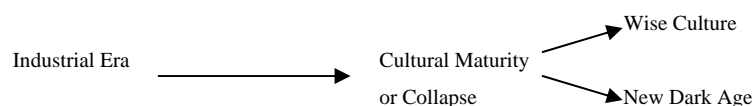
JR: “Those who do not learn from history are doomed to repeat it”. So said George Santayana (16). Throughout the centuries, the human species has displayed examples of its own ignorance and indeed arrogance. One of the first great civilisations of the world was a city called Rome.

By most standards it was a highly civilised with many of the trappings we have today, minus of course members of Aceh Imbrahim's group.

(Lots of Laughter) But for all of its success and 'civilised' advancement, it failed to learn from outside of its own walls. Falsely lulled into self-delusion through years of crude military campaigns that kept it free from attack whilst ensuring it could not learn new ways, Rome slowly deteriorated and succumbed to a wave of more effective means of human gathering. The same thing happened to the great Chinese dynasties and Japanese Shogun Temples. Hundreds of years later, a similar fate befell the great Arabian tribes. Their secure belief in their own superiority also meant that they could not learn from outside of their own tribes and over many decades, fell victim to the advancing British hordes from England, who brought with them a new way, and who by the sword and deluded self righteousness, slay those who would not submit to it. And that brings us up to the next wave commencing around the 1700's.

Eventually the Britons too would meet their match. Establishing outposts of colonies, they attempted to rule from afar, ignoring the needs of new lands that had been settled whilst simultaneously attempting to wipe from the face of the earth, the native peoples who had inhabited it. In particular the colonies around the seventeen to eighteen hundreds failed to learn the harsh lessons of sharing and unity. It could be argued that the new settlers to America, Australia, New Zealand and Canada arrived in lands often so abundant in vegetation, space and wildlife, they were like kids let loose in a lolly shop. In almost all cases, the settlers were in effect a plague set free in the land and one that would see the deaths of the greater part of natural inhabitants that previously existed. The Native Americans for one, understood all too quickly, the destructive approach of the 'white man' characterised by excessive consumption, destruction and waste. This 'rise and fall' of what became known as the 'Industrialised Era' was summed up in the following way and though the 'catastrophe period' appeared sooner and was averted sooner, it provides a good idea of what some of the more aware thinkers of the day identified (17).

Century	17th	18th	19th	20th	21st	22nd
Period & Dynamic	Growth & Expansion		High Industrialism	Decline & Uncertainty	'Catastrophe' Period	New System State



Despite warning signals, their success and one time status as the most affluent peoples on earth, the Industrialised (in particular western) world were destined to repeat the lessons of history. Like their Roman counterparts 2000 years earlier, a closed mindset and unwillingness to learn from alternative views, along with a belief that military superiority ensured their longevity, lulled their leadership leading to tragic consequences. Due to early successes the consumption strategy persisted across almost every industrialised nation until the 2015-2020 world agreement on sustainability even though the actual benefits of the strategy had outgrown its usefulness by some twenty to thirty years.

Moderator: Given all of the reliance on technology despite its obvious shortcomings, it's fascinating to think that those lyrics were considered subversive or even radical in their day. Louise you tell an interesting story of where Joni apparently discovered a source of inspiration for much of her music

AD: Yeah drugs. Lets not forget that Mitchell was part of a group whose sole aim was to undermine the democratically elected government of the day and these so called 'folk songs' were in fact nothing more than an anthem call for subversive elements to cause mayhem around the world.

Moderator: Ah yes thank you Andrew Day, president of the Streisand Collective, we'll come to you in just a second. Louise perhaps if you could continue?

LEM: Yes of course. And thank **you** Andrew. Apparently during one of her tours around what was then called the United States of America, Joni met up with a group of native American Indians fighting for the right to stay on a parcel of land they'd been given by the government of the day. Originally it was a virtual waste-land of barely grassed plains and rocky outcrops, but with their understanding of earth farming, these people had turned a barren area of land into a rich fertile farmland (18). Some of the large corporations at the time decided they wanted to have the land for themselves and began lobbying the government using financial inducements, to have these people kicked off their land.

AD: That's rubbish.

LEM: No it's not Andrew. 100 years ago it was common for large corporations to use bribes and financial pressure to induce and even force governments to give them what they wanted. It continued to get worse until the 2015-2020 world agreement on sustainability. Anyway, Joni was apparently given a paper book of sayings and thoughts from Native American peoples. Two of them really ignited her understanding.

A Large reflecto panel displays the following -

"When we Indians kill meat, we eat it all up. When we dig roots, we make little holes. When we build houses, we make little holes. When we burn grass for grasshoppers, we don't ruin things. We shake down acorns and pine nuts. We don't chop down the trees. We only use dead wood. But the white people plough up the ground, pull down the trees, kill everything. ... the White people pay no attention. ...How can the spirit of the earth like the White man? ... everywhere the White man has touched it, it is sore."
Wintu Woman, 19th Century (19)

And -

"Only after the last tree has been felled; Only after the last river has been poisoned; Only after the last fish has been caught; Only then will you find that money cannot be eaten"
Attributed to a Sioux warrior. (20)

Moderator: Andrew Day of the Streisand Collective, you wanted to add something?

AD: Yes I did. The fact of the matter is that the process of offering inducements to government was quite a normal practise around the world. In fact it has been shown that this practise reduced taxes overall because of the vast sums of money being paid under the table to governments and through government sponsored agreements.

Moderator: I thought that the governments used to give tax breaks to companies for setting up businesses, essentially handing back even more public money than the company had provided in the first place whilst reducing the assets once owned by the people the government represented?

AD: That may have been the case in some circumstances but for the most part, industry and governments enjoyed a working relationship that benefited millions of people around the world.

Moderator: Roxanne Hart of Soul-Sisters, you wanted to add something?

RH: Thanks moderator. Andrew Day you know full well that one of the main reasons we ended up in the mess leading up to the 2015-2020 agreement was as a result of the avarice and deceit of large corporations using their financial muscle to benefit the few. Your figures are accurate but you are skewing them to hide the truth. Millions of people around the world benefited from the type of relationships that existed back then BUT, and here's the problem, the planet consisted of up to seven

billion people. So the minority enjoyed the benefits whilst the vast majority, almost 99% of the world's population, paid the penalty. If it wasn't for the successful global lawsuit lodged in the world court against nations failing to ratify the Kyoto Treaty and then continuing to pollute the world's atmosphere, (21) the increasing strength of the European Union (22) and their push for EBM (23) and the backlash against corporations refusing to pay taxes to help build social infrastructure, corporations might still be riding rough shod over governments. It was Elise Boulding's 'World Without Weapons' workshops in the eighties (24) and Hazel Henderson drawing attention to the trillions of dollars zoomed electronically around the world producing nothing what so ever (25), that challenged the dominant mindset and suggested alternatives.

Moderator: That is a fair point to raise isn't it Andrew Day? Corporate greed provided benefits to people at the very top whilst the everyday person generating the work was by comparison treated as virtual slave labour.

AD: No I don't think it is fair. You seem to forget that it was through the development of science and technology that many of today's benefits eventuated. I don't think you can just dismiss out of hand, the gains that our members provided. The concept of EBM was a natural step for businesses to take. The end result being that they managed to reduce their costs of construction of their goods as well as create closed cycle loops wherein their waste would become the supply inputs for some other business.

Roxanne Hart: Yes that was the eventual case but there was no rush to embrace the concept as Andrew seems to be inferring. Organisations like energy utility companies and automotive manufacturers used existing legal process to fight some of the requirements. I recall reading about legal manoeuvring in the United States in the early years of the 21st Century, by power supply and car companies who attempted to sue the state of California for restrictive state legislation. These companies were supported by the Federal Court of the United States who claimed overriding jurisdiction on national grounds (26). Laws designed to reduce carbon emissions that were due to be enacted in 1999 were deferred for 3 years, then again for another two years. Thankfully a new government was elected federally and the automotive and energy companies recognised that they were not going to win their case. But all along their intention was to claim the right to keep polluting the air for as long as possible and to maintain company profits.

AD: I agree there have been cases where companies were unwilling to embrace sustainability and unfortunately we all have to live with the consequences of that. There are just as many, if not more examples of companies who embraced the notion of sustainability and their social responsibilities. All of our members have as part of their core mission, embraced the requirement for Environmentally Benign Manufacture and constantly seek ways to produce more from less and ensure that at the end of the useable life of the product, as much of the materials as possible could be recycled or turned into something else. Interface Inc (27), the largest carpet manufacturer in the world today led the United States industry into proving the economic and environmental value of closed loop processes (28).

Moderator: Can you give examples of when that process really came to be?

AD: Initially EBM was restricted to the cottage industry – small mum and dad shops based on a similar model to the local collective units we see today. In order to make enough money to be 'self sustaining' these small businesses assessed how they made their products seeking to do more with less. They designed products that used less components in manufacture and lasted longer. After a while this way of doing things moved into bigger firms.

Roxanne Hart: Yes and the reason for that was due to the consulting firms running out of ideas. They'd told their clients that TQM (29) was the answer, then it was JIT, (30) then it was M&A (31) even though the results were not successful in well over half of all cases (32). Then CRM (33) was the next big thing and then it was down sizing and right sizing and flexible workforces and little of it stuck. Eventually some of the bigger firms began to look at ways of reducing costs that didn't mean sacking

workers. The idea of a ‘knowledge economy’ in the early part of the century was a recognition that people, not products, made a company. That led to the idea of reducing the costs of manufacture through reducing waste and assessing design principles to align them with smarter and more effective use of materials. Arguably though, it was the about face by senior management around 2005 away from ‘command and control’ management style towards a collaborative model that meant a gradual acceptance that they just didn’t have all of the answers and that they could find them if they were willing to listen to their staff and engage those staff in sharing ideas.

AD: If I can finish what I was saying? EBM was actually around well before the end of the last century, some twenty or thirty years in fact. It may surprise Roxanne but we have a quote that all members agree the desired mindset – “The economy is a wholly owned subsidiary of the environment. All economic activity is dependant on that environment with its underlying resource base. When the environment is finally forced to file under Chapter 11 (34) because its resource base has been polluted dissipated and irretrievably compromised, then the economy goes with it” (35).

Moderator: Touching. What did it actually mean for organisations that embraced the EBM concept? Did it result in any significant changes?

AD: Most certainly. A little island nation called Japan that was reacquired in 2014 by China after its economy failed to recover from the banking crisis of the 1990’s was arguably the first to really use EBM in industry. Being a small nation with few natural resources of their own, they used to import raw materials and turn them into products, a concept referred to as ‘value adding’.

Moderator: But not value adding as we know it today?

AD: No, no. They made ‘stuff’ for people to buy, mostly electronics and those old style cars you see in visusopes, though I am told that in the barren wastes of the old United States, they are still used as a mode of transport.

Moderator: For those younger viewers not yet aware of the difference, ‘value adding’ today deals with enriching people’s lives spiritually, emotionally and intellectually which we take for granted. But prior to the 2015-2020 world agreement, ‘value added’ was solely to do with a primitive notion based on quantitative measures. By that I mean most people sought to own and surround themselves with gadgets. It is what the Wilberian Philosophers of today refer to as the ‘flatlander’(36) view of the world where quantity, not quality was the main driver for many in the industrialised world. Please continue.

AD: Thank you moderator. So Japan began to look at the design principles to address consumption of resources in industry (37). This gave them a competitive edge in the production process over more wasteful international competitors. At about the same time, parts of Europe began looking at EBM though admittedly being more a social drive than through industry, they used legislation to enforce standards with Government owned utilities being the first to change (38). There were individuals like Buckminster Fuller who identified a link between energy consumption and birth rates (39) but it wasn’t until organisations like the Rocky Mountain Institute (40) and the Alternative Technology Association (41) that looked at more effective ways to use energy opened in the early 1980’s and Greenpeace (42) who utilised old style media like television, newspapers and radio to gain coverage for industry practises that were damaging the environment that, companies in the industrialised world began to pay attention. This eventually led to the development of the ISO 14000 framework (43), an early precursor to the 2015-2020 world agreement. The ISO 14000 standard addressed the needs of organisations to meet their social responsibilities through a series of environmental management practises. Share trading indicators like the Dow Jones ‘Ethical Investment Index’ (44) used this standard to identify companies that were taking a pro-active approach to responsible and environmentally acceptable manufacturing and created increasing value for their stakeholders. This blended the public desire for income and profit with a push for

sustainable development and as the environmental companies continued to outperform their traditional competitors, the thinking of traditional companies began to change.

Moderator: I'd like to bring Roxanne Hart from Soul-Sisters back into the discussion as the development of global awareness in the late twentieth century and early part of the twenty first century is your specialty I believe?

RH: Yes thank you moderator. Andrew Day I acknowledge that your members have come a long way in the past 50 years but in the latter part of the past century the numbers of environmental disasters were increasing, at least that is, the public awareness of them began to increase as access to media and an outdated form of global communication called the Internet enabled individuals to 'spread the word'. It was the increasing growth of local action groups looking to reclaim damaged streams, or urge their councils to introduce recycling of plastics and paper, as well as the political influence of their members that really gave rise to what became known as the 'environmental movement'.

Yet even the Exxon Valdez oil tanker disaster in Prince William Sound in 1989 (45) didn't stop Exxon Mobil from using its financial muscle about ten years later to convince the Federal USA government to remove their chief scientist (46) on the United Nations Intergovernmental Panel on Climate Change (47). The IPCC was looking at the global problem that CO2 emissions caused and Exxon sabotaged efforts aimed at addressing the problem. Another petroleum firm called Royal Dutch Shell colluded in deforestation of a jungle in Nigeria (48) along with assisting local authorities to murder native peoples that protested. Then there was the loss of almost all rainforest in Australia through land clearing along with salt degradation of soils as the water table rose through irrigation and removal of trees (49), ice mining by the Israelis that destroyed parts of the arctic shelf, the China Poisoning syndrome that resulted after they dammed the three rivers gorge for electricity but left toxic chemical and radiation residues in the towns that were flooded, rendering the water useless.

Moderator: I'm sure you have hundreds more examples, but can you talk about when the 'shift' in public awareness really began to take hold?

RH: Yes lots of other examples. The GM crop development is one that caused untold damage for millions of people along with the toxic chemical build up caused by years of pesticide spraying. The public shift could be seen through music and film formats, though it was a place called 'Hollywood' (50), not 'Mollywood' (51) that generated much of the west's mainstream and rather low brow mental fodder. Public rallies against institutions that were perceived to be environmentally damaging led to legislative pressures in most modern nations, aimed at curbing the Industry players and making them accountable for their actions. Such was the change that people could buy and sell shares in environmentally friendly companies. It became good business sense to ensure your business operated on sound environmental principles.

Moderator: And was that the difference?

RH: A big difference but not the only driver. There were significant changes in the way nation states, especially those whose control over their country was usurped by multinational corporations, fought to take control back. In the first instance what became known as a 'usage tax' was introduced. Rather than taxation on profits, which were easily sidestepped by large corporations, companies were taxed on what they used. The greater their resource usage, the greater their tax bill. The model in Australia introduced around 2008 was the G-TOPE method (52) that taxed a company based on calculations between its gross turnover and how many employees it had. It was arguably the first system in the world that combined a company's right to profit with its social obligation to support the communities where it operated. This created a massive mind-shift on the part of big business. Their initial backlash ebbed when they discovered that they could still maximise profits whilst also creating more customers.

Moderator: Well I'm sure that everyone realises that this type of tax is quite normal today

RH: Another of the taxes was the Tobin Tax (53), a miniscule transactions tax on currency trades that was used to fund hospitals, research and importantly, environmental improvements in every part of the world, especially the developing nations. This tax had little impact on the flow of speculative currency movements but the funds raised quickly amounted to billions of dollars annually.

Moderator: John Riggs you have something to add?

JR: Yes. Another driver was the US led invasion of Iraq in 2003 under the false pretext of locating so called weapons of mass destruction. The EU had only been established a few years but the majority of members were against the invasion at the time. The end result was a collapse of the NATO alliance (54) after it became clear to the European NATO members that the sole purpose of the US invasion was for it to be able to maintain its consumption driven strategy by gaining access to further supplies of oil. You'll remember that EBM was being led by governments inside the EU and the US' intent to maintain resource consumption proved to be a tipping point. It came down to an ideology the EU members of NATO could no longer support and they withdrew from the partnership. The US were left out on their own and as their government myopia narrowed ever tighter, their paranoid attempts to control their own population became more intense. This led to the use of Battlefield Nuclear Weapons by that government against its own people.

Moderator: Roxanne there's another piece of the puzzle isn't there?

RH: The final piece of the challenge was getting industrialised nations, and in particular the senior management of multinationals to begin to think about the impact of the decisions they made. Typically most managers planned at most, three years out and often looked as little as three months ahead. It was all rather embarrassing for allegedly intelligent (predominantly male) people to think that way. In order to get them to think more critically about their company operations and future impact, some countries also introduced the 'Future Generation Penalty Clause' (55). What the law did was make the manager's children responsible for the environmental damage caused by their parent's company. In effect, the 'legacy' people left behind could no longer be considered in just material terms of housing or money. Children were going to be made to scrub rivers and plant trees and remove toxic wastes all as a result of poor decisions made by their parents. This brought the sustainability issue to the fore of the very people with the power to make an immediate and significant difference and was likened to war crimes against the environment.

Moderator: As I understand it, only one family in the world had their children penalised?

RH: That's right, a once powerful group known as the Shrub family in the US. The law still exists today but we don't expect to see it used again. As we all seem to be selecting a few inspirational words, I have a recording of a song that picked up where Joni Mitchell's song left off, by an artist called Julian Lennon. Our archives don't say much but there are some obscure references to his father John. Apparently during the 'crisis of the trident' most of the archive information held at the world famous OKO Gallery was destroyed in a mysterious fire. Anyway, this song by Lennon the younger, marked a crucial stage in the sustainability issue in the latter part of the twentieth century making explicit references to the havoc our ancestors were wreaking on the environment at the time –

Song Plays -

We are a rock revolving around a golden sun
We are a billion children rolled into one
So when I hear about the hole in the sky
Salt water wells in my eye

We climb the highest mountain
We make the desserts bloom
We're so ingenious we can walk on the moon
But when I hear of how the forests have died
Salt water wells in my eyes. (56)

AD: Surely if it was to have an impact, it must have been embraced by the greater population? I've never heard of it.

Moderator: Bit modern perhaps? You represent a dwindling collection of major corporations and interestingly your organisation derived its name from someone in the music industry as well, didn't it?

AD: That's right, a superstar named Barbra Streisand.

Moderator: Why Streisand in particular?

AD: One of her songs struck a particular chord with us

Moderator: Oh yes, and which one was that?

AD: 'The Way We Were' (57)

Moderator: Mmm. Probably a good time to bring in Aceh Ibrahim. Aceh you represent one of the globes leading developmental lobby groups. Can you tell us a little bit about what your group does?

AI: Certainly. Most people know that 27% of the world's population perished as a result of the environmental catastrophe of 2008. Three factors combined to create this sorry stage in human history – a world wide famine directly attributed to the poisoning of fresh water supply by radiation contamination, following the United States' attempt to control its own population through the use of 'battlefield nuclear weapons'. The second was the virus epidemic that started around 2002 in China and was not taken seriously until after the Olympic Games in Athens in 2004. 11 countries that competed against athletes from China, Canada, Singapore and Indonesia contracted the virus leading to 40% of their populations being infected. The final factor was a sudden jump in Alzheimer related illnesses around the world, later attributed to Genetically Modified foods and the chemical residues in the food chain. These are the three factors that Roxanne referred to as the 'crisis of the trident'.

As a result, the world's population plummeted and few people were available to do active work. Those still healthy had to spend the majority of their time caring for sick family members. Our organisation, Artificial Implementation, provided labour to meet the essential needs.

Moderator: And being essentially non-organic life forms your members didn't suffer from the effects of these three factors did they?

AI: That's right. Initially we operated as simple monitoring units in public utilities and met the immediate employment needs up until 2012 when the effects of the China virus had reduced and new sources of organic foods from an island called Tasmania began to enable a more habitable environment to re establish. The effects of the radiation poisoning of water supplies is still being felt and the old USA land mass is virtually abandoned. Today our organisation exists to ensure that future planning considers not only the needs of organic species but the needs of non-organic species as well. We've evolved rather quickly since then.

Moderator: Joshua White I'm wondering if you can provide a summary of recent history?

JW: We've discussed the shift in the 1700's from agrarian economics to the Industrialised notion that ultimately led to the 'crisis of the trident' and its impact on the population and we've only touched on the 2015-2020 world agreement. This agreement gained momentum from a successful law suit of Kyoto signatories against non signatories. The suit allowed Kyoto signatories to place a 20% tax on imports from leading CO2 polluters such as the US and Australia. This had a devastating effect on industries in those countries and highlighted that one country cannot expect another to deal with its wastes. Unfortunately too few industry players embraced the EBM and sustainability message, and the environmental health of the planet had continued to get worse. The challenge in the world court changed all of that.

NGOs whose focus was on sustainability grew in prominence, counteracting the western 'consumption and waste' worldview. Rising sea levels flooded island nations causing a displacement of millions of people and a growing political movement began to take over the traditional halls of power. This led to the various taxation changes and the 'Future Generations Penalty' saw many behind the scene deals being done by Industry players. To avoid prosecution they agreed to fund significant clean up efforts leading to a further shift in balance of power toward sustainability organisations.

The rise in sustainability led to a dramatic drop in weapons production in all countries but a handful, most notably the USA whose subsequent use of battle-field nuclear weapons poisoned their water supplies and the world's atmosphere. This put the US out on a limb in world affairs and they quickly became labelled a rogue state, no longer influential on a world stage.

The clean up of rivers is taking some time and there is lots of work to be done. The initial challenge by Private water companies claiming 'ownership' of water has subsided. Improvements in desalination, irrigation techniques and farming methods also jumped. The population decrease in the world coincided with a drop in the number of cattle, sheep and pork and the world's population (out of necessity) began to embrace a more vegetarian diet, decreasing pressure on world food production with the rediscovery of small communal market gardens for fruit and vegetables.

The development of the World People's Union that now hears cases based on what is best for everyone concerned and tries to achieve multiple level outcomes uses the integral framework (58) based on the late Ken Wilber's model to boost the level of understanding that exists. We also know that the majority of problems the world faced was due to clashes in 'values' as identified by Graves' work. These are two critical steps to making the world habitable for many especially as the majority of the world's population is non-western, and it was vital that these people gain a significant say in the way the world operated.

We have a way to go before the air quality, food availability and levels of comfort reach acceptable levels. It is hoped that at last we have learned our lessons from the past...

Recent Changes in Organisational Influence and Strategy

Our 'panel' has discussed the rise of the 'Industrial Revolution' where a shift from agrarian economics and bartering, changed to factory led economics and currency.

The protests against 'globalisation' during the WTO meetings (59) in 2000 summed up the growing feeling of disconnect and personal control that many people felt the process of globalisation represented. Watching massive profits being generated and CEOs receiving 'excessive' salaries and rewards whilst personally experiencing dwindling employment opportunities and actual wage decreases along with growing concerns over environmental damage, people and groups who may otherwise not have anything in common joined together on the streets of Seattle to register their 'protest'. Originally dismissed by mainstream media and senior government officials, the protest wave spread around the world until it was

finally accepted by many of the 'power brokers' in industry that perhaps major corporations were not held in the highest of regard by everyone in the world and needed to change their approach.

Growth in environmental NGOs was not fully appreciated until a major shift in political representation enabled the 'green movement' to gain a legitimate voice in legislative areas around the world. The push for 'carbon credits' was the first global initiative that truly addressed a shared understanding of the CO₂ problem (60) driven almost solely in the initial stages through the work of NGOs studying the effects of global warming. Iceland was the first country to move to total 'renewables only' electricity supply (61) and their legislative controls reflect that society's expectation for companies operating within it. Other countries most notably in the EU are looking at the potential and organisations like GENI (62) are attempting to create a united worldwide energy grid.

The changes in strategy see an embracing of EBM and the Avoid, Reuse, Reduce and Recycle method of consumption, a rise in local community strength and an increase in environmental political power, though the dominant consumption paradigm still holds sway. The theme nowadays sounds more like 'Think local, act global'.

Summary

Around the world we are seeing increasing expectations for environmentally benign manufacturing, 'take back' legislation rather than disposal of waste and a push for sustainable development. We will see assorted approaches to sustainability from the varying types of organisations. The 'Representative' bodies like NGO's and in particular local community groups will become better organised and wield more political 'muscle' whilst the larger bodies like the UN and NATO may push for a redefinition of their meaning and even question the value of their existence.

'Regulatory' groups like governments will address the needs of the environment for their local communities and the wider 'world' if they can break the shackle to 'growth at all cost' industry 'production' groups. 'Production' organisations will come under increasing public pressure to improve manufacturing processes, however they will also face a need to meet demands of the current 'market driven' profit orientation. For developing nations, the choice will be implementing sustainable practises using expensive technology or slower but cheaper people orientated approaches.

Sustainability will have a major impact on all types of organisations in the 21st century. Dramatic changes will come through legislative controls if 'Producers' are unwilling to adapt to manufacturing processes deemed more environmentally sustainable, particularly if further environmental damaging events occur. If multinationals fail to 'pay their dues' through shifting profits overseas and out of the hands of the nations reliant on tax to fulfil social obligations, the Tobin tax, GTOPE or similar models will come into play as governments address revenue decreases and community groups grow hostile.

Sustainable development reflects (as Graves' model predicted) the current clashes between differing values around the world (Producer/Regulator/Representative) and Wilber's Integral model may help expand our awareness of the differences in perspectives. What we hope is that the changes do not come too late to address the clear damage already done.

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11. The Australian Concise Oxford Dictionary 1981, Oxford University Press
12. Maslow, Abraham. Circa 1960 ‘*Human Hierarchy of Needs*’
13. For more information about the importance of shared vision, see www.mckinsey.com.au
14. Wilber, Ken. 1996, ‘*A Brief History of Everything*’. Shambhala
15. Joni Mitchell ‘*Big Yellow Taxi*’ 1969 Siquomb Publishing (BMI Records)
16. Attributed to George Santayana (1863-1952). For more details see <http://www.ariga.com/frosties/georgesantanyana.shtml>
17. See Reference 4. Periods of Macro History, taken from Chapter 7
18. In the Native American legend of the 4 Tribes, the white faces were given control of fire, the red faces were given control of the soil, the black faces were given control of water and the yellow faces were given control of the air.
19. <http://www.angelfire.com/md/elanmichaels/naquotations.html>
20. This saying has been attributed to many people though the original is believed to be Iroquois native.
21. Kyoto Treaty 2001
22. The European Union was formed in 2000 when 16 European nations joined under a collective banner and effectively removed existing geographic national borders for peoples within those countries, aligned many of their legal structures and business practises and introduced a single currency unit, the ‘Euro’.
23. Environmentally Benign Manufacturing is a concept where the whole of life issue of a product is considered within its design, manufacture, use and disposal with the aim to ensure that the product has little or no negative impact on the environment, thus ‘benign’.
24. <http://www.colorado.edu/conflict/peace/example/boul6572.htm> provides a very quick overview of the process. Viewed 19th May 03
25. Henderson, Hazel 1986. ‘Building a Win-Win World’ Barrett Koehler
26. Reported in The Age, 2nd of May, 2003, Business Section
27. Interface Inc – www.ifinc.com
28. Closed Loop manufacturing uses wastes at the end of the production cycle and ‘life’ cycle as the inputs for the commencement of the new manufacturing process. This system has substantial benefits over the linear processing model that discards waste from the processing and does not recycle any of the product at the end of its life cycle.

29. Total Quality Management – a process designed to empower all steps in a production chain to halt manufacture if an error was discovered and whilst useful, the process usually only assessed outputs, not inputs
30. Just In Time inventory management required businesses to order product from their suppliers just prior to needing them. Unfortunately the alluded to cost savings through less inventory sitting on shelves rarely eventuated as suppliers increased their own prices and the cost of urgent transportation climbed. Software designed to track reducing supplies was clumsy and reliant on an accurate level of sales and orders, but ignored staffing levels and competitor activity.
31. Mergers and Acquisitions. The process where by one company either takes over another company or attempt to merge with another company in the hope of forming more cost effective business ‘synergies’ by sacking administration, IT and support staff.
32. KPMG Transaction Services report into Mergers and Acquisitions found that in 1999 just 17% of mergers were ‘positive’ and by 2000-01 it was still well less than half (34%)
33. Customer Relationship Management. Another software ‘solution’ touted as being THE saviour. Unfortunately most companies’ application of the concept was little more than financial modelling of existing portfolios and little to do with the actual customer. One company in Australia, Sensis Pty Ltd allegedly spent over \$70 million on a software programme called Siebel following an initial quote of around \$10 Million. Sensis Pty Ltd had an annual turnover that would have ranked it in the top 30 of all Australian companies had it not been a wholly owned subsidiary of Australia’s largest telecommunications company, Telstra. Staff reported that 4 years after its implementation it still didn’t work effectively. Customer claims against the company for errors in advertising products supplied exceeded \$23 million in the 3rd year of implementation, the highest on record and attributable to an inability of software programmes to read data effectively. In the 2 years after implementation, staff turn-over in the company varied between 37 and 43%. Another CRM ‘solution’ called Peoplesoft was introduced at RMIT and failed to achieve the results with a reported \$10 million loss to the college, along with incidents of increased stress for staff who had to deal with the CRM implementation failure.
34. ‘Chapter 11’ is a bankruptcy protection clause in the United States that exists to allow a firm to retain some control over the way its assets might be seized or sold in order to pay creditors
35. United States Senator G. Nelson, Earth Day 1970.
36. See reference 14
37. International Technology Research Institute, United States Department of Energy, WTEC Panel report on Environmentally Benign Manufacturing, April 2001
38. See Reference 37
39. Buckminster Fuller was an inventor, engineer, mathematician and poet and renown for his ideas about world sustainability and unity. See www.bfi.org for more information.
40. www.rmi.org
41. Alternative Technology Association in Australia – www.ata.org.au
42. www.greenpeace.org
43. International Standards Organisation
44. Dow Jones Sustainability Index - <http://www.sustainability-index.com/sustainability/corporate.html> viewed 2nd June 03
45. Exxon Valdez Oil spill occurred on 24th of March 1989 and led to changes into both the path of Oil Tankers through the sound and that all tankers would have to be ‘double hulled’.
46. Report on the Greenpeace International website - http://www.dontbuyexxonmobil.org/background?text_id=sabotage
47. United Nations IPCC panel was one of the information research units assisting the development of what became known as the Kyoto Treaty
48. http://www.thirdworldtraveler.com/Boycotts/Flames_Shell.html
49. Assorted CSIRO scientific research papers, an example of which can be located at - <http://www.clw.csiro.au/publications/clw-link/clwlink-10.pdf>
50. Hollywood is the centre of major movie film makers in the United States

51. 'Mollywood' is the central location of India's prolific film making industry, once located in Bombay ('Bollywood') recently moved to Mumbai.
52. Barber, Marcus P. 2001 'The GTOPE Taxation Model'. Draft Paper – '*A Blueprint to Advance Australia Collectively*'
53. The Tobin Tax was suggested by James Tobin PhD in 1978. For information see the link <http://www.canadiansocialresearch.net/tobin.htm>
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56. Julian Lennon '*Salt Water*' 1991 Virgin Records
57. Barbra Streisand 1973 '*The way we were*' Soundtrack of Columbia Tri-Star film of the same name
58. See reference 14
59. A World Trade Centre protest file can be located www.disinfo.com
60. Carbon Credits see http://www.emagazine.com/january-february_2001/0101curr_carbon.html
61. <http://news.bbc.co.uk/1/hi/sci/tech/1727312.stm>
62. See www.geni.org for further information not only about Iceland's efforts but also of the push to connect the world's electricity supplies into one giant grid.