

Pulling Us Back From The Brink – Economics? Science? Religion?

Humanity at the Brink: It's a Question of Values



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Jeanette Fitzsimons, a well known New Zealand politician and environmentalist, was the co-leader of the Green Party of Aotearoa from 1995 to 2009, and a Member of Parliament from 1996 to 2010. She was the Green Party spokesperson on Climate Change, Energy, Finance & Revenue, Genetic Engineering, Research, Science & Technology, Sustainable Economics, Transport and Treaty Issues (Associate). In 2007 the NZ Herald chose Jeanette as New Zealand's politician of the year and in 2008 respondents to a ONE News poll voted her the most trustworthy political party leader in New Zealand. Then in 2010, she was awarded a companion of the New Zealand Order of Merit. Jeanette and her husband now manage an organic farm in the Kauaeranga Valley west of Thames at the base of the Coromandel Peninsula.

We are in a late model, powerful motor vehicle, traveling at 100 km an hour. It's an exciting ride – we are loving the sense of power, speed and adventure, and the comfort of this luxury vehicle. We are racing a number of other, similar vehicles, all trying to go faster to get there first. There are other people, without motor vehicles, sitting in the dust we have created, some with begging bowls. They are not really on our radar.

About a km ahead – a distance we will cover in about 40 seconds – is a cliff. It's the edge of an abyss so deep we don't know what is at the bottom or whether we could survive the fall, but we suspect not. For the last hour we've been having a huge argument about whether to change down from fifth gear to fourth. The driver has been saying that we can't afford to slip behind and lose the race. Some of the passengers have been saying a race over a cliff is not a sensible strategy, but no-one is really listening.

It is too late to turn around – you would crash trying to do a tight U-turn at that speed. No-one is suggesting slamming on the brakes as that would be uncomfortable and certainly put us out of the race. In the time it has taken me to say this much, we are over the cliff.

Well, you can only take analogies so far, and this one is starting to creak a little, but you get my drift that there is a certain urgency here.

We are in the grip of six interacting crises, all of our own making, which are propelling us, as a species, towards the brink. Three of them have been well understood and well described for forty years. The others are inevitable consequences of the first.

First, the resource crisis, well described by many writers but notably by the Club of Rome in 1971. (1) Our civilisation and our way of life is so dependent on oil it is hard to imagine life without it, yet the world was circumnavigated, Shakespeare wrote all his plays, Bach all his musical works, and various cultures built the Taj Mahal, Westminster Abbey, Notre Dame Cathedral, and much more, without a drop of it. What they did have instead was slaves, which would present certain difficulties these days under Human Rights legislation.



It is now widely recognised that we have passed peak oil – the date by which half of the world's conventional, easy to extract supplies have been used, and annual production falls. This means many fields are already in decline and new discoveries don't match depletion rates. The oil industry is now exploring for oil in places they would never have considered earlier. They are exploiting resources where you have to spend more and more oil to get less and less out, and it costs more and more.

Oil may seem like the most important resource, but actually the one we really can't do without is fresh water. As the glaciers of the Himalayas shrink, the water source for a quarter of humanity also shrinks. It runs straight down the rivers when it rains rather than being stored in ice for later melt. Many nations are now short of water – more than 40 nations have to import it from neighbours. Giant corporates have caught on to the value of water and persuaded cash-strapped countries to privatise their water supplies. We were a hair's breadth away from doing that in NZ in the late nineties.

Oil and water are the main inputs to food production, along with land so it is not surprising that food prices, especially the staples like wheat, corn, rice, have doubled or more in price recently. Land is the other input, but they are not making any more of that either – in fact it is shrinking as poor agricultural practices leads to desertification and salination, and population growth leads to more paving over of good soils.

Attempts to turn to the ocean for food are faced with fisheries depletion. Wild fish harvests will never rise beyond what they are now, and are likely to shrink as a result of ocean pollution, acidification from dissolved carbon dioxide, death of coral reefs and over-fishing. Some forms of fish farming can require ten times more wild fish as feed, than the farmed fish yield. The food crisis will be more important to most of the world than the oil crisis.

We could, of course, solve the water scarcity with desalination plants – there's plenty of water in the sea - but they demand huge quantities of energy, which is not abundant or cheap either. We could stave off the shortage of oil for a couple of centuries, at very considerable cost, by drilling under the oceans; by mining and processing the Canadian tar sands which potentially have as much oil in them as Saudi Arabia ever had; by converting low grade coal, lignite, to petroleum products. But that brings us to crisis number two. That's the crisis of limited environmental capacity - or pollution.

Just as we have used up key resources which will now not be there for our grandchildren, we have used up the capacity of the environment to absorb our wastes. Our rivers are suffering from too much nitrogen and animal effluent; our oceans have floating islands of gyrating plastic waste several times the size of California and "dead zones" where nothing can live; after fifty years of effort there is still no safe place to put the radioactive wastes from nuclear power plants; and the waste carbon dioxide from burning fossil fuels has raised the level in the atmosphere to a dangerous level.

Climate scientist James Hansen (2) has demonstrated that the safe level of carbon dioxide in the atmosphere is 350ppm. That's already about 70ppm above pre-industrial times in 1750 so Nature provided us with quite a reasonable allowance for our energy use. However, we have now raised that to 394ppm, rising by 2 or 3 ppm each year. If we stay at that level, let alone continue to increase it, eventually the great ice sheets covering Greenland and West Antarctica will melt. Over some time – centuries – that will raise sea level by 25 metres. And once it is under way there is nothing we can do to stop it.





Hope for averting climate change of this magnitude rests on our returning the carbon dioxide in the atmosphere to 350ppm this century, before the already too warm climate destabilises those ice sheets beyond the point of no return. Hansen has calculated that to do that, assuming we continue to burn what is left of the conventional easily accessible oil and gas, we must not go after deep sea oil, tar sands, shale gas, or conversion of lignite. We must also phase out coal to zero within 20 years. It is unimaginable that we could succeed in doing that in our current society and state of mind.

Climate change is only one of the ways in which we have overused environmental capacity, but it is the most urgent. Rising sea water has already contaminated the drinking water of Tuvalu and Tokelau with salt and emergency water and desalination plants have been flown there this week. Kiribati has more and more high tides that sweep across the whole island of Tarawa. Oxfam has been working for five years to help other Pacific island communities move to new islands where they can still grow vegetables free of salt water.

As climate change progresses it will bring increased storms, floods and droughts, further compromising food production. It will also bring the extinction of some 40% of all the world's species according to the latest report of the Intergovernmental Panel on Climate Change. Species extinction deserves the title of third crisis because clearing of habitat, hunting, introduced predators and pollution have already destroyed species world wide and climate change will be the last straw, making many of their refuges uninhabitable. NZ has lost a higher proportion of its native birds than any other country, beginning a few hundred years ago but accelerating wildly in the last 150.

Some of the species we lose, in places like the Amazon or the deep ocean where they have never been found and described, may hold the key to medical cures or other technological benefits. But mostly extinction stands as a testimony to the incredible greed and arrogance of one species that thinks it can take over the planet for its own use with no regard to the millions of other kinds of creatures we currently share it with.

Underlying these three crises is the driver of population increase – from the beginning of time until 1830 to reach 1 billion, then about a century to reach the second, the third arriving during my lifetime, and the seventh we are told has arrived this week. Clearly population growth is unsustainable and there will be world population decline, whether by design and careful planning or by flood, war, pestilence and hunger. But there is a trap in this as an explanation of our crises.

At many of my talks someone will get up in question time and say, "but population is the real problem and if "they" (unspecified, but usually referring to poor people in undeveloped nations) didn't breed so fast we would be OK, right?

Wrong.

The editorial in a recent Listener said "one of the best ways to save the planet is to have fewer children – and that applies equally to developed countries as developing ones". Right?

Wrong.

A child born in New Zealand will consume something like 20 times the resources and produce something like 10 times the climate change of a child born in India. Second, the rate of increase in consumption and pollution per capita is growing much faster than population itself. Slowing





and stopping population growth is certainly important, but it won't solve the problem unless each person in the developed world uses less than they do now.

Just recently a well educated intelligent friend was expounding to me the evils of population growth and how we had to encourage people to have fewer children. When I said to him, "well you didn't help, did you, having four kids?" he was dumbfounded. He could see the logic, but it had never occurred to him before.

The Club of Rome's *Limits to Growth* authors noted in 1971 that while the limits and the potential for overshoot were clearly visible then in their computer models, they would become apparent to society as a whole only between 2010 and 2050. We are right on target – or slightly earlier as the global financial crisis, what I will call crisis no 4, was actually in 2008.

It is still not widely appreciated that the financial collapse has its roots in resource depletion and ecology, and that it is not a state from which we recover and move on.

In 1998 a barrel of oil cost US\$10. In 2008 it went to just under US\$150. Ten years. This sparked an economic contraction that reduced demand for oil, so the price dropped again, but it is back up to around \$100 now. We can expect that every time economic growth recovers and oil demand recovers the price will shoot up and depress the economy again. The cost of extracting oil from surface wells in Saudi Arabia is still very low, but the price is determined by the marginal barrel. If that comes from tar sands, or deep sea drilling, it can cost ten times as much.

For a while in 2008 inflation hit 5% despite the Reserve Bank constantly raising interest rates. We faced the triple whammy of high interest rates, high prices and a high dollar which gave us less for our exports and encouraged more imports. Parliament convened a select committee to find our why. The Governor of the Bank admitted oil was a significant factor and the committee found that unless government economic policy managed scarce resources better the limited tools the Bank has would be ineffective.

But didn't the crisis happen because of sub-prime mortgages and too much debt? Yes, but let's look at why. American home owners (well, not really owners when the bank has all the equity, but we like to pretend we are owners) with mortgages they couldn't really afford were struggling already when suddenly the cost of filling the tank of their SUV doubled and food prices rose too. They defaulted on their mortgage payments; the banks found the securities they were holding weren't worth much and they fell over. The taxpayer bailed out the banks but not the home owners, some of whom ended up homeless. In the process of bailing out banks, governments went into deeper debt themselves and ended up with credit downgrades.

I'm not pretending this is a full explanation of the global financial crisis but I do believe that resource scarcity has not been credited with the significant role it played, and it is certainly ignored by those who think it's only a matter of time before we return to normal growth rates of 3-4%. There is no normal any more. Whether there will be a new normal or just continuing upheaval and chaos remains to be seen. I leave Geoff Bertram to enlighten you further on that one.

There is a parallel though between the financial and the ecological crises. Both are about debt and greed. The planet produces an annual yield of resources – freshwater flowing in rivers, sunshine which provides plant growth and therefore food; fish; timber. The Global Footprint Institute (3) has calculated that the world's people are now consuming this annual harvest in less than a year – each year we are consuming the equivalent of about 1.3 planet's worth. The day on which we have collectively used everything the planet will produce that year is now





reached in September every year – they call it planetary overshoot day - and the date keep getting earlier.

How can that be? We can't use more than regenerates each year, surely? Oh yes, we can – just as we can spend more than we earn each year and most of us have been for years now. It's called ecological debt. When we run out of that year's increment of fish we run down fish stocks. We run down our forests by consuming more than grows each year. We mine our aquifers to try to produce enough food and the level falls.

When the Club of Rome wrote we were using about 89% of the planet's productivity. They hoped their computer models would persuade us to slow down. They didn't.

This is the ecological parallel to the financial debt crisis where NZ, the US, Greece, all borrow more each year to try to sustain their lifestyle. China, who is a lender must worry whether it can ever be paid back. I guess they have in mind some useful assets that could be used to compensate if we default.

Meanwhile those people without cars, breathing our dust as we head for the cliff, have never used oil, are very short of clean water, never have enough food, and education and medical care are just a dream. "Development" has been a goal of bringing them up to our standard of living so they, too, can get in their SUV and head for the cliff. But it can't happen.

China's economy is expanding very rapidly. Their urban population is now better fed, participating in the consumer society and aspires to consume much more. If economic growth rates in China continue at the average rate of the last 30 years for just another seven, the economy will double by 2017. That means that from 2010 to 2017 China would use as much of the world's resources as that country had since the beginning of time. That's what doubling means. It would involve, for example, a million km of new roads, 97 new airports, 40 billion square meters of new office space. Where are those resources going to come from?

Sorry, China - you are too late. We've already used it all up. Don't you realise that our prosperity has always depended on your poverty?

The fifth great crisis is inequality. It has been with us forever, but economic growth has made it worse. Economic growth which has led to CEO salaries of a million dollars or more has not affected the poorest children in India at all, except they may occasionally glimpse a TV set showing that the rest of the world does not have to live like them.

Within New Zealand inequality has got worse too. We have 200,000 children living in poverty with inadequate food, housing, and health care. Some of you will have seen the book *The Spirit Level*, (4) a lovely play on words, that measures inequality across all OECD nations by the ratio of the highest 20% of incomes to the lowest. By this measure, New Zealand is the sixth most unequal out of 23 countries – the fifth worst if you exclude Singapore which isn't an OECD country and for which they don't have other data.

It turns out from their research that this inequality is closely correlated with poor social statistics – the most unequal countries have poor outcomes on levels of trust, mental illness, life expectancy, obesity, educational performance, teenage births, murders, imprisonment, and social mobility.





These poor outcomes are not just among the poorest in each country – they are across the spectrum. Rich people in unequal countries like the US have a poorer quality of life measured this way than poor people in equal countries like Japan and Scandinavia.

The inequality that has not been seriously addressed in public debate is intergenerational inequality. The world we are leaving for our children will be substantially poorer than the one we inherited. My grandchildren, and yours, do not deserve the instability and insecurity of a diminished food supply, unstable coastlines, intense storm events with floods, droughts and hurricanes, sea level rise measured in metres, high cost of maintaining or rebuilding infrastructure, new pests and diseases from warmer climates. Think Christchurch over this last year for the sort of instability they will eventually suffer - permanently.

These insecurities are a forerunner for resource wars – in fact that's largely what the US invasions of the Middle East are about.

Now there are those who want to deprive them of sunshine. Those who do not want to change our economic patterns are seriously researching releasing sulphur aerosols into the atmosphere, mimicking volcanoes which cool the atmosphere with their aerosols and particles which block the incoming sun. A cooler, greyer planet but the economy still grows as we use up all fossil fuels. I find this scenario particularly abhorrent. Sunshine is one of the free natural gifts that makes us happy whatever life deals out to us. Exxon Mobil is researching depriving our grandchildren of sunshine so they can continue to burn their filthy oil.

The sixth crisis has come to a head in the news recently but has been a long time in the making. I call it the crisis of democracy. It is happening both in countries said to be democracies where democratic rights are being eroded in the name of countering terrorism, and in countries which have long been ruled by tyrants where the people have had enough and are demanding change – and getting it.

Thanks to MMP and the role of smaller parties our government has been stopped from passing retrospective legislation allowing secret surveillance of citizens without a warrant. There is still much to be concerned at in that law, but it is improved. Our democratic system allowed enough concerned voices to be heard.

Tyrants in Algeria, Egypt and Libya have fallen to mass movements of people calling for democracy and those in Syria and Yemen are under pressure. The resource crisis, and especially food shortages have been a key to this unprecedented take over by the people. Imagine what will happen as water shortages bite much harder.

It is unclear just what young people in Britain were rioting about, other than a new pair of Nike trainers, but it seems that recent demonstrations across the US are turning on the banks and especially the Federal Reserve for their role in the financial crisis. With instability and insecurity in future we can expect constant civil unrest where the people focus their energy on a common enemy.

So as first speaker I have done my best to describe the "brink" this conference is about. I've described it as six interlocking crises – resource depletion, pollution, loss of biodiversity, a global financial crisis, growing inequality and a demand for democracy. The key question now is why we do not respond in a rational way? We need to answer this in relation to both the policy makers and the general public.



Is it because we don't know the facts, or understand the science? This is undoubtedly true of a section of the public, but it is not true of the decision makers. The Prime Minister has a science adviser who is well informed and totally convinced about the urgency of action on climate change. Ministers are constantly confronted by the facts, by the public who write to them, their own advisers, and in the international forums they attend. Industry knows too – otherwise why would they spend so much money on greenwash advertising, trying to persuade us how green they are?

Undoubtedly a major reason for inaction by governments is the power of corporate lobbying. This includes campaign donations, especially in the US. You can look up the actions of the Koch brothers, multi-billionaire funders of the fossil fuel lobby in the US. You can puzzle, as I did for years, why successive NZ governments, both red and blue, have launched massive orgies of new motorway building at a time when oil is getting much more expensive and government is cash-strapped. Then you can look at the fact that the Road Transport Association is one of the major funders of both large parties.

You can watch the gradual roll back of NZ climate change policy – the cancellation of the carbon tax announced in 2002, and the animal emissions research levy, dubbed a "fart tax" by Federated Farmers and the National Party; you can listen to former Minister Pete Hodgson, who developed that proposal, speaking at the 2006 climate change conference, where he said to those gathered who wanted real action, "give me a political mandate". In other words, lobby harder and more successfully than NZ's biggest and best funded businesses. You can watch, as I did, the regional manager of Rio Tinto turn up from Asia and threaten the select committee considering the ETS, with the withdrawal of the aluminium smelter and its 1200 jobs. And watch every other MP in the room fawning and falling over themselves to tug their forelocks. You can watch even the pathetically weak provisions of the Emissions Trading Scheme being steadily watered down and delayed after the lobbying of Fonterra, farmers, and energy intensive business.

This is why politicians don't act. And until the public are demanding action, any political party that even started to do what is necessary would be thrown out promptly. So changing the public's priorities and demands is crucial.

There is one statement in James Hansens' otherwise truly excellent book "Storms of my Grandchildren" that I strongly disagree with. He says that if ordinary citizens just understand the enormity of the problem, and the risk to their grandchildren, they will take and demand action. Unfortunately this is demonstrably wrong, and these days he would probably acknowledge that.

Is it that we know, we understand, but we don't really believe it? This is clearly the goal of the climate deniers, or sceptics as they call themselves – but their scepticism applies only to one side of the argument.

Public belief in climate science has actually decreased a bit since 2006 when it was at its peak. Part of the blame must attach to the media's understanding of "balance". If a few people with some degree in science but usually not climate science claim human-induced global warming is a myth, the media feel obliged to report this with equal space and time to that given to the consensus of more than 90% of qualified scientists in peer-reviewed papers. So the public genuinely thinks the scientists are divided. If there is doubt, then why shouldn't I believe the most comfortable option? That's why the PR firms who serve the deniers, often the same PR firms that ran the argument for decades that there was no scientific link between tobacco and lung cancer – say "our product is doubt". They know they don't have to prove their argument – they just have to diminish confidence in the science.



There are other reasons why humans find it extraordinarily difficult to take the seriousness of this on board.

In evolutionary terms, we are hard wired to react instantly to imminent danger. That was the only sort that mattered in hunter-gatherer societies. We see the tiger crouching, and we run. Who knows how many centuries it took for the first agriculturalists to figure out, "We planted the seeds last year and it didn't rain and they didn't come up. This year we should wait for the rain".

But even that is far more immediate than a threat we cannot see or feel, where the effects of our actions today will occur in 20 years' time, and equally to us and people around the world. The actions of people we don't know on the other side of the world will impact on our descendants in a variety of ways. We have no evolutionary learned response to this kind of threat. If sea level rise won't become serious (except for Tuvalu and Tokelau) for several decades, why should I worry now? If the sea still looks blue and the tide comes in and the beach is pretty and the shops still have fish (though it is getting a bit expensive) why should I worry about ecological collapse of the oceans?

Or is it that the problem is just too big for us to think about? If what is needed is a complete change in the way we live, a revolution in energy systems, industrial production, farming and transport, what can I do about it? What is the point of my catching the bus if everyone else is still driving? What good will it do to change my lightbulbs when it is civilisation that needs to change? Our powerlessness is both real and learned – let's leave it to the experts and the government.

It is interesting that citizens have understood and embraced recycling and efficient light bulbs. Some are willing to use the Good Fish guide and not buy severely depleted species. More and more are producing some of their own food in their gardens, organically and locally. They can see immediate effects from what they do, they can understand cause and effect , and it gives them power. But more importantly it does not challenge who they are, their self-esteem, their identity, or their status. This is where I think the real issue lies.

We are not called the consumer society for nothing. We define ourselves by what we consume. Strip us of our possessions and we feel we are nothing. Logically, no-one needs a car bigger or more powerful or less fuel efficient than my Jazz unless they are regularly towing heavy loads, going off road on rough country or transporting more than four people. Yet large SUVs are regularly used to drop the children at school and most men still define their status by the size of their car. New houses these days are roughly twice the size of new houses in the 1970s, which were already perfectly adequate, and families are smaller. People often claim they are building an "eco-house" but it is so large that any environmental benefit from water tanks or solar design is more than outweighed by the extra materials they used.

Governments measure their success by how much they can grow the economy. You cannot grow the economy without using more materials and energy and having more environmental impact. The public supports this because they cannot keep increasing their possessions and replacing them with later models unless the economy does grow.

People with power and money say we have to grow the economy because some people still don't have enough. We can't get rid of poverty unless we produce more. Then to support that economic growth the benefits of the very poor are cut, the minimum wage is allowed to stagnate and taxes on high incomes are reduced. The US is the richest country on earth and has





considerable areas of grinding poverty and can't even "afford" a publicly funded universal health system.

"Enough" is a very important word here. Until we high consumers say "I have enough now – I don't want more" many others will never have enough.

We are being driven to the brink by our own deepest belief in who we are and what we need to be happy. Is more science going to change this? I think not. Is more economic growth? Certainly not. Better economic rules? That could certainly help and I guess Geoff will cover that tomorrow. But the main answer lies in changing values.

There is a significant body of writing showing that emotion, values and culture have far more influence on our beliefs and actions than logic and facts. (5)

The latest I've seen is a UK report by WWF and four other ngos: *Common Cause – the case for working with our cultural values*

The global problems that have brought us to the brink are characterized as "bigger than self" problems. We are affected by them, at least indirectly, but we cannot much reduce those effects on ourselves by the personal efforts we make. Addressing them therefore requires values that go beyond personal self-interest.

Values like financial success, personal status and power tend to be opposed to values like empathy, concern for the common good, universalism. The former are unhelpful in solving "bigger than self" problems and the latter are helpful.

How then are values changed?

They are changed by our use of language, by policies, by advertising, and by personal example.

Every communication, intentionally or not, conveys values of some sort. There is no such thing as a value-free statement. In conveying those values it helps to reinforce them and to suppress the opposite value. So it is important, especially in a democracy, to recognize and publicly debate the values that underlie our behaviour and our statements.

Public policy norms contain hidden values that can be very powerful. Maggie Thatcher said her policies set out "to change the heart and soul of the nation." Changing the economic system would flow easily after that. Policies that reinforce greed, individualism, and competitiveness have far reaching effects in making further policy changes in that direction better accepted. Remember "greed is good"? There has been a shift in values that started in the late eighties. More people now think other people's problems are not their concern. You get joking comments like "what did the future ever do for me?" and serious proposals that the best thing we can do for the next generation is to leave them more money they can use to fix up whatever problems they think matter.

It is also possible to succeed in the material goal of a campaign or policy and inadvertently strengthen unhelpful values which in the long run will be counter-productive to our overall goals. I've spent a lot of time in numerous campaigns trying to shift the focus from self-interest to common good – from "Not in my backyard" to "Not in anyone's".

Then there is the oxymoron of "green consumerism". We can motivate people to install solar power out of concern for climate change, and the rights of future generations to scarce



resources. Or we can persuade them to buy solar panels as an item of green consumerism to be one up on the neighbours, reinforcing competitiveness.

Consumerism is part of the cause of climate change, environmental pollution and resource depletion, not the solution. "Green consumerism" tells people they can address these problems by buying stuff – it just must be the right stuff. It reinforces their identity as consumers rather than citizens. Buy a Prius, but don't think about how much you use it. Buy reusable shopping bags. If you forget to bring then, then buy more. Buy efficient light bulbs but don't turn the lights off.

But environmental problems are not solved at all by what we buy – they are solved by what we therefore do NOT buy. We often measure progress by how much renewable electricity has been installed. That is actually irrelevant – what matters is how much fossil fuel is NOT being burned. The two may not always be related. As an aside, that is why I've shifted my energy from fostering renewable energy and energy efficiency to stopping the extraction of fossil fuels. That is the only thing that will slow climate change.

So a campaign that strengthens values of individualism, consumerism and money may do more harm than good in the overall long haul to sustainability.

It takes me back to a central argument I remember in the seventies in the campaign against nuclear power. We had focused on safety – waste disposal and concern for people in poor countries on whom it would be imposed; possible melt downs and human tragedy; the technological link with nuclear weapons; the need for future generations to manage our mess for thousands of years; etc. Then some new analysis showed that it was likely to be more expensive than the alternatives. Immediately this seemed like the king hit argument – after all, the decision makers care most about money.

Some of us argued that if we relied much on this argument all it would take for us to lose would be a real cut price deal on a reactor from a country desperate for sales. We also felt instinctively that we didn't want this to be the deciding argument, but we didn't have to tools to analyse that this would reinforce the value that economics comes first and you can put people's safety at risk if it is cheaper.

The obvious way to change values is advertising – corporates would not be spending billions on it if it didn't work. Its purpose (and certainly its effect) is often not just to sell a particular product but to reinforce consumerism and increase demand for all products. Research shows strong correlation between time spent watching TV and the strength of materialistic values.

What many people don't realise is that we, as taxpayers, subsidise these insidious messages persuading us to buy stuff. Advertisers pay only two thirds of the cost as it is a tax deductible expense. One of the most radical policies any party could put forward would be to remove tax deductibility from advertising. This would also be the most hated and attacked policy anyone could come up with. I know – because in the early nineties I proposed investigating it. The reaction was outraged.

The language used in the media reinforces establishment values but the new social media has the potential to counteract this if people use it in that way. I see a lot on facebook that rails against injustice, analyses the destructive behaviour of corporates and campaigns to free prisoners of conscience. But perhaps I don't see millions of message about the new pair of shoes or the great new i-pad. However, its potential is that it is not controlled by Rupert Murdoch and can be genuinely democratic.



The hopeful news is that everyone holds both sets of values to some degree. Everyone is motivated by self-interest, and everyone has some common interest values that can be activated. The question is the relative strength of these, and what triggers them. A lifetime of living with public policy based on the implicit values that the market will decide, greed is good, the role of the state in the economy should be as small as possible, people who are poor usually have themselves to blame etc etc reinforces values of individualism and competitiveness and suppresses values of community and collaboration and empathy. But they are not gone, only weakened. This leads to the question, how can we strengthen values of empathy, concern for the planet and future generations?

I believe personal role models are important. The most trusted source of information and shaper of values is family and close friends and people we look up to. Moralising most certainly doesn't work but just being in a different way, and then being prepared to explain why if asked, can be a powerful force for change.

Then we need to be aware of our language. George Lakoff (6) gives the example of "tax relief" and "the tax burden" which subtly reinforces the message that tax is a bad thing that should be minimized, rather than the way we contribute to paying for our collective needs in a society. He also talks of "framing" as the wider picture in which values are formed. The mantra "balancing the economy and the environment" is a frame. It suggests that they can somehow be weighed against each other rather than one depending on the other. Frames are vehicles for activating and strengthening positive or negative values by the assumptions they take for granted.

How do we use all this knowledge to design practical actions to step back from the brink?

First, if we want people to get their self-worth from human relationships and worthwhile work we have to make sure every child is wanted and valued and encouraged to reach their full potential; that they are loved for who they are; that they experience the amazing natural world and grow to love it; that they have access to worthwhile and valued work, even if it isn't paid. Many are engaged in striving for this goal already – they need support and resources.

But that will not be enough. My grandchildren are wanted, loved, have a lot of quality time with their parents, are reinforced in generous behaviour, and are generally secure. They don't watch a lot of TV, and mostly pre-screened programmes without the ads. But the peer pressure, starting at pre-school by the age of three, is too much. They are also demanding and rabid consumers.

So we do need controls on advertising as I suggested earlier.

We need to counter firmly and loudly the view that the way to get people to do the right thing is to appeal to their self-interest. That will just reinforce the values of selfishness.

We need to challenge the values that underlie policies and communications to make them transparent and to get them publicly discussed. Insidious messages to destroy the planet and ourselves will not easily survive strong sunlight.

We need to demand of politicians a commitment to the future, to the long term, to the common good and to our values so that policies which implement those values are no long political suicide.

I suggest that when designing a campaign we should consciously ask:



- will the way we frame this message reinforce or undermine the values of common interest and non-materialism needed to address bigger than self issues?
- are the methods we are using to campaign consistent with the values we are trying to reinforce?
- Are the values we hold and the framing we use transparent and explained?
- Is our process participatory?

The recent campaign to stop mining in National Parks and protect Schedule 4 land succeeded in overturning government policy remarkably fast. The coalition of many groups who worked together achieved a policy change, by convincing the Prime Minister of their political significance with a march of 40,000 people in Auckland, and many thousands of submissions. But they also motivated thousands of people to think about the love they had for special places in Aotearoa. The message was not "mining will damage our tourist industry and our economy" but "Too precious to Mine".

So to summarise my main message, we are indeed at the brink of the abyss. Governments will not and indeed cannot act to step back. If you want proof, look at the complete lack of progress – in fact the steady backtracking – of the international climate change negotiation since the Kyoto conference in 1997.

Governments can't act because the people are not demanding it strongly enough to counter the lobbying and financial pressure of the corporates. It is now up to the people. I believe this has to involve non-violent direct action — civil resistance — in sufficient numbers that governments are forced to act or be voted out. That requires a change in values for most of the public.

Ends

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