

SCREAM CRASH BOOM 2 – THE GREAT DISRUPTION

“They go on in strange paradox, decided only to be undecided, resolved to be irresolute, adamant for drift, solid for fluidity, all-powerful to be impotent... Owing to past neglect, in the face of the plainest warnings, we have entered upon a period of danger. The era of procrastination, of half measures, of soothing and baffling expedience of delays, is coming to its close. In its place we are entering a period of consequences ... We cannot avoid this period, we are in it now...”

Winston Churchill November 12, 1936

17 July 2008

Dear friends

And so the moment arrives.

In my first Scream Crash Boom letter of 2005 I forecast the inevitable crash of the global ecosystem. I said the resulting economic and social crises would then drive an investment boom in a new industrial revolution and economic transformation. I thought I was forecasting events a decade or two away. Now, just three years later, look around us. The global economy is trembling under its own weight. We see:

- riots and political crises across Asia as surging food prices, driven by extreme climatic events and surging economic growth, put severe pressure on the daily lives of billions of people;
- protests, strikes and political upheaval across the world as oil prices respond to the reality of limited supply, threatening recession, or worse;
- global financial markets lurching from crisis to crisis as complexity, greed and interconnectedness drives the financial system to the edge;
- debate about external military intervention in countries that can't deal with the humanitarian consequences of extreme weather, such as Burma;
- scientists mystified by dramatic increases in melting at the Northern Polar and Antarctic icecaps, at rates way beyond their forecast models;
- and countless more impacts with floods and fires in the USA, droughts and dying rivers in Australia, melting glaciers all over the world, and on and on.

The ecosystem crash I thought was decades away is now underway and the resulting economic crash is not far behind, perhaps the slide has already begun.

As our global market empire eats its way through the natural resources of the planet, stealing from our children, it now overextends, as all empires do before they decline. Desperate for more resources to feed its hungry masses, to shore up the middle class's wealth, to keep the elites supportive and to protect itself, the system makes promises of continued riches. Promises it can no longer keep.

Look how our system responds to oil prices – a response so ridiculous it's almost funny. We see that our addiction to a non-renewable, polluting resource threatens the economy. Our solution? To try to increase supply and reinforce our dependency.

Madness surrounds us now. This empire has no emperor. There is no senate, no central committee, no board of directors. No-one is in charge and no-one can control what happens next. The system is too complex and intertwined and the momentum is too great. The system is breaking down and we need to prepare for what's coming.

When we look back, 2008 will be a momentous year in human history. Our children and grandchildren will ask us “What was it like? What were you doing when it started to fall apart? Could you see it? What did you think? What did you do? Often in the middle of something momentous, we can’t see its significance. But for me there is no doubt, 2008 will be the marker - the year when “The Great Disruption” began.

We are already seeing the response, though modest. Governments know the costs of inaction on climate change far outweigh the costs of acting. They are rolling out carbon pricing across the developed world. Investors too are waking up to the biggest opportunity of the 21st century – decarbonising and cleaning up the economy. They are pumping billions into what they see as a kind of dot-com boom on steroids with military support. This is all good, but it is all too late to stop the crash.

That we are at this point should not be a surprise to anyone who looks at the numbers, the science and the behaviour of society throughout history. For decades we’ve been alerted to the risks with clear data on the scientific, demographic and economic trends. True to our nature and our history however, when we don’t want to believe, no amount of data can change our mind.

In the 1970’s, the infamous Club of Rome report *The Limits to Growth*, written by my good friend Jorgen Randers and his colleagues¹, forecast this situation and explained the simple, obvious, and still true underlying logic. If you keep growing an economy based on the consumption of non-renewable resources at some point they will run out and that model of economic growth will stall. They argued that if we didn’t prepare for this well in advance, major economic and social disruption would result. They gave us 35 years warning. Although it sold many millions of copies, it was vilified by those whose interests it threatened. It was countered, as it still is today, by those techno-optimists who believe that some combination of markets and technology would allow us to respond as the crisis hit, with some relatively minor adjustments. Maybe, if we’d acted 35 years ago, but certainly not now.

More recently, studies such as the Millennium Ecosystem Assessment also raised the alarm. That comprehensive, peer reviewed scientific analysis by 1,300 experts “assessed the consequences of ecosystem change for human well-being”. The final report concluded: “*At the heart of this assessment is a stark warning. Human activity is putting such strain on the natural functions of Earth that the ability of the planet’s ecosystems to sustain future generations can no longer be taken for granted*”. Many other studies, such as the WWF Living Planet report, have concluded that we are already operating 25% above the planet’s biological capacity to support life on earth.² Now we forecast a 50% increase in population and a 300% to 400% increase in per capita income using the same models of consumption! Madness.

All obvious in hindsight. Obvious to Jorgen Randers and his colleagues 35 years ago. Obvious to future generations looking back, who will be mystified by our lack of response given the data available to us.

Anyway, we can wonder at our ability to ignore the obvious and we can analyse our society’s capacity for denial, but it won’t change anything now. It is what it is. The system has spoken, it is in a state of crash.

We will now begin the challenge of dealing with the crash and then the extraordinarily interesting and exciting process of building a new sustainable economy. Furthermore we will do all this at a speed we can barely imagine sitting here today.

¹ Limits to Growth 1972 Donella Meadows, Dennis Meadows, Jørgen Randers, William W. Behrens III

² Living Planet Report : http://assets.panda.org/downloads/living_planet_report.pdf

Of course we can't know with certainty what will occur. On climate change for example, there has never been an event like this in earth's history where such a massive amount of CO₂ has suddenly, in geological timeframes, been released into the atmosphere, let alone into a severely degraded and stressed ecosystem. This carbon was absorbed from the atmosphere over many, many millions of years and laid down securely under the earth's crust as oil, gas and coal. This caused temperatures on earth to drop to a level suitable for humans to live, grow food and build this civilisation. Now we've taken it out again and dumped it back in the atmosphere. Such a huge CO₂ release cannot occur naturally so there's no precedent from which to understand the impact. So we can't be sure of the result, but logic and all the indications say it will be ugly.

Why then, with this uncertainty, am I so convinced that a major crisis is inevitable? I've worked on these issues for over 30 years around the world, including at the highest levels in the NGO and corporate sectors. I've observed and learnt a great deal about how the system works, how issues develop and how change unfolds. Importantly, I have also learned to trust my intuition and my judgement on this. In summary, the following is why we will see a crash of the ecosystem and the economy before we get serious about change.

1. We have built an incredibly complex, interlinked global society and economic system. While we're very proud of our creation, its very complexity makes it highly prone to shocks. The interconnectedness we marvel at could well be our downfall as parallel shocks bring the whole system down. This is very well argued by Thomas Homer-Dixon in his excellent book "The Upside of Down"³ So the question is: Will those shocks occur and how large will they be?
2. Our economy as currently constructed is unsustainable, this is well established in the analysis referred to earlier. The only major unknown is how fast and by what process we will change. History indicates that we don't accept large scale change easily, especially when this change challenges our accepted beliefs. It generally takes a crisis to overcome our resistance.
3. The challenge of sustainability, particularly climate change, has characteristics that make our normal resistance to change both deeper and longer lasting. It is an enormous system-wide challenge that affects every person and every country. It requires sweeping change in every aspect of our lives and our society. It also questions many fundamental beliefs about growth and the market economy and threatens some very powerful interests. All this deepens our resistance. Unfortunately this means the crisis will have to be very large and completely undeniable before we respond.
4. This problem is also unusual in that the impacts lag the causes. Current global warming for example is caused by CO₂ emissions from decades ago. So when the crisis is big enough to force change, it will also have great and unstoppable momentum. As a result it will be far more damaging, because the impacts will continue to worsen long after we act on the causes.
5. It is due to both the scale and the lag, that the idea that markets will respond in time with price signals and technology is such a false hope. Yes, markets and society will respond dramatically, but the task of transformation is now so large and so comprehensive that achieving it will take decades. Achieving it smoothly, while maintaining a stable global economy, in the middle of multiple simultaneous global crises, is simply too much to expect.

³ We can see this at a simple level here in 2008. Extreme climate events like drought in Australia and flooding of the US corn crop drive down food supply. Increasing oil and fertiliser prices drive up food production costs. With accelerating demand driven by economic growth in Asia, food prices soar leading to political instability across the developing world. This is exacerbated by the push into biofuels which drives burning of the Amazon rainforest and the release of more CO₂ that further drives extreme weather.

So how will this unfold?

If you grow an economy or any system up against its limits, it then stops growing and either changes form or breaks down to a simpler system. This applies to a Petri dish of bacteria, a plague of locusts, a species in a forest or to a global economy. It is basic physics and biology.

As our system hits its limits, the following pressures will combine, in varied and unpredictable ways, to trigger a system breakdown and a major economic crisis (or series of smaller crises) that will see us slide into a sustained economic downturn and a global emergency lasting decades.

- A series of ecological, social and economic shocks driven by climate change, particularly melting polar regions, extreme weather events and changes to agricultural output, will generate severe economic stresses, along with deep concern in the public and the global elites. This will lead to strong government intervention and generate a sense of global crisis.
- The combined pressures of increasing demand and lower agricultural output driven by climate change, will lead to sustained increases in food prices - triggering economic and geopolitical instability and tension, with developing countries blaming the west for causing climate change.
- A deeply degraded global ecosystem will further reduce the capacity of key ecosystem services - water, fisheries and agricultural land. This will again impact food and water supply, political stability and global security.
- We will see even further sustained and rapid increases in oil prices as peak oil is breached. Yes, it will go up and down, but the trend will be clear. This will create enormous system wide economic and political pressure, as well as a great conflict between expanding dirtier supply and cutting CO2 emissions.
- As always in predicting the future, there will be surprises. These could be for example a serious global terrorist attack wiping out a major city or a pandemic shutting down global travel. Shocks upon shocks upon shocks.
- As this unfolds, our deeply intertwined and complex global financial market, prone to panic driven by fear and uncertainty, will suddenly wake up to the long term implications of all of this. Perhaps driven by a series of major corporate collapses or national economic crises, they will then simply reprice risk in global share markets. This will lead to a dramatic drop in global share markets and a tightening of capital supply.

Over she goes.

The resulting series of economic and political crises will be massive in scale and decades long. They will last this long simply because fixing the causes *while* dealing with the consequences – a declining economy, political instability and accelerating climate change driven by earlier emissions - will take decades. With this level of crisis and change, the future becomes quite unpredictable and anything is possible, including some very exciting transformational shifts.

Why do I see this starting now? The system is too complex for analytically based certain predictions. We can't even predict the oil price, let alone the behaviour of the whole system. However my intuition is screaming at me that now is the time, and the data I see confirms my intuition. If we go back to basics, the two key challenges we face - the availability of cheap resources to feed the economy and the ability of the earth's ecosystem to absorb our impacts – both have very clear indicators. So as the system hits the wall we should see a significant non-cyclical rise in commodity prices – especially food and energy – and significant evidence of accelerating ecosystem

breakdown. These have for several years been my canaries in the “end of growth” coal-mine.

We see these indicators hitting hard now and the drivers behind them are profound, well embedded and have significant lags in them. So it's game on. From this point forward, the slide into crisis will define our political and economic world.

The debate about the benefits of growth are now irrelevant. We will not choose to stop growing. We are taking a system operating past its capacity and driving it faster and harder. No matter how wonderful the system is, the laws of physics and biology still apply. The economy will stop growing and then contract – a depression.

Our whole global political and economic system has been built on incessant growth, so this crisis will strike at the heart of society. Growth is the underpinning policy focus and strategic assumption of all governments, central banks, corporations and investment funds. It is never questioned and anything less leads to intervention to restart it. So when growth stops, things get very difficult. People throw out governments, shareholders throw out Boards and Boards throw out CEOs. So we can expect all that before we face up to reality - we have a system design problem.

Is this all too pessimistic and gloomy? I'm actually by nature a strongly optimistic person. I just look at the numbers and the science and I see it coming.

I want to be clear though that this is not the “end of the world”. It does, however herald an unparalleled era of system stress, economic stagnation and social tension – a global emergency during which we'll evolve a new economic model and then rebuild. I call it *The Great Disruption* because it is most likely to be a disruption in society's evolutionary process, rather than the collapse of civilisation.

This disruption will drive a transformation of extraordinary speed and scale. It will leave in the dust all other major global changes we've faced - those driven by war, technology or globalising markets. It will be an exciting and ultimately positive transformation, with great innovation and change in technology, business and economic models alongside a parallel shift in human development. It could well be, in a non-biological sense, a “great leap forward” for humanity with a move to a higher stage of evolution and consciousness.

So I find myself soberly accepting the scale of the coming challenges and all the sadness this entails, but still confident we will come through this and rebuild. Why?

Humanity has shown itself to be amazingly resilient. History tells us we are mostly likely cope with the crisis, no matter how bad it gets, and that we will grow, change and react in positive ways over time. Yes, we're resistant to change now but when the crisis hits, its consequences will be so overwhelming that denial will disappear, virtually overnight. Then we'll begin to see extraordinary and rapid shifts.

Yes, some people in this coming crisis will do selfish things, acting out of fear and insecurity given the scale of change. However I believe that more people will do extraordinary, noble and positive things. There are many historical examples of this.

So I am a realistic optimistic. Realistic because I see the crash coming and being ugly, but optimistic because I see it all as a “*The Great Disruption*” – a period through which we'll pass - rather than a collapse which signifies our end.

Moving forward, we certainly know what we need to do. We need a zero net carbon emitting economy, a society that creates no waste and a distribution of wealth that is more equitable and sees everyone's basic needs met. We need an economy whose

central organising principle is social benefit and human advancement, with wealth creation a tool to that end, not an end in itself.

And we know how to get there. Fixing this is not hard, we just haven't decided to do so yet. We already have leading entrepreneurs, communities, corporations and governments proving the ideas that we can take to scale when we do. As William Gibson said "The future is here. It's just not widely distributed yet."

As well as reinventing our physical infrastructure, we will have to work on our social infrastructure, developing the community and family connections that build the resilience we need to get through the transition. Doing so will also be good for us. As Victor Frankl argued in "Man's Search for Meaning", the search for happiness takes us to love, to relationships and to a focus on meaningful achievement.

Personally I'm preparing for uncertainty and change by focusing on adaptability and building personal resilience. We are all going to have to be nimble and travel light. When I wrote my first Scream Crash Boom letter in 2005 I slipped into despair because the scale of the challenges seemed overwhelming. That took me closer to family, recognising that my resilience came from having a close knit home life, a base from which to face the world. I then realised I needed to look more deeply inside, to truly examine my foibles and my life's focus. I needed to know what would bring me greater happiness and what was my highest potential purpose (and how to get some of my ego out of the way of getting there!)

Through endless hours of talking with my wife Michelle and others, reading books, counselling and with much quiet reflection, I've come to a new place: a realistic optimist that knows what I'm good at, and what I'm not, and how best to contribute.

Accordingly I've decided to move on from Ecos Corporation, 13 years after establishing it. During this time, with an extraordinary team of people, we've achieved many great things. We've helped our clients, society and ourselves to learn and get ready for what's coming. We've helped great old companies like DuPont turn around their giant organisations to face a new direction and be ready. We've achieved practical success like helping to build Easy Being Green, a start up company that grew to over 200 staff and cut over 4 million tonnes of CO2 in just 18 months. We've helped to shift the attitudes of leaders in the business community. We've stayed focused on our purpose, enjoyed ourselves and done some good. Of course the rest of the team will continue on, doing more of this for a long time to come.

As for me, I have new work to do. I now understand my highest purpose is to motivate large numbers of people from all walks of life to act. We all now need to personally engage, in whatever way is appropriate in our circumstances, to slow down the crash and to get our society as ready as we can for the challenges ahead. So I'm going to talk, write, guide and support people, to help them do so.

We must now rise to this challenge. This is no longer just an environmental issue. How we respond now will decide the future of human civilisation.

We are the people we've been waiting for. There is no one else. There is no other time. It's us and it's now.

Kind regards

Paul Gilding