PART 1

A CLIMATE FOR CHANGE?

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WHY DON'T WE HAVE A CLIMATE FOR CHANGE YET?

> Barack Obama (has a) fateful choice that he – and we – must make this January to begin an emergency rescue of human civilization from the imminent and rapidly growing threat posed by the climate crisis.
>
> Al Gore, 'The Climate for Change', *New York Times*, September 11, 2008

ONCE UPON A TIME IN AMERICA, a student was taking part in what they believed to be a research project about 'life in the university'. They had been shown through to a waiting room and given a questionnaire to fill in.

A wisp of smoke trailed into the waiting room, through an air vent. Then another. A few minutes later, so much smoke had come into the room that it was becoming difficult to ignore. Yet they remained sitting there, stoically filling in their questionnaire and shooting occasional anxious glances at the other

two young men also sitting in the waiting room. The subject did not leave the room to report the smoke – even after six minutes when the smoke was so thick that it was hard to see, or breathe. And according to experts – if this were a real fire – their chances of getting out alive were now very low.

They just sat there. Why? Because the other two people in the waiting room with them were actors. The actors had been instructed to ignore the smoke, sit calmly, pretend that nothing was happening. 90% of the time, given two stooges in the room who do nothing, the experimental subject would follow their lead. Only 10% of the subjects ever left the room to report the smoke.

These experiments were first performed in the 1960s by American social psychologists Latané and Darling, investigating a phenomenon they labelled 'Bystander Apathy' (*American Scientist*, 1969[9]). Latané and Darling repeated the experiments with all three interviewees being genuine experimental subjects, and no actors present. Even now, only in 38% of cases did someone leave and report the smoke. Presumably with three volunteers, each subject was still waiting for another to respond? Whereas when the experiment was conducted with a single interview subject, sitting on their own, 75% left the room and reported the smoke.

It sounds incredible. But the experiment has been repeated numerous times with similar results. You can see for yourself – there is a video of this experiment being repeated on YouTube[10], with one experimental subject and a whole semi-circle of stooges. In this case the subject sits in the room for over 20 minutes, while all the time smoke is pouring into the room.

The experiment shows our reliance on reading others' reactions, when assessing risk and the need to take action. Especially in emergency situations, where drastic action might be required. If nobody else seems to be responding, we assume that

everything is okay. You can perhaps remember a situation like this yourself, for instance when a fire alarm went off in an office. Nobody else moved, so you assumed it was some kind of 'test'?

All of which may begin to explain why, despite regular reports in the media about climate change, most people carry on regardless. Record levels of ice melting in the Arctic. Record annual temperatures. One in 10 homes in the UK at flood risk. Hurricane Katrina. Climate change is reaching the point where some scientists say it could soon be too late to halt or reverse. And yet here we are, changing very little, not quite believing it is really happening.

Why? Because we look around and no one else seems to be responding. There are no emergency measures being brought in by the government, like fuel rationing. The only people we see responding are ones we can label as 'fringe extremists'. So we can discount their protest marches and stunts. All the real signals indicate there must be no risk. Despite the news. In fact if it was really happening it wouldn't be in the regular news (which is about things continuing as they are). It would have its own newsflash. Imagine scientists discovered a large comet on collision course with earth. They'd hardly stuff this in the middle of *News at Ten*, just after the human interest story? As one woman said, in research groups I was conducting for the UK government 'If climate change were real, there would be mass hysteria!'

The lack of public engagement and action worries politicians a great deal. It has given rise to many a report about 'behaviour change'. The question is: how can we get the general public, in large numbers, to respond to the danger signs? Attention often focuses on the gap between intention and action. It might better focus on the gap between politicians and people.

In 2006, on the publication of their handbook on climate change, the Rough Guides editor sent a copy of the book to every MP in the UK, along with a letter asking three questions:

1. How important an issue is climate change?
2. What can Britain do to make a difference?
3. What steps do you plan to take (or have you taken), in your constituency, and as an individual?

The results of this survey were published in the *Independent* newspaper, their headline being 'How Green is your MP?'[11] Nearly half of all the MPs replied (318). That's a notable result in itself, given their packed postbags. And the reason for this (at least among those who replied) may be apparent from their (near) unanimous answers to question 1: that it is *the most important issue, bar none*. Here is a representative selection of their replies:

Nick Ainger (South Pembrokeshire & Carmarthen West, Labour)

1: Climate change is the most important challenge the world is facing.

Richard Benyon (Newbury, Conservative)

1: Climate change is the defining issue of our age. Previous generations had to deal with the rise of Nazism or communism. This is the issue on which my generation of politicians will be judged. This is our Dunkirk.

Edward Davey (Kingston & Surbiton, LibDem)

1: Climate change is the most important issue facing us today – and has been for some time. The consequences

> if we do not tackle this urgently and fully are potentially catastrophic for the whole human race and life on the earth.

The answers to the other two questions showed strong support for public investment (in renewable energy, efficiency) and also that politicians are making substantial changes in their own homes and lives. Many acknowledged that the public are not nearly as fully behind this issue as they are (so that it's hard to argue that this was an exercise in pandering to public opinion?). For instance, Edward Davey went on to say:

> The problem to date has been persuading enough people to recognise the threat, and despite Al Gore et al., I remain alarmed at how few people still really understand the scale of the problem and how fast we need to move.

Building a climate for change, one where the general public do recognise the threat and are motivated to act, is the subject of this section of the book. Before we come on to public and business attitudes, it's worth pausing to reflect on just why the MPs do see this as the most important issue, bar none. One reason may be their exposure to the latest science. Another, I suspect, is their position as people who take responsibility for society- and planet-wide issues. Perhaps we need to move to a position where all of us, not just MPs, include such global issues within our scope of responsibility?

We'll come back to responsibility. First let's look at the science. I know that many reading the book will be well informed. Still, there would be something missing from this discussion if I didn't cover it. Because climate change is ultimately not a political, cultural or economic issue; it is an

environmental one. And the scientific case for urgent action is overwhelming.

At the heart of the calls for action by scientists is a probabilistic model; if we do X there is a Y% chance that Z will happen. A recent Potsdam Institute report is typical: 'The study concluded that greenhouse gas emissions must be cut by more than 50 percent by 2050 relative to 1990 levels, if the risk of exceeding 2°C is to be limited to 25 percent.' That's not because scientists aren't sure whether there is a risk. It is because risk is probabilistic. If you jump from a third storey window your chances of dying could be limited to 25%. It's something you'd regard as risky though.

Probability-based reports are problematic for media (and politicians) who deal in certainties. Probability however is not the same as uncertainty or debate. In a 2009 survey,[12] among those scientists who specialise in studying climate change and have published peer-reviewed papers on the subject, 96.2% stated that they believe global temperatures have risen, and 97.4% that they believe manmade causes of this are significant. You will find few areas of scientific enquiry where the view is more certain. (This contrasts with the view often repeated by the media that there is scientific 'debate').

On the question of *how much* of a risk climate change poses there is genuinely a spread of scientific opinions. In simplistic terms the risk assessments and implications for action can be summarised by two positions:

- Economic common sense (Serious). Changes of at least 2 degrees seem almost certain across the next century and we know from the IPCC and other sources that higher levels will significantly curb economic growth. The prudent thing is to invest now in minimising carbon emissions and hence these effects.

- The red line (Tipping points). In this view, championed by James Hansen (head of the NASA Goddard Institute for Space Studies) we may face runaway climate change. This means that if we cross a 'red line' the planet would 'whipsaw' to a new hot planet state rapidly and with little further help from us. It would be like triggering an explosive chain reaction.

Both positions argue for action; with the second it is a case of – as Al Gore put it – an emergency rescue of civilisation (Gore also supports this second view). Let's go a bit deeper into what the human risks associated with the statistical models are. I'll do this by looking at just one (of many) factors – the impact of melting ice. Getting into the detail may help bring the two different positions on risk and response levels to life:

Serious risk. Sea levels are a global temperature gauge – for the same reason we use liquid in thermometers. The IPCC had predicted a sea level rise of 28 cm if we keep temperature to +1.8 degrees, or as high as 59 cm if temperatures increase 4 degrees. Studies show that a 50 cm average rise would mean that coastal flooding events that today happen every hundred years would happen several times a year by 2100. The frequency of these events increases dramatically with small average rises because of storm surges and similar. A 2007 study in *Environment and Urbanisation*[13] found that at the IPCC predicted rises in sea levels, 600 million people were at risk of coastal flooding. The IPCC Report had similarly concluded that '[m]any millions more people are projected to be flooded every year due to sea-level rise by the 2080s.'

What would be the economic impact? Consider that Hurricane Katrina – just one such event – is estimated to have cost $150 billion. That's more than the annual GDP of New Zealand. The cities now at risk include London, New York, Shanghai,

Tokyo and Mumbai. The impact of one tenth of the world's population – and many of its economic hub cities – facing frequent natural disasters would be catastrophic. This economic common sense view is where the new US administration is putting down their marker. I went to a speech (at Tomorrow's Company in March 2009) by Bill Becker, Executive Director of the Presidential Climate Action Project. Becker summarised the Obama administration's key messages to the public on the issue as follows:

> Climate change is real, it is manmade and is doing irrevocable damage.
>
> But what mankind makes, we can still unmake.
>
> Forget 2050 it is impacting our lives and economies today; in super storms, forest fires, pine forests decimated by bugs, sea levels.
>
> Not to invest now would lead to a much bigger debt and cost to future generations; there is no possible excuse for doing too little or too late.
>
> It's time for a transition, a tipping point, and not incremental action.
>
> There is a need to lead, in order to mobilise the public will. And the US administration is gearing up for this.

Becker stated (a phrase from Martin Luther King) that their key message was:

> THE FIERCE URGENCY OF NOW.

That's the essential credo of this first (serious) risk position; act now or we will (quite literally) have hell to pay later. It is

a corrective to previous public presentations of 'things we need to do by 2050' which gave the false impression this was not a present day priority. Mixed with the threat of inaction are messages about the promise of economic prosperity for the nations that lead new industries of the low carbon economy.

Scientists (at the 2009 Copenhagen Climate Science summit) have revised their predictions; converging on 1 m of sea level rises across this century as the consensus. Why so much higher? The IPCC figures were mainly based upon thermal expansion of the oceans. The new figures are based on taking ice melting more into account too; and using the current rates of ice melting which are already higher than predicted by the IPCC.

1 metre rises are five times more than has been seen over the last 130 years. At this level you would see much more flooding and sooner. As well as the cities and their economic and population displacement impacts … consider that large areas of agricultural land and fresh water supplies could become salinated and hence unusable, creating instant food and water crises.

The red line. A typical sample of runaway climate change thinking comes from *The Last Generation* by Fred Pearce (former editor of *New Scientist*):

> Climate change from now on will not be gradual – nature doesn't do gradual change. In the past, Europe's climate has switched from Arctic to tropical in three to five years. It can happen again. So forget what environmentalists have told you about nature being a helpless victim of human excess. The truth is the opposite. She is a wild and resourceful beast given to fits of rage. And now that we are provoking her beyond endurance, she is starting to seek her revenge.[14]

Let's go back to the ice, this time at the North Pole. The loss of Arctic ice is a well-known climate impact. And people tend to think of it in sentimental terms – pity the poor polar bears. Actually it is a global threat to all of us, not just the poor bears and local peoples, because of its role as a heat shield (the Albedo effect) and a heat sink. As a reflective heat shield, the arctic ice sheet reflects the equivalent of 70% of all the heating caused by atmospheric CO_2. As a heat sink – like ice in your drink, as long as it is still present the liquid stays cool, as most energy goes into the melting (Lovelock, 2009[15]). That's why we should worry about the latest studies showing that all the polar ice will probably be gone by 2037 and possibly as early as 2020.[16]

Ice loss represents a 'positive feedback' effect – at higher temperatures with less ice the warming will accelerate. Another melting ice positive feedback effect is the releasing of methane (from the rotting of ancient peats and forests) from melting permafrost. A NASA study, looking at the geological record for past similar events (Kennedy[17]) shows that only small increases in temperature could be needed to release vast amounts of methane, and that the resulting temperature increase could be 'tens of degrees' and would happen very fast. Methane clathrate release is a common suspect in a number of past mass extinction events (an effect known as the 'clathrate gun'). Another example of how slightly higher temperatures could cause dramatic amounts of further warming. 'Tens of degrees' is known to be both a possibility from past events in the geological record, and also off the scale in terms of its potential impact on human life. Human beings can survive in deserts, but 9 billion can't survive in broken flooded cities, without food.

There are at least 10 such known positive feedback 'tipping elements' that could lead to runaway climate change. Nine are

listed in a paper by the Tyndall Centre (2008). Commenting on this report its main author, Professor Tim Lenton, said 'Society must not be lulled into a false sense of security by smooth projections of global change. Our findings suggest that a variety of tipping elements could reach their critical point within this century under human-induced climate change.'

I went to a talk on melting Arctic ice and runaway climate change models in early 2008 at Tomorrow's Company. It was a repeat of a presentation that had been given to a cross-party committee of MPs in Westminster. I was quite simply stunned. The gap between what the scientists (one of whom goes on a submarine under the North Pole every year to measure ice thickness) explained has already happened, and could be about to happen … and the low public recognition of the risks was staggering.

MPs get this information first hand. But it's not like it has been entirely absent from broadsheet newspapers and TV news. I think the key difference is that MPs feel responsible for problems on this scale. I don't mean they feel guilty. Or that it is all the current administration's fault. 'Responsibility' literally means that you are 'answerable for' – and relates to the scope of matters for which this is the case. A parent is answerable for the care of their children, but not the current state of the education system. A police officer on holiday is outside their jurisdiction. Our current political system means that we delegate public responsibilities to elected governments. This works okay for many of the administrative duties of a civil service and legislature. It's a disaster for facing an issue where the general public do need to take responsibility. Climate change is one such issue – and I'll point in this book to other cases of failing common wellbeing associated with too few seeing it as their responsibility. Poverty is one longstanding example of this.

The taking of responsibility isn't just an individual decision. You can see similar issues being played out in two sorts of crowds. One is fragmented, each going about their own business. The other is aligned and charged with emotion. It's the difference between a crowded train station and a crowded football stadium. And the key component with the latter is each individual taking a group view. Where every person feels an emotional stake in the struggle and the outcome. Where they will throw themselves behind the cause. That's the side of the 'climate change should be like a wartime emergency' argument from Al Gore, James Lovelock and others that I buy into (but not so much the machismo, mechanised side – a 'gearing up for').

Citizenship is not just a label, it's a collective process. When you invite a group of people off the street to role-play being in charge, for instance in consultative planning processes, they quickly pick up all the issues, the trade offs and balanced solutions. It's not some God-given superiority that politicians have – it is simply a position (of power/responsibility) to take a broad view. That's not the same as polling people on their views. You find that these views often shift quite dramatically in what social scientists call 'deliberative forums'. For instance 'voter weekend' experiments in the early 1990s found that people shifted from the default 'hanging is too good for them' public attitude to a more nuanced and liberal position on crime and punishment, simply as a result of taking part in forums where they heard testimonies from all sides: ex offenders, police, judiciary, victims of crime. Here we see another key to having responsible feelings towards a subject, which is the role of empathy; 'There but for the grace of God go I.'

Superficially, there are surveys showing that the majority of the population are 'concerned or very concerned' about climate

change. (I for one had become very concerned, so was encouraged to hear that most others apparently felt the same). Synnovate conducted massive annual surveys for the BBC, interviewing 22 000 people in 22 countries. They found the proportion 'concerned about climate change' increased from 68% in 2007 to 72% in 2008. The most dramatic shift was in the USA – from 57% to 80%. Big increases were recorded in other previously disengaged countries including Denmark (62% to 79%) and India (59% to 72%). And people across the world who were concerned also claimed to be taking action: saving power (80%), recycling waste (69%) and buying green (61%) or energy efficient (59%) products.

That's the proportion indicating 'concern'. It doesn't show us *the intensity* of this concern. Another better question is this: where do the environment and climate change *rank* in people's overall lists of concerns and priorities? In a 2009 poll of American public opinion by Pew,[18] 1500 adults were asked to prioritise a list of 20 issues the government should be tackling. The results are shown in Table 1.1.

Global warming ranked 20th out of the 20 priorities. Even in early 2007 (2006 being the year of media climate hype) it ranked 17th.

The survey of MPs said climate change was rated the most important issue to be tackled. This survey says it is the least important. There have been similar surveys ranking climate change 13th–17th on the list of public concerns in priority order in the UK too. (I doubt all American senators and congressmen are as serious about it as their Euro counterparts though.)

That's the general public. What about big business? Over the last few years we have seen many grand gestures like going 'carbon neutral'. Wal-Mart stunned environmental activists

Table 1.1 Percentage rating each policy area a 'top priority'

	2007	2009
Economy	68%	85%
Jobs	57%	82%
Terrorism	80%	76%
Social Security	64%	63%
Education	69%	61%
US Energy	57%	60%
Medicare	63%	60%
Healthcare costs	68%	59%
Budget Deficit	53%	53%
Health Insurance	56%	52%
Helping the Poor	55%	50%
Crime	62%	46%
Moral breakdown	47%	45%
Military	46%	44%
Tax cuts	48%	43%
Environment	57%	41%
Immigration	55%	41%
Lobbyists	35%	36%
Trade Policy	34%	31%
Global Warming	38%	30%

(aka its critics) with a sweeping pro-sustainability procurement and store energy revolution. You will barely find a single large public company that does not have policies in place on carbon and ambitious targets for other sustainability priorities (water, pollution, biodiversity, poverty, workers' rights …).

However, that's a bit like saying they are 'concerned or very concerned'. The 2008 State of Green Business Report by GreenBiz found that across a range of environmental issues; carbon, water, waste, pollution … corporate America's achievements were only just big enough to neutralise the effect of economic

growth that year. And Greenbiz in 2009[19] found that despite a slowdown, absolute carbon emissions by corporates had grown by 1.4%. We can't afford to stand still, let alone grow our national emissions. In a recent speech in China[20] Nicholas Stern summarised it as follows: we need to cut total carbon emissions globally from 50 gigatonnes now, to 35 by 2030 and 20 by 2050. By 2050 (given 9 billion people) the average per capita emissions would have to be less than two tonnes/year. That would represent a 90% cut for the average American today. Clearly there is a real political discussion to be had about who cuts what and how. But cut we must.

If you ask the priority-ranking question of business leaders, as Accenture did (in early 2008), you find climate change is a low-ish priority. Accenture's survey, reported in the *Independent*, canvassed executives in 500 big businesses in the UK, US, China, Germany, Japan and India – and it found:[21]

> 5% of companies rated climate change as their first priority.
>
> 11% of companies rated climate change as a top three priority.
>
> 89% of companies did not rate climate change as a top priority.

Asked to rank all of their priorities, Accenture found that climate change on average 'ranked eighth in business leaders' concerns, below increasing sales, reducing costs, developing new products and services, competing for talented staff, securing growth in emerging markets, innovation and technology'. Yes it's on their agenda. But no there isn't a war-effort-style shift to this eclipsing any of their previous priorities. Most businesses want a win: win – which is another way of saying they will do it *if* it also helps achieve any of the higher priorities.

Overall you have to wonder if people and corporations just don't think that climate change is that big a risk. That was certainly my impression doing focus groups for a new phase of the UK government ACT ON CO2 campaign. I found, as the surveys say, that people have superficial 'high awareness and concern about climate change'. Most would say that 'everyone thinks about the environment these days' – that it has moderated their behaviour. Nobody I met however was seriously worried that it could affect daily life in the UK, or would impinge much upon their own lifetimes. As one put it; 'it doesn't weigh on your mind'. And hence the actions are all of the 'I do my recycling and …' type. It's a social norm – an 'ought' – but hardly a gripping necessity.

In my focus groups I would ask people to tell me about 'the environment'. They would trot out sound bites from the media: ice caps, polar bears, global warming, greenhouse gases, carbon emissions, poor farmers, floods, droughts, storms … At this level it seems almost like people have really taken it on board. And then I'd ask them to *explain it to me*. Across all my focus groups I don't think a single person managed to piece it together. They had quite a few of the jigsaw pieces. People in my groups told me that it might be something to do with pollution, or ozone holes or …? A few did know about the greenhouse effect. But no one could explain it. They would try and then falter. 'Isn't it something to do with …?' Climate change has not impinged one bit on that model we have in our heads (mine looks a bit like the globe from my geography classroom at school) of 'how the world really works'.

Most studies have concentrated on new ways to communicate this information. But there is another possibility – they aren't taking it all in or taking it seriously because it simply isn't a big risk (or so they assume). A sure sign of where people

are with the issue is the question: how much do you think this will affect our life in this country in our lifetimes? People have a clear and consistent view on this; the answer is 'not very much' or 'not at all'.

No wonder they haven't gone off to frantically research the issue (as many have done with swine flu). They don't think it's a worry. So why bother?

A recent report from the Mental Health Foundation made a telling point about our assessments of sources of risk compared to the actual risks in the world:

> Excessive fear poses an enormous burden on our society directly through anxiety related illness … and indirectly through inappropriate behaviours such as excessive supervision of children or failure to invest. It also paralyses long-term rational planning to deal with key future threats such as global warming by diverting attention to more immediate but less important fears. (MHF, 2009)[22]

Reports into the way climate change has been communicated have been critical of excessive pessimism: what think tank IPPR referred to in their Warm Words Report (2006[23]) as 'we're all going to die' gloom, or even 'climate porn' – impending disaster is presented as sensationalist entertainment. The advice from IPPR is to avoid 'alarmism' in favour of 'treating climate friendly activity as a brand that can be sold' and to focus on meaningful actions such as buying a hybrid car, or fitting insulation (rather than actions too small to be meaningful like thermostats, light bulbs and devices on standby). The IPPR had studied 600 media articles and concluded in their Warm Words Report that the two main tropes – alarmism, and small actions – were unhelpful, especially in combination: alarmism led to doom and gloom

fatalism, while small actions had little credibility as real solutions to this apocalyptic vision.

A 2009 report by EcoAmerica[24] seemed to conclude that the 'best' approach was not even to mention climate change; changing the language to 'atmosphere deterioration' also switching focus to more aspirational issues such as energy security, health, American jobs, freedom, ingenuity.

I have another view.

Firstly it's a group issue – like the social experiment in the waiting room – we need to see our milieu reacting. It's not an information task, in other words. No matter how much smoke pours in, if no one is moving no one will move.

Secondly every citizen should be given the opportunity to think like an MP. Invited into a space where – as part of a citizen panel inputting to the real policies and decisions – they can take in the information and input to what needs to be done. Staging a mass public debate and forum would in itself have the missing newsflash factor – signalling something out of the ordinary.

Some argue – after the disappointing failures of 'green consumerism' to bring substantial change – that we should move to the opposite approach than free choice. That we should move to rationing. That however sounds like a double disaster. Firstly it will fail in its own terms – no regime, even authoritarian, could survive the likely public backlash against mass imposed rationing. And secondly it's a lost opportunity to build a society that is better at co-operating for the common good, because it's based on active citizenship. I'm not the first to figure this out. Leading political figures I have discussed this with, ranging from Conservatives to the Green Party, are cottoning on.

Climate change – along with other global crises in ecosystems, finance, food, poverty and equity – is a test case of our

current political system, where a few people (leaders, MPs) have responsibility and the vast majority do not. And if we want to tackle this sort of issue we need to challenge this basic structure of disengagement, which is at the heart of people not 'getting it'.

Hence I've come to the conclusion that all the advice on 'how to communicate climate change' is misplaced. It's like giving advice about how to write an email telling someone they have a fatal illness. You don't deliver this sort of information that way. You sit down and talk it through with them, over a series of sessions. Giving space for them to own the issue and develop their own responses. And hence you don't need to spin the information into alarmism nor cheerful/meaningful actions in that context.

What we need to have around the risks of climate change is a big chat. Probably in groups so each participant can, rather than stewing on their own with worry, treat it as a collective issue requiring co-operative responses. The Mental Health Foundation Report similarly recommended that we need public forums to air and manage our fears, and convert them into rational action:

> Our social bonds need to be strong if we are to tackle fear. The proportion of us living in situations without strong social support is growing – four times as many of us live on our own as 50 years ago. 'Absence of community' may mean we are forced to cope with social problems at an individual level, rather than confronting them collectively, and our power to overcome them alone may be limited. (MHF, 2009)[25]

This is a radical step, I must admit. For the many to have more power, and more say, means setting in train a process that

could echo the developments in Soviet Russia in the late 1980s. If people had a say what other issues would they start to force the pace on? Would a nationwide debate on the third runway at Heathrow have come out the same, or on building new coal-fired power stations, or going nuclear again? I am in the camp which thinks that's a good thing. So in fact do quite a few of today's politicians. All we need is someone with the gumption of a Gandhi to actually push this through.