How Green Politics Went Mainstream

WE are preoccupied at the moment with the global financial crisis. This has meant that people's minds have been rather taken off what I regard as the much more serious environmental crisis in the background, which is going to have much bigger effects on all our lives in the future. All I would say is, don't be deceived. The current problems are very preoccupying; we look at the gyrations of the stock exchange with, in my case, some amusement – others as well may feel that it is a very bad joke. But put that out of your mind, because I want to discuss the much bigger crisis which now lies behind it.

There is a long and rickety bridge between the world of science, academia and research on one side, and that of public understanding and policy-making on the other. People don't usually manage to get their messages across in the right way at the right time. The crossing is never easy whatever you do. The process of getting information from one side to the other is usually slow, although perhaps at the last few moments it can speed up and create a measure of bewilderment.

On 6 November 2008 at the British Academy, **Sir Crispin Tickell** gave the second in the series of 'Politics and Energy' lectures, jointly sponsored by the British Academy, the Mile End Group of Queen Mary, University of London, and the Science Museum.

In the case of green politics, there have been a number of developments and key documents which have so informed the background that people are perhaps, in the last few months, more aware of these issues than they ever have been before. When you now talk to a politician about some of the things that are going on, they aren't completely uncomprehending.

Key moments

Let me mention some of the key elements in the history. There was the Stockholm Conference on the Human Environment in 1972. The United Nations Conference on Environment and Development – the 'Earth Summit', held in Rio in 1992 – produced the Framework Convention on Climate Change. Then there was the Kyoto Protocol in 1997. These things were very educative events, and all who attended them felt greatly influenced by them. In the late 1980s, partly as a result of the Bruntland Report,[1] the Intergovernmental Panel on Climate Change was set up. This has produced assessment after assessment, most notably the Fourth Assessment Report, *Climate Change 2007*, which brought everything up to date and brought together the world's scientists to make the scientific case.

There was also the 2001 Amsterdam Declaration on Global Change – again frequently neglected – when people from the four great global research programmes came together and produced a document which stated, 'The Earth is currently operating in a no-analogue state. ... The accelerating human transformation of the Earth's environment is not sustainable'. In 2006 in the famous Stern Review, Nicholas Stern looked into the social and economic impacts of climate change (Figure 2).[2] As it happened, I was in Beijing

Figure 1. *Sir Crispin Tickell lecturing at the British Academy, November 2008.*

Figure 2. *Sir Nicholas (now Lord) Stern FBA is flanked by Chancellor Gordon Brown and Prime Minister Tony Blair during a presentation of his report on climate change at the Royal Society on 30 October 2006. Photo by Peter Macdiarmid/Getty Images.*

shortly after the publication of this report and it was very interesting to find that the Chinese already had copies of it and were looking at it very carefully.

For the moment, we have what is called the Global Leadership for Climate Action, which is a collection of former presidents and prime ministers. You have the successive meetings of the 'G8 + 5' countries all talking about these things. You have the Conferences of the Parties (COP) to the UN Framework Convention on Climate Change, of which the most important was that at Bali in December 2007. And you have preparations for the next big event, which is Copenhagen, December 2009. The Copenhagen Climate Council is going to put together a successor to the Kyoto 1 Agreement, which we hope very much will have better effects. I am a member of the Copenhagen Climate Council. We are having our next meeting next month, and it is very interesting to see how progress is being made.

The environmental crisis

Climate change is perhaps the most prominent issue at the moment. I prefer to refer to 'climate destabilisation', because it is not the fact that the climate is changing, which always happens; it is much more the destabilisation which is causing the problems. But the climate is only one of the major issues which our small animal species has to cope with.

You may have seen a recent book published in the United States called *Something New Under the Sun*.[3] To make sense of the scale and character of the whole impact we are making at the moment, on the surface of the Earth and on all living creatures, we have to reckon not only with climate change, but with such issues as: the multiplication of our own species; the degradation of soils; the consumption of resources; the accumulation of waste that people don't know how do deal with; the pollution of water, both fresh water and salt water; how we generate energy and how we use it; the destruction of bio-diversity, which is perhaps the least understood of these various problems. Lord Rees, the President of the Royal Society, has argued that the prospect for our civilisation surviving the 21st century is no more than 50 per cent.[4]

Natural change and human-driven change

The evidence for the crisis we are now facing is not in serious dispute. This is not the place for looking at the science in detail, but I just want to run through the great distinctions between natural change, which takes place all the time, and human-driven change. That distinction goes to the heart of the debate about green politics.

Natural change is constant. Those of you who have followed a bit of palaeohistory will know that the last 11,000 years has been a very warm period in the history of the Earth, after the last ice age. What we look for are the little variations, so-called tipping points, in which one climate regime can move into another. That has happened a good deal during this last warm period, the Holocene.

We have to try and watch what is going on to make certain that these natural changes don't go too far and don't have effects that we can't predict. One of the points where we put our stethoscopes is the state of the Amazonian rainforest, at present in some disarray, with more droughts there than usual. We look at the direction of the North Atlantic currents as they move from the Gulf of Mexico, north eastwards to Britain and Iceland. We look at the patterns of the Indian monsoon, also highly variable; we are having discussions with the Indians about that at the moment. You have the release of methane, a very powerful greenhouse gas, from different parts of the world, like the Siberian tundra, or even the ocean bed. And you have the frequency and the intensity of the two little opposites called El Niño and La Niña, in the Pacific Ocean. Last, much reported on is the state of the Arctic and the Antarctic ice shelves, both at the moment melting quite fast.

That is natural change, taking place naturally in different degrees. But then you come to human-driven change, and that is really where our responsibilities begin to get most important and where the political elements come in. First of all, carbon dioxide is a very powerful greenhouse gas, and there is a relationship between carbon dioxide and the temperature of the Earth. At the moment there is more carbon dioxide in the atmosphere than during the last 650,000 years. In ice age times, it was roughly 190 parts per million of carbon dioxide. In the warm period of the last 11,000 years, it has been hovering around 280–285 parts per million. It is now 385 parts per million and going up every year.

I mentioned methane, which is a 20 times more potent greenhouse gas. The amount in the atmosphere has also increased enormously. The pre-industrial level was 715 parts per billion, it is now 1,770 parts per billion. Nitrous oxide, another great greenhouse gas, is greatly increased again.

The warming of the oceans has proceeded. We can't always tell when the effects of ocean warming are going to take place – there is usually about a 30-year time lag – but global sea levels are now rising by around 3.5 cm a year, and that rate of progress is accelerating.

And the increasing acidification of the surface of the ocean is damaging all living organisms that are used to a rather different regime – affecting fishing, corals and all the rest.

The impact of environmental change

What are the results of this combination of the natural and the human-driven effects? There is the prospect of changes in weather everywhere, with more extreme events. There is accelerated melting of the Arctic and the Antarctic ice. The rise in sea levels will affect coastal cities all over the world, and there are an awful lot of them. The melting of the Andean and Himalayan glaciers will have effects on the water systems of South America and of China and India – about which, I assure you, the Indians and Chinese are very worried. The late Head of the United Nations Environment Programme said he thought that shortages of fresh water were likely to be the most frequent triggers for any kind of conflict in the 21st century. There is the increasing competition for natural resources. And there are changes in eco-systems: we are part of the living environment in a very real sense, and we must remember that the effects of species extinctions are often unpredictable.

All this leads to the potential undermining of current social and, in particular, urban infrastructure – reservoirs, sewage, buildings, industry, public services, and all that. And the European Commission, to its credit, has suggested that all this could lead to heavy movements of environmental refugees, both within countries and between countries, as

people move around to avoid environmental hazards.

That in a very few words is the scientific background. As I say there is now no real doubt about it.

Science and politics

The nature of science and the nature of politics are very different. Scientists work on different degrees of uncertainty and they work also on probabilities. They have to cope with problems of paradigm shift, when suddenly everything changes and we are looking in a different scientific direction – like Darwin 150 years ago, like the theory of tectonic plate movement. These things cause a complete change in the way that we look at things. Coping with 'phoney science' is very important. For example, creationism arouses a good deal of emotion – not least in America where I think that a few people believe that Joan of Arc was Noah's wife.

Some people like to lock themselves into specialities. One of the diseases of our time is that people in one box don't like to know what is going on in other boxes. This is a particular shortcoming of many scientific communities. In different parts of the world we are trying to put this right: I am involved in a number of universities – at Oxford, Arizona State University, Columbia and elsewhere – where we are trying to create institutions which will move people out of their bunkers so that they can understand what others are doing. And all scientists face difficulties in converting the vocabulary of science into the vocabulary of politics.

Few politicians have scientific backgrounds, or understanding of scientific problems. That is one of the things that Margaret Thatcher found most trying: she was the only person in her government to have a scientific background. If I may be allowed an anecdote, I once persuaded Margaret Thatcher that she ought to have an all-day Cabinet meeting on climate change. I was brought back from New York, where I was then Ambassador, to speak at this conference. She really wanted me to be there in order to look at the mandarins, because I am an ex-mandarin myself. After an interesting meeting in which I briefed her about what she was to say, as she walked into the room and saw all these ministers sitting there in a long row, she wagged her finger at them and said, 'You are here to listen, not to speak.' This, of course, was typical of Margaret Thatcher. I remember it had quite an impact.

And the civil servants who operate the mechanics of the system are usually not scientific; they are mandarins of commendable intellectual power, but they are not the people who will necessarily understand science.

Contrast that today with the government of China, which is heavily staffed with engineers and they do understand science in a way that most people in the West don't.

Politicians, at least the democratic ones, usually operate within an electoral cycle: this means that they are more concerned with the short-term problems than the long-term problems. And politicians want black-and-white answers, not shades of probability. And the relevance of science to policy is not always apparent. Scepticism or exaggeration can lead to perverse results, including sterile and emotional debates and poor decision-making. I have been a witness to all those things in my own forays into the world of politics.

The questions facing politicians

A lot of the current greening of politics, and indeed of business, has been called 'greenwash', because the talk has so far greatly exceeded the action. Any progress will depend on how politicians will respond to the following questions.

The first is, in the broadest sense, what should be done about climate change at all levels, global, national and local? Can we lower greenhouse gas emissions in time to avoid drastic changes in the atmosphere, with the kind of effects that are described in the Stern Review?

More specifically, what are the prospects for suppliers of water from current sources? I chair a group for South-East England, and we are trying to look into the effects for the next 20 years of changes in rainfall pattern. Are the reservoirs are in the right places? Are the sewage systems in the right place? If they are not, as is the case more often than not, what are we going to do about it? What would be the effects of any change in reservoirs and storage capacity? Are we going to be able to have the water we need?

What restrictions should we place on carbon emissions from cities? At present, the energy consumed by buildings worldwide accounts for around 45 per cent of greenhouse gas emissions. I talked the other day to the Royal Institute of British Architects about the relationship between all this and urban design and architecture, both in the city and outside it.

Should we move more quickly to renewable sources of energy? – wind, tide, solar, geothermal, biofuels, etc.? And should we possibly move to new nuclear technology? – ranging from the pebble bed reactors that are now being built in China and in South Africa, to fusion as the longer-term prospect?

What new technologies should be applied to transport in its many forms – cars, ships, aircraft, etc.?

How are we going to ensure the supply of food if current supplies overseas get into difficulties, or their prices rise to levels that we can't meet? Even if we did not go for self-sufficiency, should we do more to ensure a measure of self reliance in this country? I chaired a meeting in Oxford about two weeks ago on this very subject, in which we brought in the whole agricultural community to see what we could do if we tried. Are other essential commodities going to be in short supply?

What should governments do about sea level rise? Building up sea defences on a large scale is impossible, because it is going to be a very widespread rise. And we are not only dealing with environment change here: South-East England is gradually sinking at the same time as sea levels are rising.

How should town planning be dealing with these things? How are we going to cope with urban breakdown? Anyone who has studied history knows that cities are very vulnerable.

Could we predict changes in the world of micro-organisms on which we all depend? Again cities are vulnerable to epidemics where people come together. What new as well as old diseases are likely to change in current circumstances?

How politicians have reacted

It is very hard for anyone to answer those questions. I am not sure that many politicians could give coherent answers to any of them. I have had experience in dealing with governments and politicians on some of these issues over the years. Different countries have of course reacted very differently – if they have reacted at all. Many people don't want to hear about this, they prefer to look in another direction. Even when you consult people studying at universities in areas which you think would be relevant, even they say, 'Well, don't do anything yet until it is absolutely certain. We prefer to think about it. Let's act a bit later when we know.' That is not a viable way to carry on.

Figure 3. *A farmer walks on a dried-up riverbed on the outskirts of Zhengzhou, Henan province, 12 February 2009. China, the world's largest wheat producer and consumer, is experiencing what it calls its worst drought in 50 years in its central and northern parts, which produce more than 80 per cent of the country's winter wheat. Photo: Reuters/China Daily.*

Britain

In Britain, there is a long and honourable record of attention to environmental and, in particular, climate change issues. I was an informal adviser to Margaret Thatcher and, after she had gone, to John Major and Tony Blair. And I acted for six years as the founder and chairman of a body called the Government Panel on Sustainable Development, where I was succeeded by Jonathan Porritt in a somewhat different format a few years ago. So I know roughly how politicians in Britain react to all this.

There is now, as you know, broad all-party agreement on the need for action. A Climate Change Bill is going through its last stages in parliament. It will set up a Committee on Climate Change with remarkable powers to enforce respect for targets. It will be in some respects not unlike the role of the Bank of England, because the government can't tell it what to do, and it can in fact make life very difficult for the government if targets aren't met. This new Committee on Climate Change is a very interesting constitutional development.

Last month the government created a new Department of Energy and Climate Change, which caused some dislocation in Whitehall. Ed Miliband is in charge of it, and we will see how he can put it all together. I don't think that Gordon Brown has the same personal, intellectual and emotional interest in climate change that his three predecessors had. But I am encouraged by the creation of this new Department, because that is going to be a great force for good if it can really get going.

Next month there will be a major report on energy efficiency in terms of town planning and the construction industry. Towns, especially London, have worked out detailed plans for their own future. At the same time

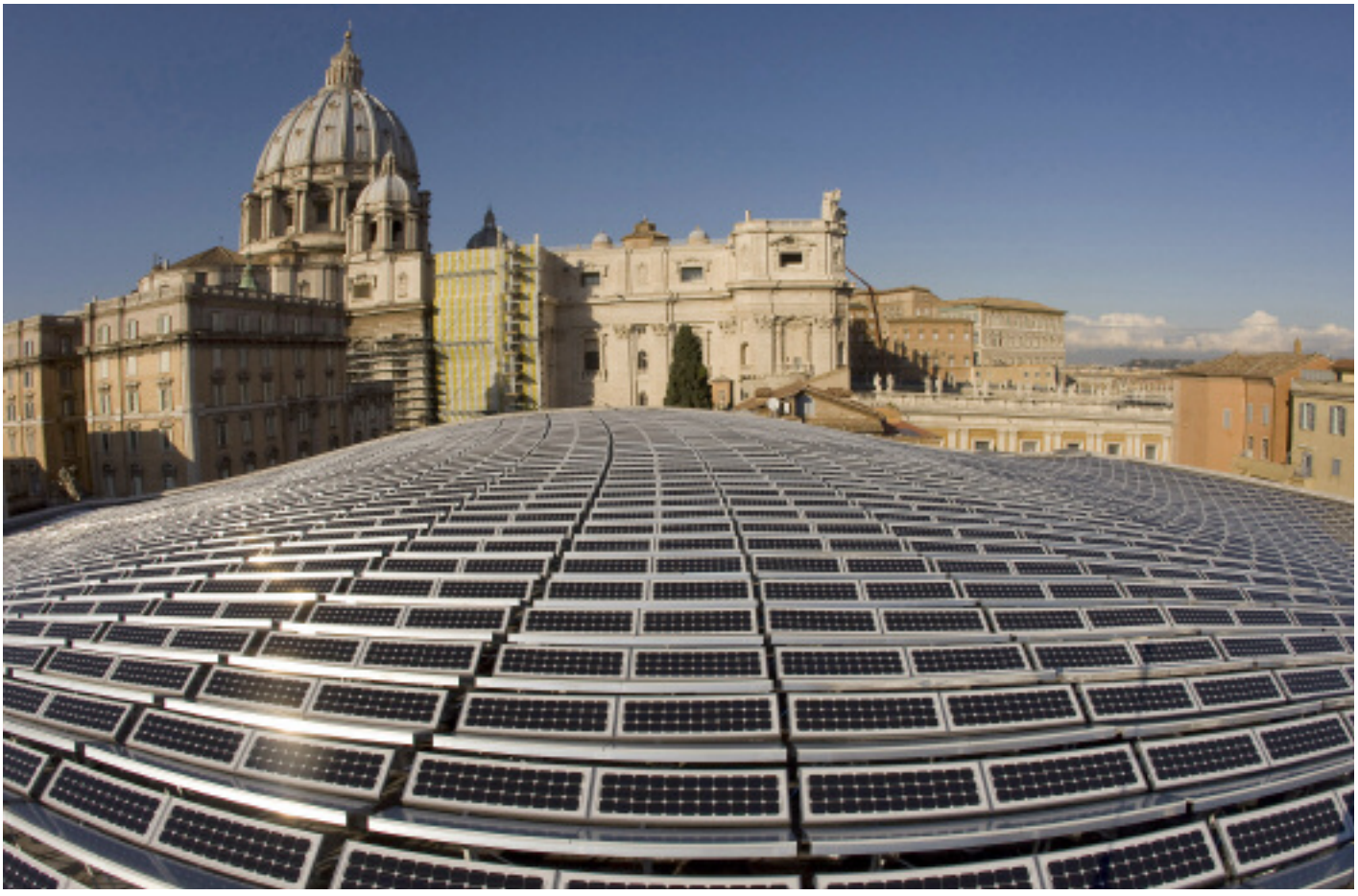

Figure 4. *Solar panels cover the roof of the Paul VI hall near the cupola of Saint Peter's Basilica at the Vatican, on 26 November 2008. On that day, the Vatican was set to go green with the activation of a new solar energy system to power several key buildings, and a commitment to use renewable energy for 20 per cent of its needs by 2020. Photo: Reuters/Tony Gentile.*

there has been blanket coverage of environmental issues in the press and on radio and television.

That is what is going on in Britain at the moment. We are not particularly good at reducing our carbon emissions. Nonetheless there is a ferment, and I think things will change quite a lot in the future.

Europe

In Europe, the scale of the problem has long been recognised, and the European Union has given practical leadership. For example, progress has been made under the Emissions Trading Scheme, which went into operation in 2005 and is now the largest Cap and Trade system for reducing carbon emissions. Improvements for that have now been worked out: there is a mandatory commitment to reach a 20% target for renewable energy. The current debate within the European Union is over the degree to which measures to lower carbon emissions across the economy can be reconciled with the continuing dependence of certain countries, like Poland, on coal supplies for their energy – and with the general economic crisis.

United States

In the United States, which is by far the biggest single per capita emitter of greenhouse gasses, the administration of George Bush has been the villain of the piece, and it has been used as an excuse for nearly everyone not to do what otherwise they might have tried to do. Although the administration of President Clinton signed the Kyoto Protocol of 1997, which was largely designed by Al Gore, neither it nor the current administration decided to put it to the Senate for ratification. Even before the last G8 meeting, things had begun to move and President Bush recognised climate change – he described it as 'a serious long term challenge'. Individual US states and cities, particularly those in the north-east and along the west coast, especially California, are already far ahead of the administration. And with a new president things are going to change pretty fast.

China and India

In China and India, there is growing awareness of vulnerability, particularly over water supplies. For 15 years I belonged to a body called the China Council for International Cooperation on Environment and Development, which gave me access to the Chinese leadership. I can assure you that they all understood very well, whatever their diplomats might say, that the aquifer depletion and the melting of the glaciers in the Himalayas are going to have terrible effects.

In India it is the same story. The Indian government has just produced a bit of paper about the effects of climate change in the monsoon. I co-chair a body called the High-

Level India-EU Dialogue, and we are at the moment trying to work out the effects of all this in India.

Global

Then the global debate continues. The Clean Development Mechanism, a product of the Kyoto agreement, has been widely applied and now accounts for almost half of emissions. But the global mechanisms for 'Carbon Cap and Trade' and 'Carbon Capture and Storage' really have yet to be worked out, and that is what we are going to be trying to do in the Copenhagen Climate Council in December 2009.

Economic development

The pressure to act is on all governments, even those who fear that measures to deal with the environment are going to inhibit their future economic development. That in turn has caused a debate about what future economic development really means, and whether it means what people have thought it meant in the past.

My own view has always been that we ought to create something much more ambitious, perhaps in the form of a 'World Environment Organisation' to balance and be a partner of the World Trade Organisation, and to bring together the 200 or so limited environment agreements, which frequently overlap and in many cases have turned out to be ineffective. It would bring order to a rather messy system. However, as a former British Ambassador to the United Nations, I know how extremely difficult it is to create anything new in the international area, and I don't hold out much hope this will happen. I was very pleased to see that the former President of France, Jacques Chirac, made a strong plea for something like this.

Perhaps our most fundamental difficulty, which I am sure you are all aware of, is the need for us all to think differently across the spectrum – in particular, to look at current economics and the ways in which we measure wealth, welfare and the human condition in terms of the Earth's good health. We need to replace consumerism as a goal and to bring in a wider assessment of true costs. We are still obsessed with such misleading measuring devices as 'growth' and GNP or GDP. We need to tackle the problem of carbon emissions from a global rather than a national point of view.

Here the Chinese may be somewhat in advance of others in seeking to apply the principles of what they call 'clean, green growth', and in working out new methodologies which surprisingly fit remarkably well with the recommendations made by Lord Stern in 2006. That really means trying to measure true costs, and looking at the problem in a longer scale than you can ever get from just measuring productivity.

In all this there is a particular responsibility for governments and politicians to give the right incentives and disincentives, and to put market forces in their appropriate place within the framework of the public interest. You will hear in some of the discussions going on at the moment that 'We must stick to a free market'. But as we all know, there is no such thing as a free market; the only question is how you regulate it and when you regulate it, and how you identify the public interest in doing so.

At present there is a strange mixture of out-of-date, often perverse subsidies which distort markets, as well as negating the public interest. We all suffer from the disease that has been called 'conceptual sclerosis'. Politicians are as subject to it as anyone else, if not more so. True change is brought about usually by somebody giving leadership from above, pressure from below, and – perhaps less welcome – benign catastrophes, when something goes relatively wrong and you can say 'This happened because that happened'. I remember being present in China in 1998, when I expressed condolences at the loss of life from the Yangtze floods. I was stopped by the premier of the day who said, 'No, it was all our fault. We cut down the trees, we had destroyed the top soils, we had filled in the lakes. And so when the storms came, as storms have a habit of doing, then we had these disasters.' He said, in a way that no British prime minister or no president of any other country perhaps can easily say, 'I have stopped timber cutting in the upper Yangtze since yesterday.' Benign catastrophes can often play a useful role – provided of course that they don't affect anyone you know!

I leave the last word to someone whom you may have heard of, a good friend of mine called Brian Fagan, and he wrote

> *If we have become a supertanker among human societies, it is an oddly inattentive one. Only a tiny fraction of the people on board are engaged with tending the engines. The rest are buying and selling goods among themselves, entertaining each other or studying the sky or the hydrodynamics of the hull. Those on the bridge have no charts or weather forecast – and cannot even agree that they are needed. Indeed, the most powerful among them subscribe to a theory that those storms don't really exist, or if they do, their effects are entirely benign – and the steepening swells and albatrosses can only be taken as a sign of divine favour. Few of those in command believe the gathering clouds have any relation to their fate or are concerned that there are lifeboats for only one in ten passengers. And no one dares to whisper in the helmsman's ear that he might consider turning the wheel.*[5]

That is what we have to do.

Question from Professor David Marquand, FBA: Could you say a bit more about the fetish of growth? It does seem to me that this is very central – not only amongst politicians, but also amongst the bureaucracy, and amongst opinion formers in the serious press. Growth is a great force. The glamorous attraction of using growth as a decisive factor in making policies is that it is extremely simple. It isn't really simple at all, in fact: it is the product of a whole mish-mash of assumptions, many of which are rather dubious. But these gentlemen sitting in the bowels of the Treasury or the Bank of England can work away and they can produce you a figure, and they can say, 'We need to have growth at 2.5 per cent, or 3.8 per cent', or, 'How shocking it is that growth is now going to go down to only 1 per cent', or 'We might get negative growth'. This is a simple thing: politicians need simplicity, they need a little tool which can tell them whether they are doing the right things or not.

Surely it isn't beyond the wit of man to devise an alternative measuring rod which would

take in the things that you are talking about. It might be equally as questionable in some ways, but it would produce you a different set of figures. I think you need something hard, or something that looks hard. I can't understand why the economics profession and others haven't yet made a serious attempt to produce an 'index of gross domestic welfare', for example. Perhaps the British Academy can start this process: it doesn't have to be done in government.

Sir Crispin: As of yesterday I believe that the new ruler of Bhutan in the Himalayas was crowned, and his measurement is GDH, 'gross domestic happiness', which is in some respects quite an interesting thing to try and achieve. What you say is perfectly true. It is very interesting that Keynes, whose ghost is now returning to haunt us, was also as sceptical about growth and GDP/GNP. As you correctly say, the temptation is that it is nice and simple, and you can produce measurements that look convincing: there is nothing like flourishing the statistics at people to make them feel that they are out of their depth. Growth has been described to me as a cancer of the economic system. The fact that you have to keep on growing all the time suggests that something is profoundly wrong in the way that you measure it.

What about working on producing new measuring devices? The Chinese have been doing so, the World Bank has been at work on the subject, the European Union has been at work on it. There are institutions in Britain that are trying to work out new ways of doing it. The answer is we don't yet have a comparable system for measuring economic welfare – above all, in the long term. Partha Dasgupta (University of Cambridge; Fellow of the British Academy) has done a lot of work on the subject and others have too. But it is all slow in coming. There are indices of this kind, but they haven't caught on in what you call the bowels of the Treasury. As it is, the bowels of the Treasury continue to serve up some rather nasty stuff, as bowels have a habit of doing.

Notes

1 In 1987, The World Commission on Environment and Development published a report called *Our Common Future*. It was chaired by the Prime Minister of Norway, Mrs Gro Harlem Bruntland.

2 *Stern Review: The Economics of Climate Change* (www.hm-treasury.gov.uk/sternreview_index.htm). Lord Stern is a Fellow of the British Academy.

3 J. R. McNeil, *Something New Under the Sun: An Environmental History of the Twentieth-Century World* (New York: W. W. Norton, 2000).

4 Martin Rees, *Our Final Century: Will the Human Race Survive the Twenty-first Century?* (London, 2003).

5 Brian Fagan, *The Long Summer: How Climate Changed Civilization* (New York: Basic Books, 2004).

Sir Crispin Tickell has been a diplomat, a Permanent Secretary, and the British Ambassador to the UN. He was one of the first commentators to illuminate the dangers of man-induced climate change in his text *Climate Change and World Affairs* (1977), and he is credited with alerting Margaret Thatcher to the issue in 1984.

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