



exactly the same arguments were used in that particular context. The argument was, ‘what is the point of Britain abolishing the slave trade when in fact other countries, Holland, France, Germany indeed, will just fill the breach and step in and the slave trade will go on and Britain will be massively disadvantaged?’

The other part of that argument was that the slave trade represented 25% of the UK’s GDP. Try to imagine today advancing an argument which was going to knock 25% off the UK’s GDP. And yet the nation decided to do it; it became a moral issue. There was a sense that this was an issue that needed leadership and the UK took the lead. There was a sense of an upsurge of abolitionism in other countries as well, and we created a very serious and important moral position for ourselves. I believe the UK can do exactly the same with respect to climate change. We do have the world’s first Climate Act, something we can afford to be proud of.

### **Public Engagement Starting with the Children**

Challenge number two is going to be selling it to the generation that’s going to be most affected by it. And that means engaging with a massive public information programme and a challenge on people’s behaviors. Now, again, we have some advantages. My strongest experience of environmental radicalism tends to be among five, six, seven, eight and nine year olds. So we do have something going on in primary schools on which we can build. The challenge now is to take that through and transition it through into secondary schools and have an entire generation of young people leaving school understanding absolutely that they will not be able to have sustainable lives on the basis that their parents and their grandparents did.

### **Rebalance Economic Expectation**

EMK: So, that is in terms of the UK. What about the challenge for the rest of the world?

LDP: The challenge for the rest of the world is to rebalance economic expectation. It is for the developed world to understand that it has the primary responsibilities in dealing with this.

I think a lot of good work has been done in laying the foundations so that we can aspire to create an equitable relationship by 2050, nation to nation. But that would mean, for the first time in history, that successive generations in the West will live more economically impoverished lives than their parents and grandparents. That has never happened before. None of us knows how human nature will cope with that. I’m a relative pessimist. I’m one of those people that believes that we will eventually wake up and understand the implications of what’s happening—but it may be a little too late and we may already be past the tipping point.

### **The Relationship between Scientists and Policy-Makers**

JJ: Do you feel this failure to wake up is due, in part, to a breakdown of communication between scientists and policy makers?

LDP: I certainly don’t blame the scientists. I think the scientists have, for the most part, been saying the right things for quite a long time. Maybe they weren’t saying it loudly enough, maybe they weren’t saying it insistently enough, maybe the very nature of scientific research and the relationship between scientists and government, and not just in the UK but globally, was such that scientists didn’t feel that it was their position to be quite as strident as they

might have been, although one or two did. There was also a problem, and this is a very, very profound problem, that it only needs three or four reasonably eminent scientists to question the legitimacy of climate change and we face the issue of balance in the media. The climate deniers were given far too much space and noise and credibility at a pivotal moment I think, five, six, seven, eight years ago; we could have got the show on the road and we were being stopped from getting the show on the road while the world (President Bush in particular) tried to decide whether this was, or was not, a man-made or man-assisted crisis.

So your question is a very good one. I think the relationship between science and government is always tricky. What does represent sustainable science? What does represent responsible science? I know that I've talked to UK government advisers Bob May and David King about this. I think both of them feel that they went as far as their remit allowed, and were pretty tough with government, but it does suggest to me that government has a way of silencing scientists when it so wishes.

And I am not sure scientists help their case when they cross the road into policy, because that's when politicians go 'Oh, just a minute'. I think the important thing is for scientists to be very, very clear and use every single medium to explain what the science suggests. They then have to be equally clear that this is an issue that politicians and policy makers have to address. Once scientists start to get engaged in policy creation, it feeds the neurosis that politicians have that their policy-making processes are being interfered with. For me, the role of the scientist is to shout as loudly as possible, 'These are the probabilities. What are you going to do about it?' And keep saying that.

The greatest single weapon in politics is embarrassment. In a sense, it is the role of the scientist to embarrass government into action.

I think the best way of handling politicians is to lay out a set of policy options with very clear indication as to which of those policy options would appear to be the most advantageous and the most possible.

### **The Relationship between Government and the Private Sector**

JJ: How do you think that the public and private sectors can work together to address the new needs that we have for energy and sustainability?

LDP: Well, I'd like to feel that the public and private sectors would sit down together, look at the options, look at the dangers, look at the threats, look at the opportunities, and work together in a very sensible way. Unfortunately, certainly my experience of the last three or four years is that it does not quite work that way. I've worked in companies most of my life, and I try to say to politicians, 'Look, have you ever been to a board meeting? Do you understand what the objectives of a board meeting are?' The objectives of most board meetings are shareholder value and, under the guise of shareholder value, it allows directors of companies to do all kinds of things that as a normal human being, they would not necessarily do.

So I'm afraid I have a lot of dismal experiences of people leaving their humanity outside the door of the boardroom and making decisions which are in some senses not human at all; not quite inhuman, but not particularly human, but such decisions are justified by the catchall phrase of shareholder value. That is something that government has a real problem understanding.

Add to that the fact that government, certainly in the last dozen years or more, has been almost in awe of business. The notion that took hold very powerfully—and it cropped up in the mid eighties—was that businesses were the great wealth generators, businesses were the people who were going to see us right; government’s job essentially was to get out of the way of business and facilitate rather than regulate business. It is only in the last six, seven, eight, nine months that I have heard people actually arguing sensibly and cogently about rebalancing the relationship between government and business. Now if we can rebalance the relationship, then of course they can work together—but if government continues to be awestruck or to feel in thrall to business then no, that partnership will not be effective.

### Engaging the Individual Citizen

EMK: What do you think governments can do to engage the individual citizen and communities?

LDP: What has to occur—and it will occur without doubt, hopefully within a democratic process, otherwise more painfully—is that young people have to be given a voice. Young people have grasped the issues of climate change far better than the older generation – my generation – and indeed far better than politicians. And sooner or later politicians have got to start listening to that voice and working through their policies and in some way accommodating that voice. It needs a generation of politicians to have the courage to engage with the very legitimate concerns of young people. It is the young people of this country, and indeed of the whole world, that will be massively affected by all of this, and they must be given not just a voice but a vote – indeed the final say.

### The Role of Universities and War on Climate Change

JJ: You are the Chancellor of the UK Open University. How do you think that an institution like this can contribute to problems of energy supply and sustainability?

I think universities can be a powerful catalyst. I suppose if nothing else, what the OU can prove is that when you bring the very best brains to bear on a subject, and begin to gather together different views and different possibilities, something important can happen. Government talks of cross-departmental working and cross-department responsibility, but I’m afraid I have enough experience of it to know that government finds it all but impossible to work cross-departmentally and all but impossible to get its collective brain around a single problem, until it goes to war. That’s a very important thing to say. Until we regard climate change as a war, ironically a war with ourselves, our own behaviors, until we see it as a war we will not solve it. So long as we keep thinking that it’s an issue or a problem, one among many, we’re not going to crack this. This is war.

JJ: Do you think that analogy really is the one that we should have? We’ve just come through the War on Terror. Do you think climate change is a more abstract problem?

LDP: Chief Scientific Adviser David King said, in 2004, that climate change represents a far, far graver threat than terrorism. At the time, he was pummelled, both in the press and indeed by one or two politicians. He was profoundly right; he was right then, he is even more right now. Because climate change is long-term.

## Scientists Must Speak with One Voice

EMK: Is there anything you would like to say to scientists, in addition to what we've discussed, about their role in policy making?

LDP: All my experience of working with government going back over thirty years, tells me one thing. Unless you speak to government with an absolutely united voice, government is brilliant at using your internal divisions to defeat you. You cannot afford, and this is very difficult in the scientific community, one scintilla of difference. And this is why I was suggesting, for example, that when offering up policy options, it is good to allow a range of options, but make it very clear which of those options you think is likely to be the most successful. But do not disagree on any component of the core problem. Because, as I said, one or other of the departments or one or other of the officials, or one or other of the people who are engaged with trying to keep business as usual, will use that division as a means of splitting you and dividing you. That's what governments do, they do it brilliantly. So I beg you, speak with a single voice, an identifiably similar range of options, and a very clear pathway forward. And that, hopefully, will get the kind of headlines, will get the television programmes, will engage the media in the way that is needed.

## The Responsibility of the Media

Another thing we should talk about is the role of the media. The role of the media so far has been something close to disgraceful. There are, needless to say one or two heroic examples, and the UK's *Independent* newspaper has done well. One or two of the other papers have done well too. But others have exploited the divisions in this debate as a way of selling newspapers or even television. The UK's Channel 4 was lam-

table in showing the programme, *The Great Climate Change Swindle*. It was a dreadful programme and has done massive damage.

The media have got to understand that they are part of this. They've got to be pressing home all of this. I absolutely believe that I will live to see, I'll probably be pretty old, but I will live to see personal carbon credits. I will, ironically, have been born into a world where I had a ration book and I will die in a world where I'll have a ration book. I can cope with that. What I can't cope with is the idea that the UK's *Daily Mail* and other similar papers are railing at the fact that this is a fundamental assault on my liberty; because my ration book is my grandchildren and my great grandchildren's liberty, and the media must be made to realise that.

## Pick Ideas that are Scalable

JJ: What kind of approaches do you think are needed to change attitudes towards climate change?

LDP: I would urge you to focus on things which are quite quickly scalable. I'm afraid again, if I'm looking back on the last dozen years, I've had a pretty miserable experience of wonderful experiments, wonderful pilots, wonderful ideas, that never went to scale for one reason or another. What is vital is that we find something simple, something that is effective and that can quickly be taken to scale at a price that is affordable. I even only add price that's affordable; of course the price should be affordable but I'm being a realist. So yes, absolutely, go for things like educating children, as I mentioned earlier, but make sure you take them to scale fast.

JJ: One of the great opportunities of our modern world is the use of the internet to scale things. Social networking gives

us huge new possibilities for the challenges we face.

LDP: Yes, I think the internet is a fantastic weapon and I was looking this morning at some things that are being done on the health front. The key there is finding ways of rewarding young people for taking time and getting involved—and indeed rewarding families when the entire family gets involved. It does require a significant shift in terms of policy-making itself. It does require people to start thinking in ways that they hadn't thought for a long time.

### The Need for a Vision

I carry around with me the issue of *Picture Post* from January 4<sup>th</sup> 1941, just a month before I was born; it's entitled 'A Plan for Britain'. Now there was Britain, losing the war with every possibility that there would not be a future for Britain, setting out this extraordinary plan for Britain in its most popular news weekly magazine; this actually became the blueprint for the changes that took place, the National Health Service, the Social Security system.

What we need is that sort of vision under that sort of pressure. I don't see it at the moment. It saddens me to say this, but I don't see that kind of moral courage that's prepared to design a vision for Britain, the post climate-crisis Britain or indeed the post-climate-crisis planet in fact. It, at the moment, is not there. You see it in fragments, you see it from individual speeches by remarkable people, but I don't see a kind of national will to create something that is remarkable. And even more sad is the fact that here we are, living through a financial crisis, which if I were God, I think I might have looked at the world and said, 'You know, you are *so* screwed up. I'm going to give you one last chance. I'm going to create this *immense* financial crisis to

make you focus on and understand that that was the wrong road; that you took the wrong road and you've got a chance to stop, pause, rethink and look at another road.' Again, I have deep unease that many, many, many people, people who should know better, are trying to somehow recreate the world the way it was in 2005, when actually in 2005 it was hurtling into an abyss.

We must hold out a vision of what that sustainable future might be. I come back to that particular issue of the *Picture Post*. You need that kind of courage, you need the ability to say, 'Things look terrible, but they could be fantastic. It could be remarkable.' And you need to say it with authority and you need to say it with courage, you need to say it with absolute conviction. I don't get any sense that that exists right across our political culture at present.

I think, unfortunately, the sheer pragmatics of politics, fear of the reactionary media, has allowed us to slip back into almost cautious policy making, where we're just trying to solve today's crisis and managing to take our eye off the real one, which is down the road. You know, there's a wonderful lesson to learn here, isn't there? We're now dealing with the results of 25 years roughly, 25 years of fiscal incontinence. Try to get people to understand that that will be as nothing compared with grasping the result of 200 years of environmental incontinence; because that is the real challenge. 25 years of financial incontinence, we can get past that with extraordinarily little pain, eventually. We will not solve the problem of 200 years of environmental incontinence without massive pain.

JJ: But wouldn't you take some encouragement from what's happened in the United States over the last few months?

LDP: I'm one of the people who stayed up until five o'clock in the morning to watch Mr. Obama win the Presidency, and who wept at his inauguration, so I'm not short on hope; I'm just a bit short at the moment on optimism. I'm assuming that you'll accept there's a difference.

EMK: Yes. However, let us hope that perhaps that passion and that vision will come along, because I think as scientists, we probably do have a role to play in that.

LDP: As scientists, could I say to you that there are two quotes by scientists that keep me going. One is a quote by H. G. Wells, when he said that the future lies as "a race between education and catastrophe". And the other one is by Albert Einstein where he said, "You can't solve the problems of the future with the same thinking that caused them." Both men were profoundly right.