

Climate change and UK politics, from Brynle Williams to Sir Nicholas Stern

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Abstract

In 2000 the UK Labour government finally abandoned its fuel duty escalator - a policy it had inherited from the preceding Conservative administration - in the face of direct action by farmers and hauliers. A short-term Conservative lead in the polls opened up. In the Pre-Budget Report 2006, the same Labour Chancellor, Gordon Brown, announced a new approach to environmental taxation in the light of the newly published Stern Report, to include an increase in air passenger duty from February 2007. This increase was denounced by the opposition parties as too feeble. As the Stern Report points out, global warming is a global public bad, and therefore all citizens in the world are in a global N-person tragedy of the commons. Everybody knows that a world without global warming is better than a world with it; but each actor is unconditionally better off from defecting (viz., continuing to pollute) than from cooperating (viz., imposing costly restraints on her polluting activities). In the light of that, one would expect 2000 to represent 'normal politics': everybody wants somebody else to drive less. 2006-7, therefore, represents a different politics, in that all UK political parties have committed themselves to tax and/or emission trading policies to mitigate global warming. The paper examines this transition. It accounts for it in terms of rational expressive voting.

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Introduction

In 2010, the member states of the United Nations voted to turn the organisation into a full federation with a directly elected president. In 2012, the first election for the government of the world took place. Gandalf Skywalker, the elected President, immediately announced his programme to combat global warming. Based on the well-established science, as summarised by the UK's Stern Review of the economics of Climate Change (Stern 2006), and the Intergovernmental Panel on Climate Change's Fourth Assessment Report and preparatory papers (IPCC 2007), he announced the following immediate measures. Stern and the IPCC had proved that they were the most cost-effective in ensuring that the stock of greenhouse gas would not rise above 550 parts per million (ppm) of CO₂ equivalent¹:

- A tax on carbon emission designed to bring the consumer price up to the marginal social cost of US\$50 per tonne²;
- An immediate halt to deforestation in Indonesia and Brazil;
- Construction of 2 million 1-MW-peak windmills, occupying 3×10^7 ha, on- or offshore;
- Replacement of coal-fired electricity generation capacity by 700GW of nuclear (twice the current nuclear power capacity).
- The immediate end to all subsidies to industries generating carbon emissions (Stern 2006 *passim*, especially Fig. 8.5)

The carbon tax on international air and sea emitters would be collected directly by the UN federal government. The part not required for the federal government of the world would be remitted to states for state government purposes. Implementation of the carbon tax on domestic sources of emissions was to be left to the individual provinces of the United Nations Federation. The provincial government of the United Kingdom (Ukania) decided to levy its share on domestic emitters by a sharp increase in road and rail fuel duty, and a direct levy on fossil fuel generators and importers. They were to be free to pass on the tax to end users. The tax would raise the consumer price of greenhouse gas (GHG) emitting energy by about 25%. Provinces were asked to amend their land-use policies, where necessary, to ensure that their population share of the required windmills and nuclear power stations was not blocked by NIMBYs. The Ukanian government was expected to strengthen its procedures, announced in 2006-7, for fast-tracking these developments. It entered discussions with the provincial government of France on whether it could trade more windmills in Ukania for more nuclear power in France, which was already above its required population quota. Ukania does not subsidise energy production, but it does subsidise farming,

¹ ppm CO₂e

² The marginal social cost of carbon emissions was still disputed in 2012. President Skywalker took a rough mean of the estimates of \$25/tonne and \$85/tonne from different research groups, as reported by Stern (2006).

which generates the potent GHG methane. Therefore the provincial government announced that subsidies to livestock farmers would only be available in future on condition of methane capture or offsetting by each subsidised farm.

In line with the recommendations and predictions of the Stern Review, the final cost to the consumer of GHG reduction (after allowing for the tax reductions elsewhere made possible by the carbon tax) was 1% of GDP. This was projected to be an annual charge until the stock of GHG was stabilised at 550 ppm CO₂ equivalent in 2050.

Introducing these changes, President Skywalker said:

Greenhouse gas is a global public bad. Climate change is, as the UK's Stern Review pointed out in 2006, 'the greatest and widest-ranging market failure ever seen' (Stern 2006, Introduction p. vi). Left to itself, the market will not price emissions correctly. This is because the benefits of emitting carbon accrue directly to those who emit it, whereas the costs are equally shared among all the citizens of the world now and for the next 100 years. A stock of CO₂ stays in the atmosphere for that length of time. These costs are therefore parcelled out among billions of people, many of them not yet born. Each market participant considers only the costs and benefits to herself in making a market decision. Therefore everybody produces too much carbon.

The citizens of the world are in an N -person prisoners' dilemma (NPD) with one another³, where N = the cumulative population of the world over the next 100 years. The mere fact of knowing that they are in this dilemma does not cure it. Everybody now knows that the best option for the world lies in the reduction of atmospheric CO₂ equivalent stocks. The last world leader to doubt that, the second President Bush of the USA (2001-9), announced his acceptance of this principle at the G8 Heiligendamm summit in 2007. In this NPD, 'defection' means emitting carbon equivalent and 'cooperation' means refraining from emitting carbon equivalent. However, for each citizen in any case where carbon mitigation costs money, the benefits from defecting strictly exceed the benefits from cooperating, *irrespective of the proportion of the rest of the world who defect*. In particular, if everybody else defects, it is in my interest to defect (I would be a sucker not to). If everybody else cooperates, it is still in my interest to defect (because my defection makes an imperceptible difference to the emission abatement). This dilemma is most acute in northern temperate provinces, such as Canada, Russia, Scandinavia, and Ukania, where some of the short-term effects of global warming are positive in the shape of higher crop yields and fewer winter deaths. The NPD is therefore most acute for their citizens and provincial governments.

We have seen a few instances of carbon reduction by provincial government action. The province of France, 'by switching to a nuclear power-based economy, saw energy-related emissions fall by almost 1% per year between 1977 and 2003, whilst maintaining strong economic growth' (Stern 2006 pp.

³ President Skywalker is careful to stress that if the players are regarded as *citizens*, the game is a true *nPD*. If governments, of unequal size, are the players, then the game is more complicated than that, despite the statements in Stern (2006, ch. 21). However, whether the players are regarded as citizens or governments, the game falls into the more general class of tragedies of the commons.

203-4). This switch was by government fiat, not through market forces. The province of Ukania's emissions peaked in 1973 (Stern 2006 p. 180). They have steadily declined since then because of the substitution of gas for coal in its power stations.

Nevertheless provincial governments proved hopelessly inadequate to the task of curbing emissions. Each had an incentive to blame somebody else. Each democratic province was driven by its median voter to take the short-run course of defecting on carbon emission reduction. The short run dominated the long run because my democratic provinces always face general elections within at most 5 years. Some democratic provinces, such as Ukania, started cheap-talk gestures aimed at, e.g., expensive cars, which few people own. But these had trivial impacts on emissions.

We had higher hopes of non-democratic provinces such as Qatar and China, where governments might have been expected to behave like benevolent dictators. Alas, they did not. In particular, the glaringly obvious move of substantial taxation of aviation fuel was not made, because airlines played countries off against one another by threatening to refuel in the lowest-tax regime.

Therefore, only the advent of world federation has made it possible to attack global warming. The world's median voter, who lives in Indonesia, will be much more sharply affected by global warming than voters in rich provinces. I am pleased to see that, although they had the option of voting for candidates who pooh-poohed global warming, the voters of Indonesia, like the voters of most provinces (although sadly not the USA province), gave me the largest number of votes. If you do not like my policies, you have the option of voting for someone else at the end of my term in 2018.

Meanwhile, back in the real world...

What requires to be explained in the politics of global warming is not why governments fail to follow optimal policies. A world benevolent dictator would start with Table 1.

Table 1 Greenhouse-gas emissions in 2000, by source

Power	24%
Transport	14%
Buildings	8%
Industry	14%
Other energy related	5%
Waste	3%
Agriculture	14%
Land use	18%

Energy emissions are mostly CO₂ (some non-CO₂ in industry and other energy related).
Non-energy emissions are CO₂ (land use) and non-CO₂ (agriculture and waste).
Total emissions in 2000: 42 GtCO₂e.

Source: Stern 2006, Figure 1.

She would note that most abatement bangs per buck come from power, then land use, then transport, industry, and agriculture jointly. The cost of abatement varies in different sectors, but she would therefore apply the abatement measures listed in the previous section, probably starting with the windmills and nuclear power stations. She might authorize a system of tradable permits, priced correctly to ensure that those who can abate their emissions most cheaply do so, and make more money by selling their permits to those whose abatement costs are higher. End of story.

A world president has a slightly more difficult task. He has to be elected, and then re-elected, by the median world voter. For his first election he may offer a portfolio of policies, and be elected by being close to the median voter on things that matter more to her than global warming. Also, as noted in the previous section, the world's median voter is more vulnerable to the costs of global warming than the median voter in a Western capitalist democracy. However, President Skywalker has to be re-elected, so he cannot guarantee not to be toppled by a populist who downplays global warming and offers the people their 1% of GDP back.

Someone who wants to run an individual democracy has a yet harder task. There is no *a priori* reason to expect politicians to converge on the optimal global warming policy. In the UK, they have not. They are edging towards it on nuclear power and windmills, but very gingerly and nimbly. They are not offering to fund the massive transfers that would be needed to pay to halt deforestation in Indonesia or Brazil, or to reduce power station emissions in India and China. They are not proposing to cease subsidising British farming. Although, unlike some capitalist democracies, the UK does not subsidise dirty sources of power, it does subsidise agriculture, and ministers have, as they say, no plans to stop that.

But the fact that UK politicians do not offer optimal policies against global warming is uninteresting. Only a super-naïve model of politicians as would-be benevolent dictators would predict that. What is more interesting is that in the years 2000-2006, UK politicians moved from no talk to cheap talk. All parties did, but the rest of this paper focuses most on the main opposition Conservative party, which has moved the furthest.

Throughout the 1997-2001 and 2001-05 Parliaments, the Labour Party had a comfortable lead in the polls, consistent with their landslide victories in 1997 and 2001 and their comfortable victory in 2005. Standard Rikerian theory (Riker 1982) therefore predicts that the opposition would have an incentive to look and look and look again for any policy line that would defeat the hegemon. The 2001 and 2005 elections proved that a Conservative 'core constituency' focus on law & order, immigration, and keeping the £, was insufficient because it failed to reach the median voter. Only one episode broke the Labour hegemony. This was the fuel price protest of September 2000, which dried up the petrol pumps and gave the Conservatives a lead in the polls which lasted for two months.

The most prominent leader was a North Wales farmer called Brynle Williams. As reported at the time:

Mr Williams said he went to the initial meeting to vent "outrage" at the price of red diesel which many believed to be a "nail on the coffin" of an already beleaguered farming industry.

According to him, the rising cost had meant spending an extra £80 a month on fuel for his farm which had already been hit by the BSE crisis....

As soon as he returned to the blockade on Tuesday [12.09.00], he resumed his role of meetings co-ordinator and media spokesman.

Claiming a "moral victory", it was Mr Williams who announced in the early hours of Thursday morning that the blockade outside the Stanlow Shell Oil Refinery in Cheshire, was to end.

But such deft handling of mass demonstration and confidence when faced with scrambling camera crews, could be put down to experience.

As vice chairman of the Farmers' Union of Wales, Mr Williams also helped set up the more militant Farmers for Action.

And he was instrumental in organising mass demonstrations at Holyhead in north Wales two years ago over meat imports.

After disturbances with police resulted in the arrest of seven protesters, Mr Williams decreed that the violence should mark the end of the demonstrations.

(Source: <http://news.bbc.co.uk/1/hi/wales/924774.stm>, consulted 13.06.07)

In 2003 Mr Williams was elected as a Conservative member of the National Assembly for Wales, and was re-elected in 2007. One of his recent press releases states:

Reacting to a recently published report from Cambridge Econometrics which predicted that the UK would miss its 2010 renewable energy and carbon emission targets, Brynle Williams AM, Spokesman on the Environment believed it had worrying implications for Wales. Mr Williams said:

This report highlights the shortcomings of the Government's plans for renewable energy, and raises serious questions over Wales' contribution.

Since Labour came to power in 1997, carbon emissions in Wales have actually increased, unlike England and Scotland, which have achieved substantial cuts.

By putting all their eggs in one basket with massive and intrusive onshore wind farms, the Welsh Assembly Government has set itself up for missing its own targets instead of investing in a broader range of renewables such as biomass and marine energy.

(Source: 'Concern that UK will miss renewable energy target', http://www.brynlewiliams.com/news_detail.php?lang=&nid=430, consulted 13.06.07)

Mr Williams has clearly moved a long way. So has his party. The purpose of this paper is to explain this move.

The politics of the fuel protest were 'normal politics'⁴. A special interest grabbed public attention and got concessions. In this case, they grabbed public attention spectacularly by blockading fuel distribution depots. This is not a policy normally associated with Conservatives, who last endorsed direct action between 1912 and 1914, when they encouraged the paramilitary revolt of Ulster Protestants (McLean and Lubbock 2007). Moreover the interests of the special interest were not as special as they made out. Note Mr Williams' reported reference to 'red diesel' in his 2000 protest. Diesel for farmers and public transport is liable to lower tax rates than diesel for other motorists. It is dyed red to prevent fraud, which is nevertheless known to be widespread in rural Wales among other areas. Mr Williams was therefore urging the public to revolt against taxation from which his tractors were exempt. The other group leading the protests were road hauliers. However, all UK road hauliers are subject to the same rate of fuel duty, so that the true incidence of goods vehicle fuel taxation is not upon road hauliers but upon those who consign goods. The hauliers would be a special case for treatment if either other transport modes or other hauliers got favourable treatment. Rail freight operators can use red diesel; but they have to pay infrastructure costs that road freighters do not. As for overseas hauliers, who were among the bogeymen of the 2000 protests because they allegedly filled up with cheap fuel Abroad and then stole British hauliers' bread from their mouths, a later Treasury study found that the practice made a trivial impact on road haulage within the UK (HM Treasury 2006). And British hauliers who go Abroad can get cheap diesel there too.

Mr Williams' direct action killed off the fuel duty escalator. This was a policy introduced in 1993 by the previous Conservative administration for environmental reasons. In order to meet the UK's obligations taken on at the first UN attempt to bind member states, the Earth Summit at Rio de Janeiro (1992⁵), fuel duty was to rise in each annual budget by 3% more than the rate of inflation. In his Pre-Budget Report of 1999 (PBR 1999), Labour Chancellor Gordon Brown announced that he was abandoning the automatic escalator mechanism, and that 'the appropriate level of fuel duties will be set on a Budget by Budget basis, taking account of the Government's economic and social objectives as well as the UK's environmental commitments.' In PBR 2000, after the fuel price protests, Chancellor Brown announced a freeze on duty. A freeze in an *ad valorem* tax is always a real reduction if either of inflation or GDP growth is positive. In 2000, both were.⁶

⁴ This is not meant to imply that the UK politics of climate change was 'abnormal', merely that it was no longer dominated by producer-group interests. It is to be noted, although it is beyond the scope of this paper to explain why, that in many EU and other European states (and beyond – e.g., Switzerland, Norway) it has become impossible for mainstream political parties to take up a 'climate sceptical' platform. See Table 3 for cross-national poll data on the level of concern at global warming.

⁵ Stern (2006), p. 454.

⁶ The PBRs are available at http://www.hm-treasury.gov.uk/pre_budget_report/pre_budget_report_1999/pbr_99_index.cfm and http://www.hm-treasury.gov.uk/pre_budget_report/pre_budget_report_2000/prebud_pbr00_index.cfm.

Real fuel duties are therefore low by historic standards. There are currently rumours that the Conservatives plan to reintroduce the fuel duty escalator.⁷ Brynle Williams' reaction is not known.

The announcement by Steve Norris, a former car dealer who in 2006 headed a Conservative working group on transport reporting to party leader David Cameron, that he was considering the reintroduction of the policy that Brynle Williams' blockade of Shell had killed off, was not an anomaly. Since being elected Conservative leader in December 2005, Mr Cameron has moved party policy radically to the left in several areas. He has accepted same-sex civil partnerships, which previous Conservative leaders bitterly opposed. He has abandoned a traditional Conservative commitment to building a selective grammar school in every town. And he made several expressive gestures to show his warmth towards averting global warming. Two that were widely derided were:

- cycling to work (but it was revealed that a car followed behind with his papers);
- flying to Norway to view glaciers melting⁸.

Nevertheless, he has successfully positioned the Conservatives as a party that cares about global warming. The Labour government published the Stern Review of Climate Change alongside the annual Pre-Budget Report in 2006. In that report, Chancellor Brown announced an increase in air passenger duties as an anti-global warming measure (Table 2).

Table 2. Air Passenger Duty Rates from 1 February 2007

£ per UK flight departure		Old duty rate	Change	New duty rate
Passengers flying to EEA destinations and certain other European countries	In lowest class of travel	£5	+£5	£10
	In other than lowest class of travel	£10	+£10	£20
Passengers flying to other destinations	In lowest class of travel	£20	+£20	£40
	In other than lowest class of travel	£40	+£40	£80

Source: HM Treasury, Pre-Budget Report 2006, at http://www.hm-treasury.gov.uk/pre_budget_report/prebud_pbr06/press_notices/prebud_pbr06_press02.cfm.

⁷ "Tories would bring back fuel duty 'escalator'", *Daily Telegraph* 02.09.2006, at <http://www.telegraph.co.uk/news/main.jhtml?xml=/news/2006/08/31/uosborne.xml>.

⁸ See BBC, 'Cameron visits Norwegian glacier', 20.04.2006, at http://news.bbc.co.uk/1/hi/uk_politics/4925444.stm; 'Gloves come off as Mirror and Cameron declare war', *Observer* 10.06.07, at <http://observer.guardian.co.uk/business/story/0,,2099270,00.html>.

The Opposition complained not (as over fuel tax in 2000) that this was excessive, but that it was inadequate (although Mr Cameron, unlike the Liberal Democrats, did not go so far as to vote against the rises). The latest available newspaper summary of Conservative environment policy is:

Carbon tax

Convert the Climate Change Levy into a proper carbon tax, creating a long-term price for carbon to make products and activities that produce high levels of carbon more expensive

Green air miles allowance Charging fuel duty and/or VAT on domestic flights; replacing **air passenger duty** with a per-flight tax based more closely on carbon emissions; green air miles allowance so that frequent fliers pay tax at a higher rate.

Green cars

Cut average emission levels from new cars from around 170g/km to 100g/km by 2022. That should be an average for all Britain's cars by 2030.

Green energy

Promote efficiency with consumers producing more of their own energy; pave way for more investment in low-carbon energy sources including wind, wave and solar power. Two-year moratorium on sale of overgrown railway lines until viability assessed.

(Source: 'Cameron's environment policy', *Daily Telegraph* 17.05.07).

Why did the Conservatives shift?

As noted, the 2000 fuel-tax revolt gave the Conservatives their only poll lead over Labour during the 1997 and 2001 Parliaments. Brynle Williams achieved what successive Conservative leaders John Major, William Hague, Iain Duncan Smith, and Michael Howard all failed to do. Why did the revolt work for them, and why has the Conservative front bench abandoned that strategy?

The revolt worked because UK public opinion has failed to connect fuel taxation with global warming. Opinion poll results have been pretty consistent on this.

If the question is simply 'Do you care about global warming', the answer is *Yes*. Table 3 reports data collected by a polling organisation and reported by Stern (2006).

Table 3 Public attitudes to climate change around the world³⁸

Global Warming Concerns:

	A great deal	A fair amount	Only a little/Not at all	DK
	%	%	%	%
United States	19	34	47	1
Great Britain	26	41	32	1
Spain	51	34	14	2
France	46	41	14	0

Germany	30	34	36	1
Russia	34	31	34	1
Indonesia	28	48	23	1
Egypt	24	51	23	1
Jordan	26	40	34	0
Turkey	41	29	23	8
Pakistan	31	25	39	5
Nigeria	45	33	20	2
Japan	66	27	7	0
India	65	20	13	2
China	20	41	37	2

Based on those who have heard about the "environmental problem of global warming".
Source: Pew Center, reported in Stern 2006, Box 21.6

However, feeling that something must be done is disconnected from feeling in favour of doing anything. The latest available UK data on road transport come from a Yougov survey of February 2007 (Table 4). Although Yougov's question refers to one public bad, congestion, any measure that reduced traffic would also mitigate another one, global warming. Therefore the question is a valid measure of people's willingness to be inconvenienced in order to mitigate public bads.

Table 4 UK perceptions of effectiveness of traffic reduction measures

Which of the following do you think would be the single most effective means of reducing traffic congestion?

Providing more buses and trains so that people would not have to rely so much on their cars	55
Building more roads	16
Charging people extra for driving on the busiest roads, especially at peak periods	9
Increasing sharply either fuel duty or vehicle license duty	2
None of these	12
Don't know	5

(To all except "none" and "don't know") **And what would be the next most effective means of reducing congestion?**

Charging people extra for driving on the busiest roads, especially at peak periods	21
Building more roads	20
Providing more buses and trains so that people would not have to rely so much on their cars	19
Increasing sharply either fuel duty or vehicle license duty	8
None of these	27
Don't know	5

(Source: Yougov. $n=2292$. Fieldwork 19-22.02.07)

Like every other poll I have seen, this confirms that citizens are willing to make cheap talk or non-budget-constrained commitments ('let there be more buses and trains'), but unwilling to make commitments where the costs are obvious and upfront. Only 11% of respondents to the first question are willing to support either of the only two economically literate solutions to transport congestion and emission abatement,

namely road pricing and increasing fuel tax. Even adding the results from the forced-choice second question brings the proportion prepared to accept these up to only a maximum of around 30%. Only two road-pricing schemes exist in the UK at the time of writing: a large one in London and a tiny one in Durham City. A proposal to introduce road pricing in Edinburgh was heavily defeated in a referendum in 2005. A petition against road pricing on the 10 Downing St site in 2007 attracted over a million signatures. A counter-petition in favour attracted only about 30,000. You may if you wish add your name to the *Daily Telegraph's* anti-road-pricing petition online (www.telegraph.co.uk/roadpricing). The UK government has introduced a bill empowering local authorities to introduce road pricing but has no plans to do so itself.

Going beyond road transport, other data are available from both Yougov and Ipsos-Mori on the UK population's willingness to support anti-global-warming measures. Tables 5 and 6 record, respectively, people's willingness to take abatement measures and to pay environmental taxes.

Table 5

In order to combat global warming, would you personally be prepared to..., %

	Would definitely	Might	Would not	Not relevant to self	DK
Take fewer holidays abroad	27	22	23	24	4
Improve your home insulation	61	22	2	13	3
Club together with neighbours to install a wind turbine for generating electricity	25	37	20	9	9
Use less hot water	33	39	20	4	3
Install solar panels on your house	35	41	10	9	5
Avoid, as far as possible, using packaged goods in order to reduce waste	51	35	8	1	5
Drive your car less	25	32	23	16	4
Fly less frequently	27	24	20	24	5
Use fewer electrical appliances around the home	26	45	22	3	4
Buy more locally-produced food	52	35	6	2	4

Table 6

Would you support or oppose..., %

	Would support	Would oppose	DK
Taxing more heavily companies whose factories and other facilities emit large amounts of greenhouse gases	83	8	6
Increasing the duty on petrol and diesel fuel	23	65	12

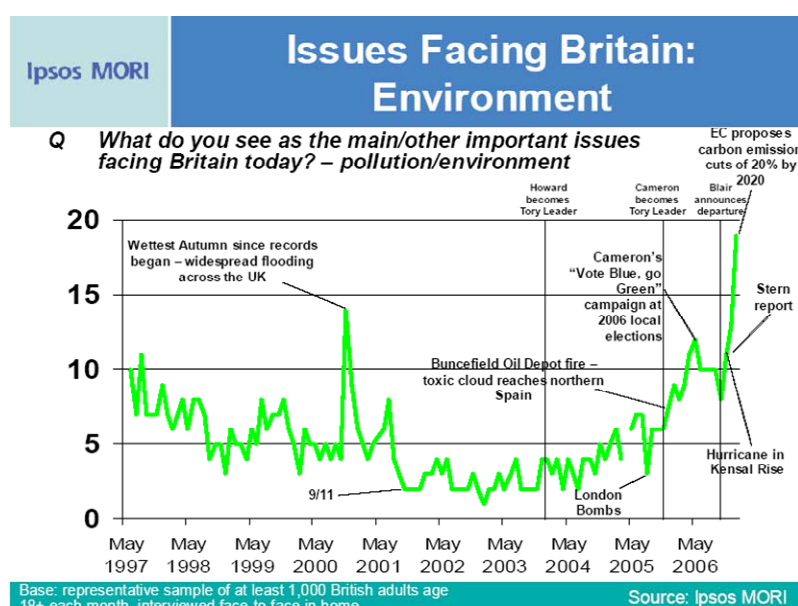
Taxing more heavily restaurants, shops and other firms that produce a great deal of waste	66	23	11
Increasing the council tax on homeowners whose households produce a great deal of waste	42	47	12
Increasing the tax on large executive-style, estate and 4x4 vehicles	72	21	8
Introducing a new tax on all flights	46	40	14
Making it more expensive for supermarkets to import produce that has to be flown to this country from countries overseas	60	26	14

Source for Tables 5 and 6: Yougov for *Daily Telegraph*, 30th October - 1st November 2006. $n = 1619$.

The pattern is clear. People are willing to do (only) things that seem cheap, and things whose cost appears to fall on other people. It is unlikely that many respondents thought deeply about the likely true incidence of environmental taxes on restaurants and supermarkets.

The environment is a medium salience issue in the UK. Figure 1 shows the time series of salience from IPSOS-MORI:

Figure 1



The environment has never topped the standard ‘main issue facing Britain today?’ question. Health, law & order, immigration, and security always run ahead; Europe and education formerly did but have now dropped below. But note that the environment has doubled in perceived importance since the Conservatives adopted environmentalism and the publication of the Stern Review.

These data therefore show that the Conservatives had the option (although they were not forced) to try out the environment as a heresthetic move to stake out a political dimension for themselves. However, Brown's commissioning of the Stern Review was also a commitment to change policy. Stern was commissioned before Cameron's move, although it reported after it. Gordon Brown is notorious for never commissioning a review unless he can predict the broad line it will take. Therefore, it is not certain that the Conservatives have gained support from environmentalism alone. Cheap-talk environmentalism has become a valence issue. Politicians of all parties are doing it. This applies not only to national but to local leaders. London Mayor Ken Livingstone's controversial extension of the congestion charge zone into the Royal Borough of Kensington and Chelsea in February 2007 seems to have cost him no popularity, except in the borough where he had little to start with. The congestion charge extension is cheap talk for those who do not own Chelsea (or Kensington) tractors.

Getting that old-time religion

To characterise the Conservative move from 2000 to 2006 as cheap-talk environmentalism is not to deride it. It may be not only advantageous for them but socially optimal. To see why, return to the conceptualisation of global warming as a tragedy of the commons among all the citizens of the world now and into the future. Conceived of as a single-shot *nPD* game, it has only one equilibrium, that of universal defection, as explained above. But it is not a single-shot game. It is a repeated game, in which citizens, and governments, interact with one another frequently. Repeated PD games, in some circumstances, have cooperative solutions. In fact, what is known in game theory as the 'folk theorem' states that anywhere in the space bounded by universal defection, universal cooperation, and various retaliatory strategies (excluding only space where players are consistently 'suckered') may be an equilibrium.

In the light of the folk theorem, it is not longer necessary to believe that all PDs and tragedies of the commons end in universal defection. Local islands of cooperation may emerge. For instance, a small town may decide to make itself 'carbon neutral' and social cohesion may persuade the selfish and the sceptical to cooperate. On the international scale, an international organisation may decide to make soft law (cf Stern 2006, ch. 21) rather than hard. The Rio Summit was a (somewhat) successful example of soft law. The Kyoto Protocol was a limited attempt at hard law⁹. Or politicians may shop for fora. If the UN will not produce a climate change protocol, what about the G8 (Gleneagles 2005; Heiligendamm 2007)? Or the OECD? Islands of local cooperation may grow (although they need not). Some global commons

⁹ The Kyoto Protocol is best known for the refusal of the successive Clinton and Bush Administrations in the USA to adopt it. However, it can be argued that the aim of the Protocol was to establish an institutional architecture, based on the idea of introducing legally binding absolute emission caps, and on flexibility mechanisms such as emissions trading. It has been remarkably successful at that. The fact that the Kyoto Protocol is in force and the instruments are being implemented even against the active opposition of the 'hegemon' is a remarkable success. The architecture of the Kyoto Protocol is here to stay, which constitutes an important signal for the business sector, in particular. In particular, the EU Emission Trading Scheme would not be here without the Kyoto Protocol. The design of the initial phase of the ETS was flawed because member state governments handed out far too many permits to pollute. As a result, their market price crashed and the ETS achieved no carbon mitigation. However, grandfathering of allowances was probably necessary to gain industry acceptance.

dilemmas have been successfully tackled by these methods (such as removal of ozone-depleting chemicals from the atmosphere). Others have not (such as the collapse of many fisheries).¹⁰ The EU emissions trading scheme was another example of a local coordination scheme. The first phase of it achieved nothing substantive, because permits to pollute were overissued. But it sent a signal, which financial markets have picked up, that the EU would back emissions trading. Future rounds may set more realistic volumes of permits for 'grandfathered' producers.

What strategies may induce local cooperation? One promising one is inducing shame and guilt. Unlike envy (e.g. at Chelsea tractors), which has only limited traction, shame and guilt may lead to genuine self-sacrifice. If politicians can make sufficient people feel ashamed and guilty, they may change their behaviour, and even get them to reward those politicians for making them feel ashamed and guilty.

This is expressive, not instrumental politics. But it is none the worse for that. The classic Downsian dilemma – why does anyone ever vote, given that the probability of decisiveness for an individual voter is infinitesimal? – is insoluble on instrumental postulates. It can only be solved by postulating ethical voters, who vote for the side they support for expressive reasons:

[W]hat presents itself for the voter's choice is not the political outcome, and any voter who believes otherwise must be deluded. One who intends through his vote to bring about the election of candidate X is on all fours with someone who steps on a crack with the intention thereby of breaking his grandmother's back (Brennan and Lomasky 1993, p. 171).

If voters can be expressive about party choice, they can be expressive about much else, including Third World poverty and global warming. If politicians can persuade them that it is in some sense their moral duty to do so – a duty which includes the duty to posterity – they have more chance of getting locally cooperative solutions to the global warming nPD.

It is in this context that the Stern Review is not so much economics as eschatology¹¹. To put it vulgarly, it makes your flesh creep. Global warming gives rise to some truly horrifying possibilities by about 2100, especially if positive feedbacks come into being. For instance, primary warming may reduce plants' capacity to absorb CO₂, which would increase the speed of warming. Eschatology is about death, judgment, heaven, and hell. It is easy to think of three of these engulfing Earth in the event of mean temperature increases of 4-5°C. The markets do not think that Earth will be even slightly like Venus in 2100, because if they did, long bonds would be priced accordingly. But hellfire preachers may have good reason to make our flesh creep about the possibility.

What should we do in the face of death, judgment, and hell? We should repent. And we should behave as if death, judgment, and hell will come to all those who do not truly repent, even if we think that the probability of that outcome is low. That is the

¹⁰ The ideas of these two paragraphs are drawn from an unpublished presentation by Professor Duncan Snidal, Oxford, 15.06.07.

¹¹ *Eschatology*: The department of theological science concerned with 'the four last things: death, judgement, heaven, and hell'. *OED* online.

classic logic of Pascal's Bet. Even if the probability of God's existence is infinitesimally low, said Pascal, we should behave as if we believe in Him, because the reward of belief is eternal life and the penalty of unbelief is eternal damnation. Behaving as if you believe in God incurs minor costs (going to church) but may bring infinite rewards.

Actually, the logic is *better* than Pascal's bet, which depends on God being the sort of God who punishes unbelievers and rewards believers. What if He were the sort of God who punishes believers and rewards unbelievers? Even if my taking empty bottles to the recycling bin only decreases infinitesimally the probability that Earth will have turned to Venus by 2100, it is the right thing to do. So long as I walk and do not drive to the recycling bin, I cannot be making global warming worse. Going to the recycling bin is an equivalent minor cost to going to church. And (a separate point) it makes me feel good.¹²

Several eminent economists (e.g., Dasgupta 2006, Nordhaus 2007, Klemperer 2007) have pointed out that Stern's argument depends vitally on a low discount rate. Stern is quite upfront about this – the arguments are set out in his chapter 2. The discount rates which are used more widely in economics have the effect of valuing the welfare of future generations less than the agent values her own welfare. There can be many reasons, positive and normative, to justify such an assumption. Stern considers that they are overridden by the ethical imperative that the welfare of future generations is worth not less than the welfare of the generation now living. The discount rate he uses, therefore, discounts only for the probability that life on Earth will be wiped out by a meteor collision or comparable catastrophe.

That is fundamentally an ethical viewpoint, which can be shared by citizens of many religions and none. It points to two motives for action: *Do what is right* and *do what makes you feel good*. In the politics of global warming, these have come increasingly to coincide. That is a rhetorical triumph for UK politicians including both David Cameron and Gordon Brown. It may induce islands of cooperative behaviour in small things. It is even possible that it may lead to harder law and links between islands of cooperation, such that world society moves closer to the general cooperation equilibrium in the folk theorem solution. It may not be the UK Conservative Party, in the end, which profits most from this rhetorical shift, but it played a part in bringing it about.

¹²

Thanks to Mathew Humphrey for forcing me to clarify my argument at this point.

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