

Confronting Policy Dilemmas

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Apart from much of today's idiotic 'conspicuous consumption', there are only two facets of current human behaviour that simply cannot be squared with any reasonable scenario of a genuinely sustainable future for humankind as a whole. The first is the continuing growth in demand for air travel, and the second is the continuing growth in demand for meat consumption. However traumatic the transformation from a carbon-intensive way of life to an ultra-low carbon way of life may prove to be (and the longer we delay, the more traumatic it *will* be), there are no other *insuperable* barriers from either a technological or a socio-economic point of view.

Aviation's contribution to total greenhouse gas emissions is still relatively small (anywhere between 2 per cent and 4 per cent, depending on how the calculations are done). Livestock production, by contrast, contributes at least 18 per cent of total greenhouse gas emissions, though here again the figures are complex.

Interestingly, that 18 per cent is almost exactly the equivalent of total greenhouse gas emissions from continuing deforestation. After years of neglect, what is known as REDD (Reducing Emissions from Deforestation and Degradation) is now very high up the list of priorities for world leaders. Ever-larger sums of money are being talked about in order to get a series of global deals in place.

By contrast, policy makers' attention to the 18 per cent from meat eating is as close to zero as it is possible to get. But for how much longer can that deplorable state of affairs continue? As the data get more robust (as mapped out in Chapter 3 in this book), academics and NGOs are now beginning to flex their muscles in terms of forcing the issue into the public domain. In 2004, through its Eat Less Meat campaign, Compassion in World Farming was pretty much a lone voice advocating decisive interventions by government to restrict projected increases in per capita meat consumption. Today, it's far from being a lone voice. Indeed, the food retailers are all carrying out their own analysis of the issue, and more and more people inside governments in the EU know that the meat consumption challenge is just going to grow and grow.

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In a previous publication for Compassion in World Farming, I felt it important to state my own personal rationale as a consumer of meat:

I write these words as a meat-eater. I've never been a vegetarian, and as a prominent exponent of all things sustainable, have often been attacked by vegetarians for what they see as inconsistency at best and outright hypocrisy at worst. I don't see it that way, though I'm aware that my own personal response to this dilemma (which is to try and eat a lot less meat and buy almost all the meat we consume as a family from organic suppliers) won't work for most people for reasons of price, availability and so on.

Whilst I will always continue to campaign actively to improve the welfare of farm animals, and to eliminate all forms of cruelty from the food chain, I'm reconciled – with those caveats – to the moral acceptability of the human species using other animal species for their own benefit. By contrast, I'm far from reconciled to the grotesque misuse of the earth's resources that our current pattern of meat-eating demands. (Compassion in World Farming, 2004)

Building on that rationale, I believe it is perfectly possible to produce meat on a strictly sustainable basis and according to the strictest ethical criteria. But the implication of taking both of those two concepts seriously (sustainability and ethics) is that the total amount of meat consumed in the world will be massively reduced.

Exactly the opposite is happening today. According to the Food and Agriculture Organization (FAO), total global meat consumption is projected to grow from 240 million tonnes today to 376 million tonnes in 2030 and 465 million tonnes in 2050. In 2008, sharp price rises in all the major food commodities caused severe food shortages in many parts of the world, with food riots in around 25 different countries. Doubling meat consumption over the next 40 years will require the growing of at least 1 billion tonnes of additional feed. Even if such growth were 'a good thing' (and this book has demonstrated just how dreadful a thing it would in fact be), it simply won't be physically possible. So why do we permit chronic 'impossibilism' of this kind to dominate our worldviews and our policy deliberations?

The power of industry

Many of the reasons for this deeply unsatisfactory state of affairs have surfaced in preceding chapters. Politicians are hugely reluctant to incur

substantial political risk where the upside in addressing the challenge is not as yet (for most of them) as clear as it needs to be, let alone for most of their voters. The risk resides in a number of different areas. First, the industry itself has become increasingly concentrated. With fewer companies commanding an ever greater share of the marketplace, the food industry has simultaneously become increasingly powerful, particularly in the US. A loose coalition of industry trade groups deploys armies of lawyers and lobbyists to protect their own interests – and even challenged the supremely influential Oprah Winfrey when she started championing one of the industry's critics. US democracy is a strange beast, and the role of the pork barrel (and indeed the beef barrel and the chicken barrel) remains disturbingly present.

Second, there will undoubtedly be substantial consumer resistance to any concerted measures to reduce average meat consumption. This may be an uncomfortable truth to surface in a book of this kind, but the majority of people rather like their meat, and a substantial minority like it a lot. It has taken years to raise concerns about the health effects of excessive meat consumption, and education campaigns to date have had little effect. The average US citizen consumes 100kg of meat per person per year (ERS USDA, 2009) – four times as much as is recommended for dietary purposes. Astonishingly, that figure is still increasing by about half a kilo per person per year – and we're not far behind that rate of increase here in the EU either.

Third, there is a whole set of legitimate concerns about the potentially regressive impacts of policies designed to reduce meat consumption. 'Cheap meat' has been built up as one of the great achievements of the last two or three decades – and so it is, just so long as you avoid doing a more detailed cost-benefit analysis. Meat is now so cheap that in both the US and (to a lesser extent) the EU it has somehow become 'culturally embedded', the default dietary option as much, if not more, for the poor than for the rich. China and other emerging economies are following rapidly in those ill-advised footsteps.

Lastly, there's now an important equity issue in terms of food as a globally traded commodity. The huge expansion in meat consumption in the rich world has opened up unprecedented opportunities for countries like Brazil and Argentina to provide the feedstuffs on which the livestock industry depends – soy, wheat and so on. Within the next decade, according to the Food and Agricultural Organization, the amount of meat that Brazil exports will be larger than that of the United States, Canada, Argentina and Australia combined (OECD/FAO, 2007).

Against that backdrop, politicians' finely honed survival skills are inevitably going to predispose them to inertia rather than to the kind of leadership that the evidence now demands. My nine years as Chairman of the Sustainable Development Commission taught me that ministers' enthusiastic

advocacy of 'evidence-based policy making' pretty quickly evaporated once that evidence turned out to be either inconvenient or totally unpalatable. So even if Sir John Beddington, the UK's current Chief Scientific Advisor, were to take to ministers the kind of comprehensive dossier of evidence to be found in this collection, he would still get very short shrift.

Eventually, however, evidence wins the day. You just can't keep a good body of facts down – it will out. But even that, of itself, is not necessarily enough to ensure the kind of policy making process required for such a deeply controversial area. Seduced though I would happily be by Colin Tudge's eloquent account of how increased meat consumption has *not*, historically, been a principal indicator of status and affluence, I fear that history is against him on this one. As societies work their way out of poverty, meat consumption correlates with increased income in almost all circumstances where religious constraints (as with Hinduism) and cultural norms (as in Buddhist cultures) do not apply. I was delighted to hear from Colin that the Emperors of China infinitely preferred the skin of the duck to the flesh of the duck, but you can guarantee that hundreds of millions of their subjects would have loved to dine on duck every day. And right now in China, that's pretty much what they're doing, where the correlation between increased income (and the status that brings) and increased meat consumption could not possibly be clearer.

Criteria for successful policy making

In such circumstances, policy makers have to keep the objective simple: seek to reduce per capita meat consumption. Professor McMichael (see Chapter 11) has suggested that the appropriate threshold would be to get consumption down to no more than 90g a day, of which no more than 50g must be from red meat. This is against a 2005 baseline of around 300g a day, which on current projections would keep on gently rising rather than declining.

Personally, I'm not sure that the 90g threshold is sufficient, even from a climate change perspective, as this will do no more than stabilize the emissions associated with meat consumption at the 2005 baseline. The likelihood is that meat consumption, as a generic human activity, will have to take a bigger share than that if we're to get anywhere close to the 80 per cent cut in greenhouse gases required by 2050. But no need to scare the horses at this stage, let alone eat them, so we'll go with 90g. (I'm going to use the UK here as a proxy for all countries with unsustainably meat-intensive diets.)

If I was the Permanent Secretary in the Department for Environment, Food and Rural Affairs, listening to the Chief Scientific Advisor and realizing that this could no longer be avoided, I would recommend to the

prime minister of the day that he/she should promptly set up an Advisory Council to determine 'how best to get from 300g to 90g a day within the next ten years'. Such a Council should include no representatives of the different vegetarian/vegan advocacy groups, and no representatives of the meat industry or the food industry more generally. It should be made up of people with impeccable scientific and non-scientific credentials, to ensure that their resulting conclusions/recommendations would give plenty of 'cover' for whichever ministers happened to be in the firing line when the going gets tough. Let's call it the '90g Advisory Council'.

They will have a lot of material to play with. The compelling truth is that there can be few theoretical 'single policy objectives' (in other words, reduce per capita meat consumption to 90g per person per day) for which there are more supporting evidence bases: health, food hygiene, animal welfare, climate change, wider environmental impacts and equity issues, all have a crucial part to play. Any one of these might (and, from an ethical point of view, *should*) suffice on its own – and the combination should surely be overwhelming.

The first thing to do would be to develop some kind of policy matrix. Such a matrix would need to assess the value of different policy interventions against a set of overarching criteria: *effectiveness* (just how substantive is the contribution any policy might make to the 90g objective?); *practicality* (just how easy will it be to implement and enforce any particular policy?); *acceptability* (just how intense are the objections to any particular policy likely to be?); and *desirability* (just how important would any policy intervention be, in the best of all possible worlds, from an ethical or values-based perspective?).

It is clear, as far as Kate Rawles is concerned (see Chapter 13 in this book), that once the science has been 'signed off', that any such policy making process should be *primarily* values-based, rather than geared to effectiveness and practicality, let alone public acceptability. And she is, of course, right. But world-weary Permanent Secretaries would dutifully point out that this is not 'the best of all possible worlds' and that the best of policies can sometimes be derailed by a combination of vested interests, ignorance and crude political prejudices. For instance, the panic-induced withdrawal back in 2000 of the government's admirable fuel-tax escalator, in the face of incensed lorry drivers, aggrieved farmers and a motley crew of petrolheads, was not only a massive blow to a still relatively new Labour Government, but basically kiboshed any interest that Treasury might have had in the whole question of eco-taxes and how best to effect behaviour change through fiscal instruments of this kind.

To reduce the risks of any such debacle on the reduced meat consumption front, the 90g Advisory Council would need, quite ruthlessly, to assess the correlation between any proposed policy instruments and people's *real self-interest*. Though Colin Tudge is right to point out that the vast majority

of people do indeed demonstrate significant 'natural sympathy' (to retrieve the long-overlooked phrase that Adam Smith used regularly to explain what would actually make the 'invisible hand' of the market work), that sympathy is never quite as powerful as the sympathy that people have for their own interests and the interests of those nearest to them.

Working with self-interest

So how would the hierarchy of self-interest look as the 90g Advisory Council settled into its first few months of work? They'd probably argue like hell about it, but having no particular vested interests to deal with, I suspect they'd come up with something like the following:

- 1 health;
- 2 climate change;
- 3 wider environmental impacts;
- 4 animal welfare;
- 5 equity/fairness issues.

I appreciate, from an ethical point of view, that such a hierarchy is probably deeply offensive to animal welfare campaigners. But how else can we account for the grindingly slow process of change over the last few decades to establish the bare minimum of 'decency' standards for animals kept in captivity? Very few people condone suffering or cruelty to animals when confronted by it, but not enough of them feel sufficiently concerned to have encouraged politicians to have raised standards faster and more comprehensively.

But they *do* care about their own health, and with a serious education campaign (think tobacco as the analogy here, or possibly alcohol consumption), there's no reason why more people would not start to think much more seriously about the impact of their personal meat consumption on their own health. It's just that we haven't had a serious education campaign as yet.

And the rationale really couldn't be clearer. As spelled out in Part 3, there's now a particular emphasis on obesity. The UK Government is already very focused on a growing crisis. Both the Foresight's 2007 Report on Obesity and the Cabinet Office's 2008 'Food matters' report demonstrated just how serious a policy challenge this has now become. The UK already has the highest rate of childhood obesity in the EU. The Foresight report predicted that 40 per cent of UK citizens will be obese by 2025 and 60 per cent by 2050 on current projections (Foresight, 2007).

In the US, it's even worse: the US Centers for Disease Control estimates that there are already 112,000 premature deaths every year arising from

complications from obesity and related problems, amounting to around \$75 billion in medical costs – that's nearly 5 per cent of total health care costs in the US (US Centers for Disease Control, 2006). Food-related ill-health cost the NHS an estimated £7.7 billion in 2007, 9 per cent of its total budget (Cabinet Office, 2008).

Tentatively, a few commentators *are* beginning to make some direct connections between obesity and climate change – not least through the compelling neologism of 'globesity'! The World Health Organization published some data in 2009 showing that each overweight person causes an additional 1 tonne of CO₂ to be emitted every year. With 1 billion people judged to be overweight around the world – of whom at least 300 million are obese – that's an additional 1 billion tonnes (Edwards and Roberts, 2009).

This is still very controversial territory. But on accelerating climate change in general, things are really starting to change. For more and more people, this is moving out of the 'possibly, but not in my lifetime' category of concern to the 'blimey, that doesn't sound good' category. Whereas the rhetoric was once geared almost entirely to appeals on behalf of 'our children and our children's children' (eloquently invoking the spirit of inter-generational justice), now it's all about *us*, in our lives, in our own backyards. Such is the measure of urgency that our growing scientific knowledge of climate change brings with it.

The chapter by Arjen Hoekstra on 'The Water Footprint of Animal Products' makes an extraordinarily convincing case as to this particular environmental issue. With delicious irony, one of the best overall summaries of these cumulative impacts can be found in the FAO's 2006 Report 'Livestock's long shadow' (Steinfeld et al, 2006). Unfortunately, this hasn't persuaded the FAO to start recommending to governments that they should start thinking about appropriate policy interventions – but, remember, 'you can't keep a good body of facts down'.

As to animal welfare, I think it's important to subdivide this into 'impacts on human health' and 'impacts on the animals themselves'. Quite frankly, having taken in the full analysis of Michael Greger's article (Chapter 10), it's perfectly clear that potential impacts on human health could go straight to the top of the 90g Advisory Council's hierarchy at any point in time. As we contemplate the full extent of a potential 'catastrophic storm of microbial effects', either directly or indirectly associated with intensive livestock production systems, it wouldn't take much to spill public opinion over from 'don't like the sound of that' to 'no more intensive systems of that kind *now* – and we don't care how much more our meat will cost'.

There's one particular aspect of this that is particularly potent: the continuing, widespread use of antibiotics in livestock production systems on a sub-therapeutic or even prophylactic basis. As our knowledge of antibiotic

resistance in humans increases all the time, and medical concerns about different multi-drug resistant bacteria become ever more acute, pressure on ministers to regulate and even ban such practices is growing all the time. It is, to be sure, a rather indirect route to our 90g objective (banning the sub-therapeutic use of antibiotics would substantially raise costs of production, which would raise costs through the supply chain, which may contribute eventually to people turning away from meat and meat-based products), but it would be highly influential in terms of subtly transforming the whole cheap meat debate.

On the straight animal welfare issues themselves, I only wish that what Andy Butterworth describes in Chapter 8 as 'the margin for care' for animals held in captivity mattered far more to far more people. I'm persuaded this *will* happen in time, and the indefatigable efforts of animal welfare organizations the world over will in the meantime keep chipping away at raising standards and eliminating some of the cruellest practices. But I would be very surprised if the 90g Advisory Committee suggested to ministers that they should spearhead their new policy interventions primarily on the basis of improved welfare standards.

And that's also why concerns about the impact of *our* meat consumption on the lives of some of the world's poorest and hungriest people still come at the bottom of the list – despite the fact that in this age of cornucopian plenty there are still around 35 million hunger-related deaths a year. There is of course the most powerful moral argument (spelled out a number of times in this book) that the grain and other feedstuffs that currently feed animals should instead directly feed people. As Colin Tudge points out, by 2050 (on current projections), the livestock we eat will then be consuming the same amount of food as would be sufficient to feed 4 billion people directly, in effect increasing total human numbers at that time from an estimated 9.5 billion in 2050 to 13.5 billion.

But I fear that's not the way most people see things. Even if they did see it as a straight 'either/or' debate of this kind, we're then deep into people's complicated attitudes towards developing countries, food aid, corruption and so on.

Policy interventions

Armed with its Machiavellian matrix, our intrepid 90g Advisory Committee would then move to the consideration of specific policy interventions available to governments, all the way along a conventional policy spectrum with voluntarism at one end to outright interdiction at the other. Given that our objective is 90g a day rather than 'no meat at all', we need not concern ourselves any

longer with a total ban. At the voluntary end of things, this is obviously the relatively easy place to start, with a commitment to a substantial and ongoing public education campaign to enable citizens to understand the full personal and societal implications of today's meat-intensive diets. 'Meat-free Mondays' and other 'Eat Less' campaigns are early signals of just how big this could be.

If past dietary challenges (on salt, for instance, or fat or artificial colourings) are anything to go by, the government will seek to shift as much of the burden involved in such a campaign onto our food retailers and (of increasing importance today) the catering industry. Portion size is already part of many retailers' 'healthy meals initiatives'. Alternatives to meat could be marketed much more aggressively, and there's considerable scope for further innovation here. For an industry that brings out more than 19,000 new products *every year*, the opportunities for a whole new family of 'I can't believe it's not meat' products must be enormous!

The next level in is for any government to take responsibility for its own actions and for its use of public money. Throughout the world, billions of dollars of subsidy to farmers directly and indirectly promote increased meat consumption. An end to all such perverse subsidies (let alone to specific government-funded meat-promotion campaigns!), would have a huge impact on the economics of meat production. What is the logic of using taxpayers' money to promote patterns of behaviour that translate directly into an increased burden for the taxpayer in terms of health, environmental pollution, disease, climate change and so on? The case against production-related subsidies within the CAP is of course one that has been diligently pursued by the UK for many years. With the combined firepower of the health lobby and the climate change lobby weighing in behind that campaign, things could just move a little faster from now on.

Closer to home, the government would need to get its own food procurement policies sorted out. In its new climate change strategy, the National Health Service (NHS) has started to think through the implications of all this regarding hospital food:

The actions needed to develop a more sustainable food system in the NHS, whilst maintaining nutritional value, include the use of seasonally adjusted menus, increased use of sustainably sourced fish and a reduction in the reliance on meat, dairy and eggs. (National Health Service Sustainable Development Unit, 2009)

And that would be just the start. Predominantly meat-free school dinners; reduced meat consumption in prisons; 100 per cent meat-free government canteens: there is absolutely no reason why this should not be taken completely for granted in ten years time.

Next up would be regulatory interventions – on pollution controls, higher welfare standards, a ban on the use of sub-therapeutic antibiotics, and so on. As already discussed, the effect of all this would be to raise the cost of meat for consumers – in effect to start consigning the concept of ‘cheap meat’ to the dustbin of history. But it’s at this point that a couple of ‘wicked issues’ raise their ugly heads. First, how could we do this in the UK without further disadvantaging our own farmers, at the hands of intensive livestock operations free to carry on in the same old cruel, polluting and environmentally unsustainable way that we had just put behind us? This would be a disaster. Indeed, our farmers should in every respect be incentivized to be the pioneers in the transition to genuinely sustainable and ethical meat production systems.

Unfortunately, under World Trade Organization (WTO) rules, that’s not possible. Just as we can’t do a lot of other sustainable and ethical things under the wretched WTO rules. So how far might we here in the UK be prepared to go to reassert our right to pursue our own health, environmental and welfare interests?

The second wicked issue is, of course, social justice. Rationing meat consumption by price is a deeply regressive approach. For instance, David Pimentel of Cornell University has for a long time advocated some kind of ‘sustainability tax’ that would be applied to all foods on the basis of the external costs involved in bringing them to the market (Pimental and Pimental, 2008). Meat and dairy products would be taxed most heavily, whilst legumes, fresh fruit and veg wouldn’t be taxed at all. But the problem is a simple one: this would still hit the poorest hardest.

Personal meat quotas

It’s here that the overarching objective (90g a day per person, of which no more than 50g must be red meat) begins to bite. After all the regulation and the education and the incentivization, there are only two ways of further reducing demand. First, by raising prices until the inherent inelasticity in this particular market disappears. But meat is now so cheap that prices would have to rise very substantially indeed for that to happen, and the regressive impacts would be very severe. Second, governments could move to set ‘personal meat quotas’ along the lines of the much-discussed personal carbon quotas proposed as a way of reducing individual carbon footprints.

Were that to be the recommendation of the 90g Advisory Committee, the response would undoubtedly be something along the lines of ‘are you all out of your tiny minds?!’. But science and logic are great bulwarks against accusations of insanity. And let’s just remember the science behind this, just from the perspective of what is and what isn’t physically possible. In his admirable book *The End of Food*, Paul Roberts puts it like this:

Under any model for a future food system that is both sustainable and equitable, the meat-rich diets of the West and especially the United States, simply don’t work on a global scale. If the American level of meat consumption – about 217lbs per person per year – were suddenly replicated world wide, our total global grain harvest would support just 2.6 billion people – or less than 40% of the existing population.

Even if we use a more modest level of Western meat consumption such as that of Italy, where per capita meat consumption is about 80% of the United States, world grain supplies would still be adequate for just 5 billion people. In fact, according to the Earth Policy Institute, it’s only when the world adopts an Indian level of meat consumption – that is, around 12lbs of meat per person per year – that current global grain supplies would be adequate to feed 9.5 billion people. (Roberts, 2008)

Which sets that kind of incontrovertible physical reality at odds with today’s political reality. But if the science is robust then and the imperative is as strong as more and more people believe it to be, then Personal Meat Quotas (PMQs) would provide an elegant and effective policy intervention. Every citizen would receive the same quota, eliminating any regressive effects; it would be set on a sliding scale, starting with current consumption levels for Year 1, reducing down to 90g in Year 10, allowing people plenty of time to adapt; quotas could even be traded to begin with, although any such resale market would obviously favour rich carnivores over poor carnivores; and the whole thing would be done electronically, via a smartcard from which deductions are made automatically in the butchers, supermarket or restaurant.

Scary prospect for our politicians? Of course. For people who see cheap meat as part of their latter-day birthright, such a proposal is a total anathema. For people like Colin Tudge (whose simple maxim is ‘plenty of plants, not much meat and maximum variety’) it’s just common sense based on a sound understanding of the role that meat has played in our lives over the entire evolution of the human species. For those somewhere in the middle, their first response is quite likely to be one of resistance. However logical such an approach might be, it would still be seen to be non-viable. Psychologically, there doesn’t seem to be that much difference between PMQs and the kind of meat rationing we had back in the Second World War.

And that’s true! But that’s exactly the point. Very few people have yet grasped the fact that combating the threat of accelerating climate change will indeed entail going onto some kind of ‘war footing’. As I said before, most of the changes that need to happen could be driven through by technological innovation, radical fiscal shift and integrated

policy interventions that will make low-carbon living relatively pain-free and positively benign from all sorts of environmental, health and well-being perspectives.

But aviation and meat consumption are not amenable, I fear, to that kind of relatively conventional policy portfolio. Hence the need for sterner measures!

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