

The Energy Glut: The Politics of Fatness in an Overheating World Ian Roberts - Publisher ZED Books

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Chapter 4 - Contraction and convergence

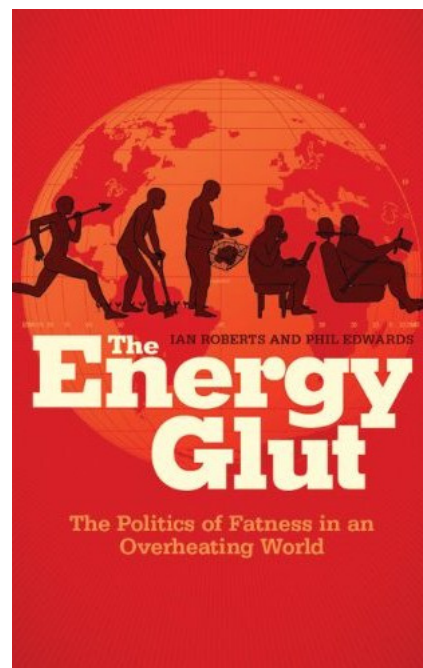
The first patient that I actually observed being enrolled into the CRASH 2 clinical trial was a Colombian soldier who had stepped on a landmine in the mountains north of Medellin. Although by that time over 12,000 patients had been enrolled, this was the first time and witnessed the process. Two paramedics wheeled him into the emergency room and then turned and left, as though in a hurry to get out. Moments later his mother, having convinced the security guards that this was her son, tiptoed into the room to stand by his side. Whether she had been with him on his four-hour ambulance journey, or else had been waiting for him at the hospital, I don't know. The soldier who was lean and cinnamon brown, probably still in his teens, with his hair cropped 10 closely around the side of his head that it left just a small black runway round the top. He looked more puzzled than in pain as the nurses cut off his trousers to allow the surgeon to examine the ragged stub of his left leg, but when her gloved finger started probing the meat of his thigh he stiffened and arched. Within minutes his mother had given consent for him to be entered into the trial, the entry form had been filled in, and the trial treatment had been started.

Worldwide, most patients with severe internal bleeding have been on the receiving end of motor vehicle kinetic energy, but in Colombia bullets and landmines account for a large proportion of the patients. Clinical trials in trauma care have to be simple because they are carried out in emergency situations. We hope that the new treatment will save lives by reducing blood loss but the only way to find out is to recruit thousand of bleeding trauma patients, give one half the new treatment, give the other half a placebo and then later compare the death rates in the two groups. To build a collaboration of trauma doctors from all around the world, the trial aims and methods must be simple and clear.

Climate change is a slow-burn global health emergency and there is an urgent need for an international agreement on how greenhouse gases should be reduced. The foundation for any such agreement will have to be simple, science-based and transparent. There are of course complicated scientific and political issues at stake, but time is running out and unless the arguments can be made clear and transparent what can be the prospects for success? Complexity is a strategy used by professional elites to maintain control. Proclaiming that a problem is complex is shorthand for saying that you have no role in solving it. For example, referring to the need for an international agreement to prevent climate change, Tony Blair wrote: "Given the complexity of the issues involved, the imprecision of much of the data, and the extraordinarily tricky interplay between the political the technical and the organizational, answering the question of 'how?' is as difficult as any the international community has grappled with since the design of the post-war Bretton Woods economic institutions. (Blair, 2008)

Does this sound like someone who wants the public to have any say in how we reach a binding climate-change agreement? But there has to be public support for such an agreement if we are going to avoid dangerous climate destabilization.

The earth is getting hotter. Reducing our personal carbon footprint might make us feel virtuous and we will probably shed some excess weight, but we should not delude ourselves that it will save us from catastrophic climate change. What we do as individuals will never be enough. Mayer Hillman, co-author of *How We Can Save the Planet* makes this point with humour, joking that he is saving up to buy a house in Mayfair (Hillman and Fawcett, 2004). To raise the necessary funds, every evening when he comes home, he puts his loose change in a jar by the door. Yes the jar gets a little bit fuller by the day, but he will never have enough money to buy his dream house. Moving in the right direction does not necessarily mean that we will arrive at our destination. And of course what we do is not the whole story. Even if we live the most carbon-frugal lives possible, unless the rest of the world changes too, we will fail to prevent the steady accumulation of greenhouse gases that is endangering the planet.



We have seen that the causes of population weight gain are environmental not personal. Even if we do manage to walk and cycle everywhere we go, and purge our homes of energy-dense foods, unless everyone does the same, we will always be swimming against the current. And the direction of flow is clear. The population is getting fatter. Short term, we might summon the will to make the necessary sacrifices. By moving more and eating less we can rapidly lose weight, but the body responds to sudden weight loss by increasing appetite and reducing energy expenditure, and any weight lost is likely to be quickly regained. This chapter outlines a simple and transparent policy framework for reducing greenhouse gas emissions. If such a framework was implemented, then not only would it ensure that atmospheric levels of greenhouse gases were kept to within a safe level, but all of the steps suggested in the earlier chapter of this book would become the easy options, as they would for everyone else around us (Egger, 2008, 2007). The policy is called Contraction and Convergence and it was devised by the Global Commons Institute.

Contraction and Convergence

Contraction and Convergence is a simple, science-based, starting point for an international agreement on reducing greenhouse gas emissions that is based on the principle of justice and equity.

The amount of greenhouse gases in the atmosphere is increasing rapidly. The concentration of carbon dioxide, the chief greenhouse gas is now about 387 parts per million (ppm), which is nearly 40 per cent higher than the concentration at the start of the Industrial Revolution (280 ppm), and higher than at any time in the past 650,000 years. To ensure our survival, the concentration of carbon dioxide must be kept within a safe upper limit. Because carbon dioxide accumulates in the atmosphere, where it remains for about a century, in order that the atmospheric concentration does not rise any higher the amount of carbon dioxide that is emitted must fall, eventually reaching very low levels, such that emissions just balance natural loss. This is the contraction part.

Establishing a safe upper limit is a technical matter for climate scientists; although there is bound to be heated debate, it should be possible to reach agreement on where the limit is set and a date by which this concentration should be reached. This upper limit will determine the amount of greenhouse gases that can be emitted in the future. The key question that remains is who should be allowed to emit them.

From space, the life-sustaining gases of the earth's atmosphere are a thin blue layer enveloping the planet. The idea that anyone should own the sky, the silent space where the clouds soar, is absurd. The atmosphere is a global good that all the citizens of the earth must share. It follows that when it comes to parcelling out entitlements to emit greenhouse gases, everyone should have an equal share. Currently, the emission of greenhouse gas is far from fair. The average per capita emissions of carbon dioxide in the USA (20.6 tonnes) is about sixteen times higher than that in India (1.25 tonnes). Contraction and convergence sets out a timetable for when per capita emissions should converge to equal per capita share. This is the convergence part. The policy is a compromise. It acknowledges that everyone has an equal right to the atmosphere but recognizes that the wealthy world will need some time to make the transition to fair shares. In the convergence phase, wealthy countries will have to make cuts even as emissions from poorer countries are increasing. However, once per capita emissions converge, rich and poor alike will have to reduce their emissions together. The policy also allows for emissions entitlements to be traded, which should help to ease the transition to equal shares whilst ensuring that the safe upper limit is not exceeded. Wealthy countries with high carbon dioxide emissions will have to buy the unused entitlements of poor countries, resulting in a transfer of wealth from the rich world to the poor.

In high-income countries, emissions by individuals account for about 40 per cent of total carbon emissions with the rest coming from factories and businesses, which means that any corporate cap-and-trade system will need to be accompanied by personal carbon rationing (Hillman and Fawcett, 2004). With personal carbon rationing, every year, each individual would be allocated an equal number of tradable carbon rations. The size of the national carbon budget would be set by an independent organization that international obligations to cut greenhouse gas emissions to global emissions policies (Hillman and Fawcett, 2004). The extent of the personal carbon ration would be determined by the national budget. The important part is that setting a national and personal carbon ration based on what the planet can stand guarantees that we live within our environmental limits. Of course, if the population of a country grows then everyone's personal carbon ration would get slightly smaller. Population and sustainability are inextricably linked. If there are more people, the finite share of the right to put carbon dioxide into the atmosphere has to be shared between more people. It could not work any other way without leading to ecological destruction.

Under such a system of carbon allowances, people would hand over their carbon credits whenever they buy fossil-fuel energy, such as fuel for transport or heating. One can imagine that the technology already in place for direct debit and credit cards could be adapted for use in personal carbon trading. People who lead highly carbon-intensive lifestyles might use up their allocation of carbon credits and would have to buy the unused credits of those living more carbon-frugal lives. Because greenhouse gases accumulate in the atmosphere, where they remain for years, to stabilize concentrations within a safe limit the allocation of carbon credits would have to be reduced year on year, eventually down to zero. As a result, the cost of buying unused credits would increase as they become increasingly scarce. There would be a strong personal incentive not to waste carbon allowances and a strong political incentive to reduce the carbon intensity of society. Under a system of carbon trading there are likely to be winners and losers. Globally and nationally the carbon-profligate would lose out and the carbon-frugal would gain. A 2008 study by the UK Department for Environment, Food and Rural Affairs (DEFRA) found that because low-income households tend to have lower carbon emissions than high-income households, the poorest sections of society would win, whilst the more wealthy sections would lose out (DEFRA, 2008). When homes are ranked into tenths according to their household income, the DEFRA study found that 71 per cent of households in the lowest three income tenths would have left-over allowances that they could sell, whilst about half of households in the highest three income tenths would have to buy unused allowances or cut their emissions. Transportation research by the University of Oxford shows that carbon emissions related to travel are steeply socially stratified, with the rich being massively more polluting than the poor.

Under a system of carbon rationing, there would be a strong incentive to reclaim the streets from motor vehicles. It is unlikely that people would want to waste valuable carbon credits on foolishly short car trips that they could easily walk or cycle and there would be a strong demand for safer streets. Public demand for improved road safety might lead to much greater investment in infrastructure for safe walking and cycling. Legislation could be passed to give pedestrians legal right of way, as is the case in some streets in the Netherlands, and that Home Zones, which are residential streets with very low vehicle speeds and pedestrian priority, might become the rule rather than the exception. People might regain their sense of distance, and their physical fitness would start to improve. They would realize that most of their access needs can easily be met by bicycle or by public transport. Market forces would eventually ensure that those access needs that are not met within a cycle ride soon would be. As population fitness levels increase, half an hour of cycling morning and evening might be just as acceptable to city commuters as is the largely wasted time spent commuting by car or train now. Purposeful movement would become the key to maintaining a healthy body weight and the fitness industry would go into decline.

Sedentary home-based activities like watching television, playing computer games or surfing the net, might become less popular as people become reluctant to use up carbon credits on home heating and electricity use. People would begin by insulating their homes and wearing warmer clothes. The street space would become a public space, and public activities would replace sedentary solitary indoor pastimes. At the same time corporate carbon trading will mean that fossil-fuel-intensive, energy-dense, processed foods would become more expensive than locally grown seasonal fruit and vegetables. Healthy eating will become the easy option.

We cannot know, nor do we need to know, the extent and the diversity of the strategies that individuals and society might develop to reduce fossil-fuel energy use. But we can predict that when the creative intelligence of the world is directed towards this aim, the future will be a different place. Our overconsumption of fossil-fuel energy has given us climate change and pandemic fatness. Contraction and convergence by weaning us off fossil fuels will protect the planet and release its inhabitants from the chains of corpulence (Egger, 2009).

The principle of contraction and convergence has been endorsed by governments, non-governmental organizations, environmentalists, scientists and religious leaders around the world. You can get some idea of the range of individuals and organizations that support the principle from the Global Commons Institute website. It reads like an international Who's Who of the great and the good. In fact, according to the UK government, the only group that is not convinced about the merits of the approach is the public. In 2008, the UK government published the results of its 'pre-feasibility study into personal carbon trading'. It's odd given the support for contraction and convergence that the government should conduct a 'pre-feasibility study' implying that it was not even sure that it is worthwhile proceeding to a feasibility study. Nevertheless, the study concluded that personal carbon trading 'is an idea currently ahead of its time in terms of its public acceptability and the technology to bring down the costs'. In other words, they are claiming that we are not ready for it and that it is too expensive.

You might be surprised to find that in the view of the government you are the main obstacle to moving ahead on this critically important issue. I suspect that many people will never have heard about the proposals. This is not our fault. Given its importance, the media coverage of carbon rationing has been scant at best and the amount of airtime given to it by our political leaders has been rock-bottom low. They blame you for being killed on the roads, they blame you for getting fat, and they will blame you when the planet fries. The costs of setting up the scheme for the UK were estimated at between £700 million and £2 billion. These are large sums of money, but must be considered in the context of the tens of billions of pounds of public funds that were spent to prop up failing financial institutions. Saving the planet must surely be allocated as much importance as saving banks.

Governments were quick to bail out the banks because the people who run the banks and our political leaders are friends. When wealthy people start declaring a crisis and the need for an urgent state-funded solution, the media make sure that we get to hear about it and our elected leaders respond. Not so when it comes to the environment. This time wealthy people have more to lose. Burning fossil fuels irrespective of the consequences makes a lot of money for some. At the individual level, the people drinking champagne in the business-class lounges of international airports are not your average punter; they are the wealthy elite. The media are gagged due to their financial dependence on advertising income from motor vehicle manufacturers, air travel and distant holidays and are understandably reluctant to bite the hand that feeds them. So it remains a secret, and the main excuse for not taking it forward is that the public are not ready for it.

Government denial of the inevitability of carbon rationing means that when such a system is finally introduced, as it must be, the emissions cuts that will have to be made will be that much steeper. Because carbon emissions eventually have to be reduced down to zero, the total carbon budget for any particular country will have to be reduced year on year. Shunting the decision about carbon rationing into the future will mean that far more radical emissions cuts will have to be made and that the thinking time for finding creative societal solutions will be that much shorter. It will also mean that the population will be that much fatter, heavier and slower, making the modal shift to walking and cycling even more difficult.

One unfortunate feature of the policy of Contraction and Convergence is its name, which implies both austerity (contraction) and uniformity (convergence). We know that greenhouse gas emissions must contract if we are going to prevent ecological disaster. But greenhouse emissions are not the metric with which we judge the quality of our lives. It is not what we consume or how much we pollute but how happily we live our lives that matters the most. Being physically active, connecting with the people around us, contributing to the wider community and having trees, bushes, flowers and birds around us are the foundations of well-being and all of these will expand in a low-carbon society. The freedom to move, in a safe and quiet environment, breathing clean air without the fear of road danger or crime, is not austerity.

We also know that greenhouse gas emissions have to converge to equal per capita shares. The first article of the Universal Declaration of Human Rights is that 'all human beings are born free and equal in dignity and rights'. No individual or society can legitimately claim a greater right to pollute the atmosphere. However, equality does not constrain diversity. Quite the opposite, it allows for its fullest expression. Currently, because it reserves the interests of the businesses that make up the petro-nutritional complex, all roads lead to the shopping mall and all the malls look the same. They contain the same retail chains and sell the same mass-produced products. And to channel the wealthy people to the malls, supermarkets and petrol stations more efficiently, everyone else is forced out of the way. Currently, throughout Asia and Africa, a miscellaneous multitude of small traders is being cleared off the streets to make way for road expansion, flyovers and shopping centres, the hardware of what is currently considered to be economic development. Professor Dinesh Mohan from the Indian Institute of Technology believes that this is bad for safety and bad for the economy:

Hawkers have to be there on roads. They are the most enterprising entrepreneurs who are doing business every day by occupying little space, consuming very little energy and generating reasonable revenue. They are contributing to the economic growth. It is because of them that the Indian roads are comparatively safer from mischief doers. Roads and cars channel people and profit past the small businesses towards the big business, from multiplicity towards monopoly. Carbon rationing would foster diversity between, as well as within, nations. Under Contraction and Convergence: and carbon trading it would not be in the interests of carbon-thrifty nations to follow the same fossil-fuel-intensive paths to 'development' that were taken in high-income countries. If Africa and Asia became carbon copies of North America, they would have killed the golden goose. Low-carbon economic and human development will not look like anything that has gone before. Real human development is about the expansion of human freedoms, and freedom brings diversity not austerity. We will take a closer look at what a low-carbon world might entail in the next chapter.