The Green Economy: Why Ownership and Control Matter

Keynote address to the ICA Conference New Opportunities for Co-operatives,

Mikkeli, Finland, Friday 26th August 2011

Molly Scott Cato, Reader in Green Economics, Cardiff School of Management

The debate about the green economy is now one of the keenest topics under discussion in international fora. The 20-year follow-up meeting of the 1992 Earth Summit which first brought these issues into mainstream discussions is again to be held in Rio—in June of next year—and its primary focus will be on building the green economy.

My own involvement in these debates began only a few years before the first Rio summit, a quarter of a century ago now. I had been concerned about the environmental crisis while a student, and then when my first child was born I decided I needed to take some personal action. After some ten years as an environmental activist and working with the Green Party it had become clear to me that the problems I was concerned about had their origins in the economy. So it seemed to me an efficient response to learn how economics worked and to try to shift it in a more environmentally friendly direction.

[Slide 2]

I rapidly became disillusioned with the global economy, dominated by corporate interests, and where wealth was shared so unfairly. It seemed to me that it needed to undergo fundamental structural reform: that we needed to start with a blank sheet of paper. Fortunately, around this time a kind friend pointed me in the direction of the co-operative movement. What I found was a huge global movement, representing a significant share of every national economy, that was not operating in the exploitative, destructive way I had observed in global capitalism. The design principles of a co-operative economy seemed to me then, and still seem to me now, to also be the design principles of a green economy.

[Slide 3]

So what I am going to do today is to begin with a theoretical consideration of what it would mean to live in a sustainable economy and to think a bit about what this might have to do with co-operative ways of organising the economy. Then I’m going to think about four features of the corporate globalised economy and how we could redefine these so that they were design principles of a sustainable economy.

*What do we mean by a ‘sustainable economy’?*

In English, the word ‘sustainability’ is open to accidental or deliberate manipulation. For example, it can be used simply to mean something that lasts—for an indeterminate amount of time, as in the phrase ‘sustainable development’. Working with such a loose definition almost anything that is not disposable can be considered sustainable, and such a definition isn’t good enough to protect our planet.

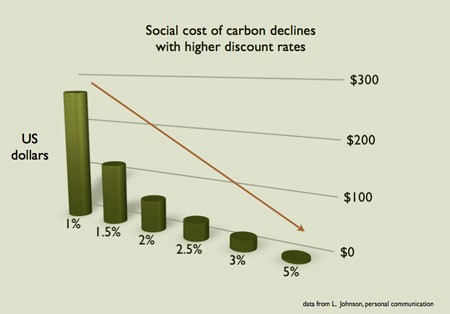
So let’s consider the famous Brundtland definition, which allows us to meet our own needs without compromising the ability of future generations to meet their needs. This is better: both because it uses the concept of ‘needs’ rather than ‘wants’ and also because it requires us to consider the needs of future generations.

But how do we balance current and future needs? In spite of the fact that this definition was devised a quarter of a century ago little progress has been made in answering this question. But I’d like to suggest that there might be a reason why co-operatives could have something to offer. Because co-operatives were designed as a form of economic organisation that could balance the needs of producers, for decent work at decent rates of pay, and of consumers, for good-quality products at affordable prices. Although this does not address the political problem, this inclination to consider the needs of others is a key design feature of the co-operative that is valuable in discussions around sustainability.

[Slide 4]

The consequences of many environmental losses and impacts are likely to be felt many years into the future. In the case of climate change we may be talking about 2050 to 2100; in the case of nuclear pollution we are talking about hundreds of thousands of years. This represents a significant problem for economists whose techniques are based on markets and prices, since they need to be able to say what those prices are likely to be many years ahead. To achieve this they use a technique known as ‘discounting’. This translates the environmental impact from the future into a present value according to a discount rate.

While there is considerable debate over what the appropriate rate should be, it is usually somewhere around the prevailing interest rate. In effect, this means that we are automatically devaluing the welfare of future generations. If this sort of procedure was not included in conventional economists’ calculations around the costs of climate change, the conclusions about its impact on future generations would be entirely different. We can consider this in terms of the cost of climate change relative to each ton of CO2 emitted—the differences are illustrated in the graphic.[[1]](#footnote-1) Low discount rates of around 1% imply a cost of $300 for every ton of carbon, contrasted with an estimate of the damage at around $10 per ton for a discount rate of around 6%. If we are to take the suggestion that we should treat current and future generations equally the only acceptable discount rate would be zero.



Clearly, a sustainable approach to economics would not permit us to substitute money for the health and welfare of future generations in this way. Two of the co-operative values could guide us in developing a sustainable economy if we were to extend them to include future generations: the principles of equity and solidarity mean that we cannot consider our well-being to the exclusion of the well-being of others. These values have encouraged the global co-operative movement to create and spread the principle of fair trade: if they were extended to include future generations they could also enable the building of a sustainable economy.

But beyond this, real sustainability requires a commitment to changing our relationship with the planet. In his account of bioregionalism *Dwellers in the Land*, Kirkpatrick Sale (2000: 22) describes the attitude towards our environment that has prevailed since the Enlightenment:

[Slide 5]

‘The natural world is essentially there for our benefit, our use, our comfort. The Colorado River is there to provide water for the people and farms of Southern California, needing only the technology of a Boulder Dam to complete what nature forgot to do; the Northwestern forests are there to provide lumber that the growing populations of the carelessly sprawling suburbs need to build their rightful houses; the Hudson River flows purposefully to the Atlantic so that human wastes and industrial poisons such as PCBs can be carried away, out of sight and mind, to the sea.’

We need to replace this attitude of exploitation—nature as a store cupboard to be raided—with one of respect informed by spiritual values and by mutual values. Just as the early co-operators believed that resources should be shared, so we should adopt an attitude of sharing in the bounty of nature.

I have spent some time considering these issues because this view of the green economy forms the framework for my other remarks. The rest of my presentation will involve a description of the key design features of a green economy. I will frame this discussion through a reinterpretation, through the lens of co-operative values and principles, of four corporate buzzwords: Growth, Equity, Efficiency and Innovation.

*From Growth to Dynamic Equilibrium*

So let’s begin with Growth. The obsessive focus on growth has been made clear since the crisis in 2008, when for the first time in around 30 years the industrialised economies started to go into reverse. Growth is so essential to a capitalist economy that the shrinkage of the economy is actually referred to as ‘negative growth’. There is an almost universal consensus across the political spectrum that the solution to our economic woes is more economic growth.

[Slide 6]

But green economists take a quite different view of this. We consider that the ecological crisis is evidence that the economy is already too large for the ecosystem to sustain. How, they question, is it possible for an economy to grow exponentially within a limited planet? In the words of the proto green economist Kenneth Boulding, ‘Anyone who believes exponential growth can go on forever in a finite world is either a madman or an economist.’ The New Economics Foundation have produced a short film which offers the same insight in a rather more entertaining way.

[Slide 7]

Rather than growth, green economists focus on what they call the ‘steady-state economy’ or what Andrew Simms of the New Economics Foundation has relabelled an economy in Dynamic Equilibrium, to reflect the fact that it will grow and change in response to natural conditions, just as species and ecosystems do. So why might an economy made up of co-operatives be less likely to be focused so intently on exponential growth?

Co-operatives, we could argue, are naturally limited by the size of their membership. Although some of the most successful co-operatives are very large, this can often lead to a degeneration of their co-operative values. One important stage of development arises when the co-operative becomes too big for all its members to be in the same room at the same time to make decisions. The need to elect representatives reduces engagement and ends direct accountability.

For this reason co-operatives are more likely to expand by networking and by creating spin-offs than by expanding into ever-larger businesses. This tension was faced in the past by the Mondragon Group, which split co-operatives in two when membership grew above 500 in order to maintain personal relationships and the ability to make democratic decisions. However, more recently the Group has operated more like a conventional corporate, with offshore subsidiaries, under pressure from capitalist competitors. For similar reasons the UK retail co-operatives went through a period of consolidation, where local links and democratic accountability were undermined.

[Slide 8]

Fritz Schumacher, the original green economist whose centenary we are celebrating this year, coined the phrase ‘Small is Beautiful’, which might be considered a design principle both for the green economy and for the co-operative economy. Schumacher also argued for a ‘human scale economy’ for social and psychological reasons.

*Equity*

So far we have been in fairly conventional territory for ecological and green economists, but what does this have to do with a co-operative view of the economy? Well, I think first and most importantly we need to be clear about the link between the need to stop the economy from growing and the need to share the production of the economy more fairly. Like co-operators, greens have been concerned about the way an economic system based on competition has led to widening inequalities between rich and poor on a global as well as a local scale, and the inevitable tension and conflict this inequality generates. This is intrinsically related to the inability of the economy to stay within ecological limits, and hence the two motivations for the development of a green economy are intertwined.

[Slide 9]

The elites of the corporate economy are well aware of this, as demonstrated by the following quotation from Henry Wallich, a former governor of the Federal Reserve and professor of economics at Yale: ‘Growth is a substitute for equality of income. So long as there is growth there is hope, and that makes large income differentials tolerable.’ But as the authors of the recent study of the dangerous health and social consequences of inequality conclude, ‘this relation holds both ways round. It is not simply that growth is a substitute for equality, it is that greater equality makes growth much less necessary. It is a precondition for a steady-state economy.’ (Wilkinson and Pickett, 2009: 221-2).

You may also be interested to know that discussion about ‘shared equity’, which for my money is the central concept of the co-operative as a business form, is now being discussed in the *Harvard Business Review* by no less an authority than Michael Porter. As part of a project to ‘Rethink Capitalism’ Porter argues that corporations ‘remain trapped in an outdated, narrow approach to value creation’ and that this has led them to ‘ignore the well-being of their customers, the depletion of natural resources vital to their businesses, the viability of suppliers, and the economic distress of the communities in which they produce and sell’. So even in the Harvard Business School it is accepted that ownership and control matter, although I have not seen any credit given to the co-operative movement in finding a solution to this issue.

The co-operative model for economic organisation was a response to the extreme inequality of the early days of capitalism. It has always been about sharing the value of production fairly, and about producers and consumers co-operating over the quality and quantity of production, and how what is produced should be shared fairly. The contribution of the co-operative movement is in claiming back the right to judge what is of value. We need to use that same principle now to revalue the earth and its resources and to use our values to ensure that a green economy is also an economy with equity at its heart.

Along with other early co-operative theorists, Robert Owen was signed up to the Labour Theory of Value, and its central idea that there was an inherent unfairness in those who created value through their work losing a share of it to those whose only contribution had been capital. His ideas about reassigning the value back to the producer and eliminating the middle man enabled generations of working people to establish their own non-exploitative businesses and to gain access to their necessities without becoming involved in exploitative consumption systems.

[Slide 10]

But what about if the labour theory of value was itself a mistaken route? Throughout the 19th century the focus of economic theorising and political debate was on labour, but as the opposing forces of labour and capital struggled over the share of production, the real source of value, the planet itself, was sacrificed. The labour theory of value replaced an earlier system of economic thought developed by the physiocrats, whose foremost thinker, the Irish economist Richard Cantillon, worked according to a land theory of value. It was these theories that were overturned by the classical economists and their neoclassical inheritors, who lost sight of the real value of land. The environmental consequences of this theoretical error are clear to see.  
  
So how might we construct an economic system that paid due heed to the contribution of land as well as labour to the production of economic value? Could we imagine enterprises where the sorts of negotiations between producer and consumer that take place in co-operatives could be extended to include the planet? In a co-operative economy neither side should take too much, or be expected to give too much. In a green economy perhaps the planet should also be included as a negotiating partner, whose contribution is recognised and not exploited.

*Efficiency*

Conventional economics has an entirely inappropriate definition of efficiency, which actually boils down to cheapness. To move towards a sustainable economy we need to substitute an understanding of efficiency that is all about energy. Energy efficiency is far from irrelevant to the conventionally managed business, since its cost impacts strongly on the balance-sheet. However, the negotiation over value and the need to reduce labour costs can often dominate over any concern about energy costs. Hence major reorganisations of systems of production and distribution can often be ‘efficient’, in conventional terms, even when they demand vast amounts of energy.

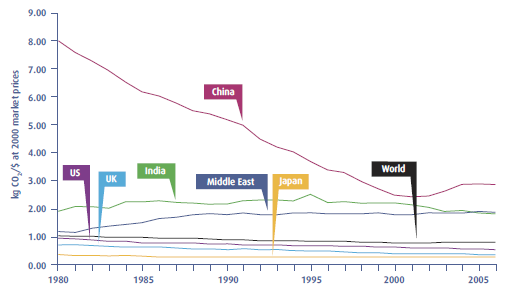
An example is the shift from conventional docks to container ports which took place in preparation for the major expansion of trade that was one of the hallmarks of globalisation. This was motivated partly by technology, but also as a means of avoiding conflict over wages and conditions in the traditional ports, which were heavily unionised. Thus each old port had a container port constructed nearby—Immingham for Hull, Avonmouth for Bristol, and so on—involving a huge energy input. In conventional economic terms this reconstruction generated economic growth, as did the later renovation of port areas into arts and café quarters, but in terms of thermodynamic efficiency, it was a disaster.

Another example is what is happening right now in the higher education system of the UK. Large numbers of lecturers and professors are being made redundant—in fact more professors because they are more expensive. Such people are being offered large amounts of money to leave their jobs, and the more experience they have the more money they are being offered. The logical conclusion of this process is that students will turn up next month and find nobody in front of them to lecture: efficiency required that all the professors were sacked.

Because of the impact of climate change businesses are going to have to think much more seriously about energy, but they don’t think this will require them to change the way they do business. Conventional economists argue that we can get around these limits by producing things in ways that do not require so much energy or such a heavy use of materials. They make arguments about a weightless economy and about decoupling economic activity from the production of carbon dioxide.

So let’s spend some time considering the data on this question of decoupling. The first graphic shows the carbon intensity of production in a range of national economies, i.e. the amount of value in monetary terms that can be bought with a fixed amount of carbon dioxide emissions. Increases in carbon intensity would be achieved by more efficient production methods, or by switching from fossil fuel to renewable energy. The results are not that encouraging.

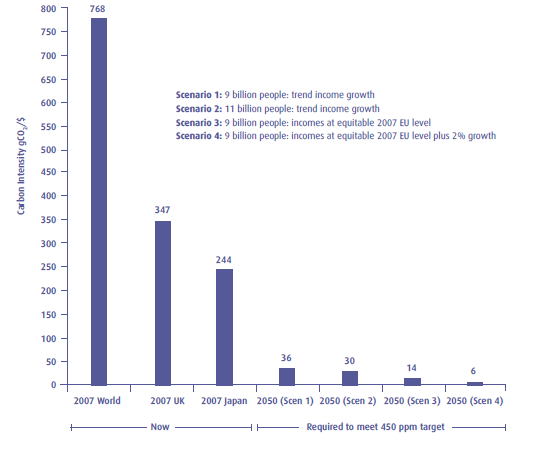
[Slide 11]



The global carbon intensity declined by almost a quarter from just over 1 kilogram of carbon dioxide per US dollar (kgCO2/$) in 1980 to 770 grams of carbon dioxide per US dollar (gCO2/$) in 2006. Again, steady improvements across the OECD countries were accompanied by a slightly more uneven pattern across non-OECD countries.

Significant growth in carbon intensity occurred across the Middle East and during the earlier stages of development in India. China witnessed some striking improvements early on. But these have been partly offset by increasing carbon intensity in recent years. Worryingly, the declining global trend in carbon intensity has also faltered in recent years, even increasing slightly since its low point in 2000.

[Slide 12]



The second graphic considers how much we would need to increase the carbon efficiency of our production processes to achieve a level of CO2 emissions that are compatible with avoiding dangerous climate change. It does this for a number of scenarios based on different assumptions about economic growth, the size of the global population and growth rates. At present it takes 768 grams of CO2 to buy a $ of output – although only 347grams in the UK and 244 in Japan. If we were to achieve global equity we would need to be able to buy a dollar of output with just 14 grams of CO2 by 2050.

To achieve the sorts of increases in energy efficiency that we need means an improvement of 50 fold or so in technological efficiency, which I suggest is just not feasible. There is also a relationship between improvements in technology and changes in lifestyles and population growth. Efficiency hasn’t even compensated for the growth in population, let alone the growth in incomes. Instead, carbon dioxide emissions have grown by almost 40% since the Kyoto agreements in 1990.

[Slide 13]

So the clear message from the green economists we need to stop the economy from growing and we need to find a way of building an economy which focuses on quality rather than quantity, where less really can mean more.

Co-operatives can help to do this because they do not need to have the lengthy supply chains that enable the profits of the globalised economy. Here is what green economist Hazel Henderson has to say on the subject:

[Slide 14]

‘An economy based on renewable resources carefully managed for sustained yield and long-term productivity of all its resources can provide useful, satisfying work and richly rewarding life-styles for all its participants. However, it simply cannot provide support for enormous pyramided capital structures and huge overheads, large pay differentials, windfall returns on investments, and capital gains to investors.’

*Innovation*

So this brings me to my final subject: innovation. How does an economy that is focused on finance and the accumulation of capital influence innovation? This is an important question, because we need to make a rapid transition to a sustainable economy, and while that requires significant structural and social changes, it also requires rapid technological innovation.

[Slide 15]

In a profit-driven firm, innovations that lead to large and immediate profits are encouraged, rather than those that are in the social interest. The most obvious example of this is the pharmaceutical industry, where we have drugs for slimming and tanning but no drugs for sleeping sickness or malaria. In the environmental sphere, we have the history of the electric car, which was held back by opposition from the oil industry and the automotive industry. In the early days of car development, there were both electric cars and biodiesel cars, but once the US oil industry took off, this was the route that these vehicles followed, in spite of the disastrous environmental consequences.

And on the consumption side, the incentive of profit-driven firms is to design products that we have to keep buying, rather than products that last. Although as a Green I am keen to stress that your choice of light-bulb is not going to change the world, understanding the behaviour of the Phoebus cartel just might. This was a group of the world’s leading light-bulb manufacturers, who agreed to reduce the maximum life of a light-bulb to 1000 hours from the 2500 hours that Edison had already managed. A long-lasting life-bulb reduced their profits and so innovation was restricted. The oldest light-bulb in the world is still in place at the Livermore Fire Station in California: it is 110 years old.

[Slide 16]

New research from Cleveland, Ohio also indicates how the process of financialisation can cause investment to be diverted away from innovation and into speculation. Margaret Levenstein of the University of Michigan has studied the process of local investment and innovation in Cleveland in the 1920s, when it was at the cutting-edge of technological developments. The innovation networks broke down as a result of local investors sending their money to New York, where it fed the bubble that resulted in the Stock Market Crash. They lost their money and the Cleveland local economy never recovered.

While I can give you examples like this of how the capitalist business form does not foster socially and environmentally beneficial innovation, I think we in the co-operative movement still need to find incentives to replace the financial incentives that dominate today’s economy. Part of the transition to a sustainable economy is the rapid development of alternative technologies, as well as infrastructure and community. John Restakis in his book *Humanizing the Economy* argues that the co-operatives of Emilia-Romagna have played just this sort of role. He concludes that a diversity of economic forms is necessary in an economy, just as a range of species is necessary to a healthy ecosystem.

The sort of incentive we need to drive co-operative innovation has to be about social engagement and also real ownership. Nils Bohlin who invented the three-point seat-belt while an employee at Volvo didn’t do it for the money: his reward was the 1 million lives he is estimated to have saved. But if we are thinking about individual reward from innovation, then surely this is more likely to occur in businesses whose structure means that everybody who innovates gains the benefit—because they own their own business.

*Conclusion*

In a recent paper Richard Smith refers to ‘green capitalism’ as ‘the god that failed’. The suggestion that we could achieve sustainability without major structural reform of our wasteful globalised economy was always misguided and has wasted time that we desperately needed to make the transition towards a truly sustainable and just economy.

[Slide 17]

Capitalist firms put more pressure on the planet and use more resources because they need to extract a greater level of value to pay dividends to shareholders. During financial bubbles they also divert investment for expansion or innovation into speculation. This has been disastrous in recent years, and has held back the development of vital technologies that might have eased the transition. The inequality that competitive capitalist economies generate also undermines communities and creates ill health and poverty. To all these issues co-operative firms have answers.

However, co-operatives still betray their 19th century origins and are still focused on addressing the struggle between capital and labour. What green economics can do here is to reintroduce the issue of land into the discussion. This means considering natural resources more carefully, but also moving away from a focus on labour and production and towards livelihoods and self-provisioning. It also means having the courage to be innovative, to think differently, to ask really fundamental questions, in the way co-operators have always done.

[Slide 18]

Most importantly, co-operatives have always been guided by their values rather than monetary return. And they have always had a stronger commitment to empowered governance and involving their workers in decision-making. These are highly valuable characteristics in the firms that will make up the sustainable economy. The values of responsibility and accountability have always characterised co-operatives: which have always been distinct from both the state and the corporate sectors. These qualities will also be crucial in building the green economy.

These are challenging times, but they are also inspiring times. We know that we have to make a rapid and fundamental change in the way our economy is organised: discussion of the green economy is everywhere. The challenge for the co-operative movement is to convince others that a green economy must also be a co-operative economy.

[Slide 19]

*References*

MacLeod and Reed in Co-operatives in a Global Economy: The Challenges of Co-operation across Borders. ed Darryl Reed and J.J. McMurtry (Newcastle upon Tyne: Cambridge Scholars Publishing).

Sale, K. (2000), *Dwellers in the Land: The Bioregional Vision* (Athens, Ga.: University of Georgia Press).

Smith, R. (2011), ‘Green capitalism: the god that failed’, *Real World Economics Review*, 56.

Wilkinson, R. and Pickett, K. (2009), *The Spirit Level* (London: Penguin).

1. Article by Nicole Heller and Douglas Fischer on the Daily Climate website; calculations by Laurie Johnson, chief climate economist for the Natural Resources Defense Council. [↑](#footnote-ref-1)