www.equilibrium-economicum.net

Quarterly essays (in English and French) on the theme "Querying economic orthodoxy"

No. 60 - juin 2013

Herman Daly's Ecological Economics

ANGUS SIBLEY

Perhaps our children's children will learn at last...to forgive this generation its blind commitment to ever greater consumption.
Herman E. Daly and John B. Cobb, Jr, *For the Common Good* (Beacon Press, Boston, second edition, 1994), page 406.

Economists must learn to recognise natural limits to growth

Herman E. Daly (born 1938), former World Bank economist and subsequently professor at the University of Maryland, is a leading figure in the field of *ecological economics.* What does that mean? The very name of this school of thought is a reproach to orthodox economics. The need to add the word *ecological* implies that normal economics, as it is still widely understood, taught and practised, considers our economic behaviour in isolation from our natural environment. It implies that most economists pay little attention to the effects of human activity on the non-human world. Unfortunately, this reproach seems to be well founded. Orthodox economics is not ecological.

Daly's economics is expounded in *For the Common Good* (1989; second edition 1994, hereinafter 'Daly and Cobb'); in *Beyond Growth* (1996) ('Daly'); and in many other writings. The first of these books is co-authored by Methodist theologian John B. Cobb, Jr. Though Daly and Cobb are both Protestants, most of their arguments appear to be compatible with Roman Catholic social and economic doctrine.

Daly's argument starts with the proposition that the human economy is an expanding system that exists within a world, an ecosystem, a biosphere[1] that is not expanding. It follows that the growth of the human economy must, sooner or later, run up against limits imposed by the earth's size and resources. Perpetual, unrestrained economic and population growth is physically impossible.

The emptier world of the classical economists

When economic science as we know it began, in the mid-eighteenth century, there was little need to worry about such limits, since the human economy was small in relation to the natural world. In 1750, the entire population of the world was around 750 million, little more than one-tenth of its present size. And most people had very low standards of living; they consumed little. For both these reasons, human economic activity was too small to seriously affect the global environment. Our planet was, in human terms, relatively 'empty'. But today we have, as Daly puts it, a *full world*: full of us.

There are far more of us and, on average, we consume a lot more raw materials per head. In so doing, we generate a lot more rubbish per head. We are approaching the limits of the capacity of our planet to provide the resources we consume, and to absorb the junk we discard. Moreover, the carbon dioxide, methane and other gases that we release into the atmosphere are bringing climatic changes that threaten to be catastrophic.

Yet we continue to rely on economic theories that date back to the classical economists of the eighteenth and early nineteenth centuries. Those theories take no account of the need to adapt our behaviour to the limitations of our environment. They favour practices that encourage, indeed impose, ever-continuing growth. So we need urgently to rethink our economic paradigms. But the economics profession, in general, seems unwilling to undertake this task.

One reason for this is what Daly and Cobb call *disciplinolatry*: the science of economics has become an academic discipline that is largely isolated from other relevant disciplines such as biology, geology, history and sociology. Economists, by and large, plough their own furrow; and, like their horses, they are blinkered. They lack lateral vision. This problem is not new; the French historians Charles Gide and Charles Rist, in their classic history of economic doctrines, describe a similar situation in the mid-nineteenth century:

...political economy took on a more and more abstract character; it became stuck in a body of unappealing doctrines whose connection with economic reality is more and more difficult to perceive.[2]

No limits to growth?

In 1978, the famous University of Chicago economist Milton Friedman poured scorn on the Club of Rome report *Limits to Growth* (1972): *they said we have to adjust our sights, we must recognise that there are limits to growth…This approach is completely wrong.*[3]

Daly recalls (p. 6) a conversation, around 1990, in which he asked Laurence Summers, then chief economist at the World Bank, whether economists should be asking the question, *what is the optimal scale of the entire human economy relative to the environment?* Summers' reply, Daly tells us, was immediate and definite: *That's not the right way to look at it.*

Though such attitudes are rather less common today, they survive in diehard fortresses of *laisser faire* thinking such as the Institute of Economic Affairs in London. On its website we can find Kristian Niemietz, a research fellow of the institute, writing in 2011: *there are no natural limits to growth.*[4]

But it is well known that the WWF estimate of the current 'global footprint' of the human race as a whole is in the region of « one and a half planets », meaning that humanity is consuming renewable natural resources at 1.5 times the rate of their renewal. Therefore, to continue indefinitely at this rate, even without any further growth, we would need one and a half planets.[5]

Daly compares the human race as a whole with a 'ship' floating in the 'sea' of the biosphere. The fact that we are overconsuming our resources suggests that our 'ship' has its 'Plimsoll line' under water, indicating that it is overloaded. And we well know that an overloaded ship is at risk of sinking!

The Steady-State Economy

We need therefore to consider how the human economy can be stabilised so that it does not persist in expanding, becoming instead a *sustainable* or *steady-state* economy. This idea is not new. In his *Principles of Economics* (1848), the English economist John Stuart Mill envisaged a future *stationary state* in which population has stabilised, and so has economic activity.[7] *A system of legislation favouring equality of fortunes* would ensure a more even distribution of wealth and income than that of 1848, or indeed of 2013. There would be *a well-paid and affluent body of labourers* and *no enormous fortunes.* Such a state would be *a very great improvement on our present condition* said Mill, who took a dim view of *the trampling, crushing, elbowing, and treading on each other's heels, which form the existing type of social life.* He was particularly scathing about

American society, in which, he claimed, *the life of the whole of one sex is devoted to dollar-hunting, and of the other to breeding dollar-hunters.*

In our restless age, that cherishes dynamism and movement, many people may fear that life in a steady-state economy would be boring. However, as Daly (p. 31) observes, *the steady state is by no means static.* There will be scope for improvement in the *quality* of what we produce and consume, though not generally in its *quantity*. With intangible 'goods' such as theatrical or musical performance, literature, sports, philosophy, there will always be scope for innovation and renewal, since these activities consume little in material terms. To quote Mill again, the stationary state *implies no stationary state of human improvement. There would be as much scope as ever for all kinds of mental culture, and moral and social progress ; as much room for improving the Art of Living, and much more chance of its being improved, when minds ceased to be engrossed by the art of getting on.*

What changes do we need?

How can we find our way to a world in which we no longer deplete our planet's natural resources and choke the ecosystem with our wastes?

First, we must move away from our voracious consumption of non-renewable resources. Here the biggest problem is energy production, which still relies so heavily on hydrocarbon fuels (coal, oil and gas). Metals are a lesser problem, since they can generally be recycled, though by processes that require energy. Daly suggests using alcohol derived from sugar-cane instead of mineral hydrocarbons; but this technique, though practicable, reduces food supplies and fails to eliminate pollution. Since Daly wrote that, we have seen considerable development of cleaner methods. The 20,000 or so new Spanish 'windmills' (*turbinas eólicas*) are now the country's biggest source of electricity; in January 2013 they provided more than 27% of total output.[8]

Second, we must learn to make and use longer-lasting capital goods. Daly (p. 110) points out that *wants are satisfied by the existing capital stock, not by the unavoidable but regrettable characteristic of the stock to become worn out or used up.* So we should create capital assets (buildings, vehicles, machinery, furniture…) designed to last as long as possible, not to be replaced after a few years. This is perfectly feasible. We still make use of buildings that have stood for centuries, though we no longer create such buildings. The city of Buenos Aires has recently retired some metro trains that were built in 1913, and some of the famous Lisbon trams, still running, are almost as old. The *Sächsische Dampfschiffahrt* (Saxon Steamship) company in Dresden, Germany, runs a fleet of thirteen riverboats on the Elbe; seven of these were built in the nineteenth century, and some of them still have their original steam engines.

It is only in recent times that we have fallen into the bad habit of *planned obsolescence*, and the sooner we get out of it the better. In Paris, it is saddening to see handsome nineteenth-century buildings, well able to last another century or two, demolished to make room for incongruous new structures, many of them designed to last only a few decades.

The problems of free trade

It is a cardinal principle with Daly (p. 147) that *international competition tends to be standards-lowering.* A country that permits its industries to neglect the environment, or to treat their labour harshly, will have lower costs than countries that impose higher standards. Therefore, high-standard countries are inevitably uncompetitive with low-standard countries. Free trade between them will either drive industries in the high-standard countries out of business, or force them to lower their standards. Never mind, said Milton Friedman, *the more unfair the competition, the better.* But Daly knows better. He calls for *compensatory tariffs* on imports from low-standard countries. *The motivation,* he explains, *is not to impose one country's moral standards and values on another country – rather it is to be true to one's own standards by not letting them be undercut by standards-lowering competition.* However, in my opinion, tariffs can be dangerous, since they invite retaliation. They must be imposed with great care.

Daly and Cobb condemn in a memorable phrase (p. 235) *the degenerative competition of individualistic free trade.* They point out that the classical economists' argument for free trade rested on the assumption that capital did not move easily across international borders; eighteenth-century capitalists preferred to keep their capital in their own countries. Today, clearly *this cornerstone of the argument has crumbled into loose gravel* (p. 216). Multinational businesses move their capital freely to wherever it can be employed most profitably, and this process escapes regulation by national governments that represent actual communities. This a triumph of private interests over the common good.

So Daly and Cobb recommend that countries should refuse to tolerate large trade imbalances. Each government should *limit imports to rough equality with expected exports by issuing import quota licences* (p. 230); companies could trade these licenses between themselves. Thus, just as European countries already have rules prohibiting excessive budget deficits, there should also be rules prohibiting excessive trade deficits. Indeed, the European Commission frowns upon a national trade deficit amounting to 4% or more of GDP, though oddly it seems willing to tolerate surpluses of up to 6%. Rules against large trade deficits, if strictly enforced, would have the great advantage of curbing the buildup of exorbitant international debts. Quota licences, not directed against any particular foreign country or product, may be less likely than specific tariffs to provoke retaliation.

Daly and Cobb also argue that governments should restrict international capital movements. This view was considered heretical when they wrote, but now it seems to be moving slowly towards acceptance. In 2008 Carmen Reinhart and Kenneth Rogoff at Harvard observed that *periods of high international capital mobility have repeatedly produced international banking crises.*[9] In 2012 the IMF published a report arguing that full capital liberalisation is not always the best policy.[10] Today, one of the hottest topics in public finance is the fight against tax evasion, a practice that is facilitated by free capital movements.

The need for redistribution

According to free-market economists, the best cure for the disease of excessive inqulity and poverty is robust economic growth, making more goods and services available. They trust that, if successful entrepreneurs generate more wealth, it will *trickle down*, as they say, to the poor. Yet in the USA, substantial growth over recent decades has benefited mainly the richest 10% of the population, while poverty has increased. Clearly, this theory does not always work in practice.[11]

But even if it did work, it could not be a long-term solution, in a world where there is little or no room for substantial further economic growth. If we can no longer increase total global (or national) income, then the only way to alleviate poverty is to share out the income we have.

Redistributive taxation seems to be widely hated in America today, yet there is good historical precedent for it. The Federal income tax rate on very high incomes was 70% or more between 1936 and 1981, even over 90% in the years 1944 to 1963. These taxes did not kill American capitalism; they simply discouraged firms from paying their executives so much that most of the top slice went to the Treasury.

An end to population growth

America needs to join Europe in the attainment of a stationary population…having children is a privilege rather than a duty: Daly and Cobb (pp 246, 250) do not shrink from controversy. When they wrote those words, world population was still little more than 4 billion; now it is over 7 billion. Yet many people still regard low birthrates and static or declining population as disastrous.

Daly and Cobb point out that traditional pro-natalist attitudes date from *earlier times when more children were an asset to the community as a whole…all the great traditional religions arose during that period, and their teachings are deeply affected by that social need.* Here we may note that, at the beginning of the Christian era, the population of the entire world is thought to have been only around 250 million; in the time of Mohammed (570 - 632 AD) it was nearer 200 million, while in the time of Moses (c. 1200 BC), it was perhaps less than 100 million.[12]

Moreover, Daly and Cobb point out that there have always been dubious motives for encouraging population growth: notably the desire for bigger war-making potential, or for abundant cheap labour. In their view (p. 239), *ten billion human lives are better than five billion, as long as the ten billion are not all alive at the same time…as far as we know, God is not impatient for all lives to be lived soon.*

Though some Catholics may react angrily to these arguments, modern Catholic social doctrine is not averse to 'family planning', so long as it is practised by natural methods. Thus the *Catechism* (Vatican, 1992) states (#2368, 2372) that *for just reasons, couples may wish to space the births of their children* and that *the state has a responsibility for its citizens' well-being. In this capacity it is legitimate for it to intervene to orient the demography of the population…by objective and respectful information, but certainly not by authoritative, coercive measures.* The *Compendium of Social Doctrine* (Vatican, 2004) states (#232 - 235) that *responsible parenthood is exercised…in the decision, made for serious reasons and in respect of the moral law, to avoid for a time or even indeterminately a new birth…the judgement concerning the interval of time between births, and that regarding the number of births, belongs to the spouses alone…the desire to be a mother or father does not justify any 'right to children'.*

On a long-term view, it is clear that the rapid growth of world population in recent times is historically abnormal. During the first thousand years of the Christian era, there appears to have been little or no overall growth. In the Middle Ages, world population still grew very slowly, probably less than doubling between 1000 and 1500 AD. Over the eighteenth century, it rose by around 50%; over the nineteenth, by around 80%; over the twentieth, it almost quadrupled. At the recent average world growth rate of 1.5% per annum, population doubles every 47 years. We cannot go on like this.

New patterns of taxation

As we have seen, Daly and Cobb favour heavy taxes on the very rich, in order to achieve a fairer distribution of income. They also call for drastic changes in the general tax pattern. Our payroll taxes and pay-related social security contributions make it costly to employ labour; but consumption of resources is less heavily taxed, and sometimes even subsidised. In a world where we have too few jobs, and yet consume too many resources, this is clearly perverse. We should (Daly pp. 89 - 91) shift the tax burden to natural resources, to discourage their consumption, while encouraging more use of labour.

Conclusions

Does a sustainable economy have to mean a puritanical 'hair-shirt' way of life? Many people, including myself, would not welcome that. But it may not be necessary. At present, we consume too much, largely because we consume carelessly and wastefully. That is because orthodox economics has succeeded all too well in making consumer goods so abundant and cheap, that we have lost the old habits of making and keeping truly durable things; of reusing materials; of taking care to avoid needless waste. Yet the tide is turning. We are relearning the arts of recycling materials and of producing energy by non-depleting methods, as our ancestors used wind and water mills. There is plenty of scope for consuming in a more conservationist fashion, without ruining our quality of life.

Why am I arguing, with Daly, against conventional growth, when obviously we need such growth to get our unemployed back to work, and to earn the wherewithal to pay down our excessive debts? No problem. Zero growth is a medium-term objective; in the near term, we are going to need very substantial investment, to build the new economy that will no longer deplete our natural resources, pollute our atmosphere, and derange our climate. That means heavy investment in renewable energy production; in restoring rail transport, which uses less energy than road or air, and can run on electricity rather than fossil fuels; in adapting our buildings so that they need less heating and cooling; in many other conservationist projects. All that will call for a good many years of continuing growth, to prepare the ground for eventual stability.

Ever since Adam Smith told us that *the interest of the producer ought to be attended to only insofar as it may be necessary for promoting that of the consumers*,[13] we have been running our economies in the belief that the right strategy is to « pander to the consumers and bugger the producers » (this word in Smith means *workers*; he wrote in the age of handmade production). We insist upon maximum competition between producers, in order drive prices down for the benefit of consumers. But this leads to ever-rising *labour productivity*, i.e. producing the same output with less labour. So, unless our economy keeps growing, inevitably we have persistently rising unemployment.

We have pursued this strategy to the point where we are producing and consuming too much for the long-term good of the environment, upon which we all depend. It follows that classical economic strategy has hit the buffers. We cannot persist in producing and consuming more and more. We have to learn to live with stable levels of population, production and consumption. Christine Lagarde, director-general of the IMF, is one of the few people at the top who show signs of recognising the folly of all-out competition: *We are multiple players, but we are engaged in a single game - a game that must be cooperative, not simply competitive.*[14] But she is not an economist.

* * * * *

ANGUS SIBLEY (postmaster@equilibrium-economicum.net) is the author of The 'poisoned spring' of economic libertarianism (PAX ROMANA, 2011).

References

1 The earth's biosphere consists of those regions of the planet and its atmosphere that are habitable by living organisms.

2 Charles Gide and Charles Rist, *Histoire des Doctrines Economiques* (1909) (Dalloz, Paris, 2000), book 4, page 426.

3 Milton Friedman, *The Energy Crisis,* reprinted in *Bright Prospects, Dismal Performance* (Horton, Sun Lakes (Arizona), 1983), p. 143.

4 See *The Steady State Economy Conference* on www.iea.org.uk/search/node/niemietz.

5 See the WWF *Living Planet Report 2012.*

6 Peter Vitousek et al., *Human Appropriation of the Products of Photosynthesis* (1986), available on JSTOR.

7 John Stuart Mill, *Principles of Economics* (1848), book 4, chap. 6. Mill's comments on 'dollar-hunters' are missing from some later editions.

8 See www.enerzine.com/3/15277/espagne.

9 Carmen Reinhart and Kenneth Rogoff, *This Time is Different* (April 2008), see www.economics.harvard.edu.

10 IMF, *Public Information Notice* no. 12/137 (December 2012).

11 Lawrence Mishel, see www.epi.org, 8th September 2012.

12 See Jean-Noël Biraben, *Essai sur l'évolution du nombre des hommes* in *Population*, vol. 34 (Paris, 1979), pp. 16 ff.

13 Adam Smith, *The Wealth of Nations* (1776), book 4, chap. 8.

14 Christine Lagarde*, The Future Global Economy* in *Project Syndicate,* 31st December 2012.