

The radical implications of a zero growth economy¹

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For 50 years literature has been accumulating pointing out the contradiction between the pursuit of economic growth and ecological sustainability, although this has had negligible impact on economic theory or practice. A few, notably Herman Daly (2008), have continued to attempt to get the notion of a steady-state economy onto the agenda but it has only been in the last few years that discussion has begun to gain momentum. Jackson's *Prosperity Without Growth* (2000) has been widely recognised, there is now a substantial European "De-growth" movement (Latouche, 2007), and CASSE (2010) has emerged.

The argument in this paper is that the implications of a steady-state economy have not been understood at all well, especially by its advocates. Most proceed as if we can and should eliminate the growth element of the present economy while leaving the rest more or less as it is. It will be argued firstly that this is not possible, because this is not an economy which *has* growth; it is a *growth-economy*, a system in which most of the core structures and processes involve growth. If growth is eliminated then radically different ways of carrying out many fundamental processes will have to be found. Secondly, the critics of growth typically proceed as if it is the only or the primary or the sufficient thing that has to be fixed, but it will be argued that the major global problems facing us cannot be solved unless several fundamental systems and structures within consumer-capitalist society are radically remade. What is required is much greater social change than Western society has undergone in several hundred years.

Before offering support for these claims it is important to sketch the general "limits to growth" situation confronting us. The magnitude and seriousness of the global resource and environmental problem is not generally appreciated. Only when this is grasped is it possible to understand that the social changes required must be huge, radical and far reaching. The initial claim being argued here (and detailed in Trainer 2010b) is that consumer-capitalist society cannot be reformed or fixed; it has to be largely scrapped and remade along quite different lines.

The "limits to growth" case: An outline

The planet is now racing into many massive problems, any one of which could bring about the collapse of civilization before long. The most serious are the destruction of the environment, the deprivation of the Third World, resource depletion, conflict and war, and the breakdown of social cohesion. The main cause of all these problems *is over-production and over-consumption* – people are trying to live at levels of affluence that are far too high to be sustained or for all to share.

Our society is grossly unsustainable – the levels of consumption, resource use and ecological impact we have in rich countries like Australia are far beyond levels that could be kept up for long or extended to all people. Yet almost everyone's supreme goal is to *increase*

¹ This paper elaborates and extends a discussion of themes published in *The International Journal of Inclusive Democracy*, Fall, 2010; see Trainer 2010a.

material living standards and the GDP and production and consumption, investment, trade, etc., as fast as possible and without any limit in sight. There is no element in our suicidal condition that is more important than this mindless obsession with accelerating the main factor causing the condition.

The following points drive home the magnitude of the overshoot.

- If the 9 billion people we will have on earth within about 50 years were to use resources at the per capita rate of the rich countries, annual resource production would have to be about 8 times as great as it is now.
- If 9 billion people were to have a North American diet we would need about 4.5 billion ha of cropland, but there are only 1.4 billion ha of cropland on the planet.
- Water resources are scarce and dwindling. What will the situation be if 9 billion people try to use water as we in rich countries do, while the greenhouse problem reduces water resources.
- The world's fisheries are in serious trouble now, most of them overfished and in decline. What happens if 9 billion people try to eat fish at the rate Australian's do now?
- Several mineral and other resources are likely to be very scarce soon, including gallium, indium, helium, and there are worries about copper, zinc, silver and phosphorous.
- Oil and gas are likely to be in decline soon, and largely unavailable in the second half of the century. If 9 billion were to consume oil at the Australian per capita rate, world demand would be about 5 times as great as it is now. The seriousness of this is extreme, given the heavy dependence of our society on liquid fuels.
- Recent "Footprint" analysis indicates that it takes 8 ha of productive land to provide water, energy, settlement area and food for one person living in Australia. (World Wildlife Fund, 2009.) So if 9 billion people were to live as we do about 72 billion ha of productive land would be needed. *But that is about 10 times all the available productive land on the planet.*
- The most disturbing argument is to do with the greenhouse problem. It is very likely that in order to stop the carbon content of the atmosphere rising to dangerous levels CO₂ emissions will have to be totally eliminated by 2050 (Hansen says 2030). (Hansen, 2009, Meinschausen et al., 2009.) Geo-sequestration can't enable this, if only because it can only capture about 85% of the 50% of emissions that come from stationary sources like power stations.

These kinds of figures make it abundantly clear that rich world material "living standards" are grossly unsustainable. We are living in ways that it is impossible for all to share. We are not just a little beyond sustainable levels of resource consumption -- we have

overshot by a factor of 5 to 10. Few seem to realise the magnitude of the overshoot, nor therefore about the enormous reductions that must be made.

Now add the implications of growth

The above figures refer to *the present* situation, but that does not define the problem we face. The problem is *what will the situation be in future given the determination to increase production and consumption continuously and without limit?*

At least 3% p.a. economic growth is demanded and usually achieved in this society. If Australia had 3% p.a. increase in output to 2050 and by then all 9 billion people expected had risen to the material living standards Australians would have, the world would be producing almost 20 times as much as it does today. Yet the present level is alarmingly unsustainable.

“Technical advance will make it all possible.”

We come now to the crucial assumption most people make, i.e., that there is no need to even think about questioning growth, let alone reducing consumption or economic output, let alone cutting GDP by a factor of 5 to 10. The generally assumed view is, “We will all be able to go on buying lots of goods, living in gigantic houses, driving long distances, going away for holidays, jetting around the world, having elaborate wardrobes etc., and increasing our consumption of those things every year – because our wizard technologists will find ways of producing goods and running cars etc. without causing significant problems. Indeed the technologies already exist; it’s just that our dull-witted politicians have failed to implement them.”

However, the overshoot is far too great for any plausible technical advances to be able to reduce the problems to tolerable proportions. Perhaps the best known “technical fix” optimist, Amory Lovins, claims that we could at least double global output while halving the resource and environmental impacts, i.e., we could achieve a “Factor Four” reduction. (Von Weisacher and Lovins, 1997. More recently a Factor Five reduction is argued.) But this would be nowhere near enough to solve the problems.

Let us assume that present global resource and ecological impacts must be halved. It has been explained that if we in rich countries average 3% growth, and 9 billion rose to the living standards we would then have by 2050, total world output would be almost 20 times as great as it is today. It is highly implausible that technical advance will make it possible to multiply total world economic output by 20 while halving impacts, i.e., to enable a *Factor 40 reduction?*

“But what about renewable energy sources?”

No technical-fix assumption is more common nor more unexamined than that renewable energy sources can be substituted for fossil fuels, thereby enabling abundant energy affluence while eliminating the greenhouse and other problems. A case to the contrary is detailed in *Renewable Energy Cannot Sustain A Consumer Society* (Trainer 2007, and updated in Trainer, 2008. See also Trainer, 2009 and 2010.) For example, following is

an indication of the reasons why there is no chance that all people could have vehicles fuelled by biomass.

It will probably become possible to derive 7 tonnes of biomass per ha from very large scale production, and 7 GJ of ethanol per tonne of biomass. Thus it would take 2.6 ha to produce the 128 GJ each Australian uses each year as oil plus gas. If 9 billion people were to live as Australians do now, *23 billion ha of forest would be needed on a planet that has only 13 billion ha of land.*

This does not mean we should forget about renewables. They are the sources we should be moving to full dependence on as soon as possible. But they can't fuel a consumer society for all. They have to be part of the "simpler way sketched below.

The failure of the Greens

Despite the overwhelming case against growth, and the argument that there is no possibility of solving the environment problem unless we shift to a zero-growth economy, green movements and political parties have almost totally ignored the issue. The original German Green Party saw the need for vast and radical system change away from consumer-capitalist society. However, now almost all green effort goes into merely trying to reform that society, so that its damage to the environment will be reduced somewhat, and virtually no green campaigning is directed at moving towards a kind of society that does not inevitably and increasingly destroy the environment. Almost none of their attention is given to the topic of growth. (For instance Geoff Mosley's recent book details the continued refusal over many years of the Australian Conservation Foundation to deal with it. Mosley, 2010.)

Similarly Green political parties will not discuss economic or population growth and instead focus on reforms which never challenge growth and affluence. Green people are among those who make the strongest claims that technology can solve the problems eliminating any need to face up to system change...and the politicians are at fault for not implementing the available solutions.

The reason for this failure/refusal is of course that if they spoke up against the pursuit of growth and affluence in a society that is fiercely obsessed with these goals, they would quickly lose their subscribers.

The wider context

The gross unsustainability of consumer-capitalist society is only the first of two crushing arguments against its acceptability. The other is to do with the extreme and brutal injustice built into the global economy, and without which we in rich countries could not have such high material living standards.

The global economy delivers most of the world's resource wealth, e.g., oil, to the rich countries. It does this simply because it is a market system and in a market most scarce and valuable things go to the rich, because they can pay most for resources and goods.

The same principle ensures that the development taking place in the Third World is little more than development that will enrich the corporations from the rich countries, Third World elites and the people who shop in rich world supermarkets.

The global economy totally ignores the needs and the rights of people and ecosystems. It allows, guarantees, that 850 million people starve while 600 million tonnes of grain are fed to animals in rich countries every year and most of the best land in many hungry countries is devoted to export crops. Conventional development, i.e., development determined by market forces and profit, is therefore clearly *a form of plunder* – it puts the productive capacity of the Third World into enriching us not them.

Conventional development theory and practice are based on the idea of “growth and trickle down”, i.e., the assumption that if we all enthusiastically pursue growth within the market place then this will be the best way to raise the Third World to satisfactory living standards. What a delight for the very rich! “No need to think about redistributing existing wealth, or producing what’s needed rather than what’s profitable...just produce whatever most enriches the already rich and wealth will trickle down to enrich all.” This is to say we should be content with an approach to development which delivers almost all of the Third World’s produced wealth to us in rich countries while a tiny fraction of it benefits Third World people.

The greatest blind spot in this conventional development theory and practice is that its goal is utterly impossible. The discussion above makes clear that there is no possibility of the Third World developing to be like the rich countries or to have rich world “living standards”; there are nowhere near enough resources for that.

“But look at China!” Yes there are places in the global economy where some people are winning spectacularly, and where significant benefits are going to poorer people. There is strong evidence that the ‘living standards’ of large numbers of people in the Third World are indeed rising significantly. (See for instance Rosling, 2009.) However this does not mean the Trickle Down approach is acceptable or that it could solve the basic problems.

Firstly the booming export markets the Chinese now enjoy have been taken from many in poor countries who once had them but now can’t earn from exporting the things they used to sell. Also it is easy to overlook the fact that 800 million Chinese are not sharing in the new wealth. (Hutton, 2007) Market based systems mostly benefit the middle class and the rich, and create limited opportunities for some to rise to the middle class. Ask 500 million in Africa, or most people in Haiti and Tuvalu about the miracles of growth and trickle down. Most of them are probably enjoying declining GDP per capita. (...which of course just means they need to work harder, cut their export prices, log more forest...) Very little ever trickles down to the poorest, and globalisation has increased the rate at which the resources of the very poorest are transferred to the rich. (For extensive documentation see Note 2.)

Even for those poor classes benefiting from the growth and trickle down approach to development, the rates evident show that it would take hundreds of years for them to rise to rich world “living standards”. Meanwhile the rich countries would have risen to stratospheric levels...and the ecosystems of the planet would have collapsed long ago.

Even if the growth and trickle down approach was solving the most serious problems it is obviously an extremely wasteful and unjust strategy. For every crumb it delivers to the poor majority, great wealth is heaped on the already rich.

The rich countries go to a lot of trouble to keep the unjust global economy in place. They use aid, support for brutally dictatorial Third World regimes, World Bank Structural Adjustment Packages, and provision of arms, and they resort to military invasion, in order to maintain the governments and systems that ensure that our corporations and shoppers continue to get most of the world's resource wealth and to take most of the markets. The rich countries deliberately prevent appropriate development, i.e., the application of the Third World's productive capacity, its labour, land, skills and capital, to developing the simple things that would do most to quickly increase the welfare of its people. The conditions written into the World Bank's Structural Adjustment Packages explicitly rule this out and decree that productive capacity must be free for market forces to determine what it will be put into -- that is free for corporations to use in whatever way will maximise their global profits.

Our high material "living standards" cannot continue to be provided unless these appallingly unjust systems and processes remain. We could not live anywhere near as well as we do if you were not getting most of the available tin, coffee, oil etc. The problem of Third World deprivation cannot be solved unless the rich world reduces its consumption dramatically and lives on something like its fair share of world resource wealth. Yet its supreme goal is to increase its levels of production, consumption and GDP.

Thus growth is a major cause of global problems.

This "limits to growth" analysis is crucial if one is to understand the nature of the environmental problem, the Third World problem, resource depletion and armed conflict in the world. Although there may also be other causal factors at work, all these problems are directly and primarily due to the fact that there is far too much producing and consuming going on.

For instance, we have an environment problem because far too many resources are being drawn out of nature and far too many wastes dumped back in, at rates technical advance cannot cut to sustainable levels. We have an impoverished and underdeveloped Third World because people in rich countries insist on taking most of the resources, including those in the Third World that should be being used by Third World people to meet their own needs. And how likely is it that we will ever have peace in the world if resources are very scarce and all cannot use them at the rate a few do now, yet all insist on getting richer and richer all the time without limit? If you insist on remaining affluent then you should arm yourselves heavily, you will need arms if you want to continue to take far more than your fair share.

The quality of life

The ultimate paradox is that for decades it has been clear in the literature that increasing the GDP of rich countries does not increase the quality of life. (Eckersley, 1997; Speth, 2001.) In fact we are now probably seeing a falling quality of life in the richest countries. What then is the point of striving for economic growth?

“But growth will make us so rich we will be able to afford to save the environment.”

This statement is characteristic of the conventional economic mind ...just create more monetary wealth and we can solve all problems with it. The fatal mistake in the argument is transparent. *If we don't reduce “wealth” production dramatically and quickly the environmental consequences will soon eliminate our capacity to produce any wealth at all.*

The conclusion?

To repeat, the point of the foregoing sketch has been to make clear the magnitude of the problem. The volumes of producing and consuming going on in the world are many times beyond levels that might be sustainable. It is not just a matter of getting to an economy that does not grow any further; the imperative is to reach a steady state economy in which production, consumption, investment, trade and GDP are very small fractions of their present quantities. The following discussion seeks to show that this means that most of the core structures and systems in this society will therefore need to be scrapped.

The far reaching and profoundly radical implications of zero-growth

The growth problem is not just that the economy has grown to be too big, now depleting resources and damaging and eventually destroying ecosystems. The more central problem is that growth is integral to the system. Most of the systems basic structures and mechanisms are driven by growth and cannot operate without it. Growth cannot be removed leaving the rest of the economy more or less as it is. Unfortunately people in the current “De-growth” movement tend to think growth is like a faulty air conditioning unit in a house, which can be taken away and the rest of the house will function more or less as it did before.

- If you do away with growth then there can be no interest payments. If more has to be paid back than was lent or invested, then the total amount of capital to invest will inevitably grow over time. The present economy literally runs on interest payments of one form or another; an economy without interest payments would have to have totally different mechanisms for carrying out many processes.
- Therefore *almost* the entire finance industry has to be scrapped, and replaced by arrangements whereby money is made available, lent, invested etc., without increasing the wealth of the lender. That is incomprehensible to most current economists, politicians and ordinary people.
- Among related problems is how to provide for old age, when this can't be done via superannuation schemes relying on returns on invested savings?
- The present economy is literally driven by the quest to get richer; this motive is what ensures energetic search for options, taking of risks, construction and development, etc. The most obvious alternative is for these actions to be motivated by a collective effort to work out what society needs, and organise to produce and develop those things. This involves an utterly different world view and driving mechanism. Such a society would have to find another way to ensure innovation, entrepreneurial initiative

and risk taking when people can't look forward to getting richer from their efforts. (This is not necessarily a difficult problem; See Trainer 2010a, Ch. 5.)

- The problem of inequality would become acute and would demand attention. It could not be dealt with by assuming that “the rising tide will lift all boats”. In the present economy, growth “legitimises” inequality and defuses the problem. Extreme inequality is not a source of significant discontent, because it can be said that economic growth is raising everyone’s “living standards”. But if the pie remains at a constant size, and everyone is driven by a competitive struggle to get richer all the time, before long the most energetic/talented/ruthless few will have taken most of the pie. Thus inequality would have to be addressed and dealt consciously and deliberately, involving social decisions regarding distribution and fair shares...which again would involve a very different kind of society.
- Above all, if there is to be no growth *there can be no role for market forces*. Many people who oppose growth do not seem to realise this. The market is about maximising; i.e., about producing, selling, and investing in order to make as much money as possible from the deal, and then seeking to invest, produce and sell more, in order to again make as much money as possible. In other words there is an inseparable relation between growth, the market system and the accumulation imperative that defines capitalism. If we must cease growth we must scrap the market system.
- The above changes could not be made unless there was also a profound cultural change, involving nothing less than the abandonment of the desire to gain. For more than two hundred years our Western society has been focussed on the quest to get richer, to accumulate wealth and property. (The point is focal in the writings of Polanyi, 1944, and Tawney 1922, in the emergence of capitalist society from Medieval society.) This is what drives all economic activity, such as the innovative and development behaviour of firms and the behaviour of individuals and firms in the market, and it is at the core of national policy. People work to get as much money as possible. Firms strive to make as much profit as possible and to get as big as possible. People trade in order to end up richer than they were. Nations strive to become richer all the time.
- The logically inescapable point here is that in a zero-growth economy there could be no place whatsoever for this psychological motive or economic process. People would have to be concerned to produce and acquire only that stable quantity of goods and services that is sufficient for a satisfactory quality of life, and to seek no increase whatsoever in savings, wealth, possessions etc. It would be difficult to exaggerate the magnitude of this cultural transition. A zero-growth economy cannot exist unless there is enormous change from the mentality that is typical in consumer society and that has been the dominant driving force in Western culture for several hundred years.

Subsistence, gift, reciprocity...sufficiency

The alternative to a growth economy is in fact a subsistence economy, that is, one in which people produce to meet stable needs and not to accumulate wealth. In tribal, peasant,

ancient and Medieval societies and in many communes today items are not made to sell in order to gain, to accumulate money over time. (See Polanyi's discussion, 1944.) They are produced to exchange for other needed items of equal "value". Market day enables all to acquire the things they need, in exchange for a contribution to meeting the needs of others. No one intends to gain from the exchange; they just intend to exchange items of a certain "value" for others of the same "value" (usually measured in labour time needed to produce them.) People do not go into the market to get rich. (Merchants visiting the town, usually with non-necessities, luxuries, to sell, did trade to gain, but in Medieval Europe were an almost irrelevant minority on the fringe of the mainstream economy, and were not respected.)

In these subsistence economies the basic operation was not getting, it was giving...knowing that others would give to you. In other words the key economic mechanism was gift and reciprocity. In tribes elaborate rules govern the giving and receiving, ensuring that all are provided for. (No one in tribal society is poor or hungry, unless times are difficult for all.)

These are the economic principles that must exist, whether we like it or not in a satisfactory, viable economy in the coming era of intense and irremediable scarcity, in which we must develop mostly small local cooperative stable economies focussed on meeting needs. The focal concerns must be organising local resources and productive capacities to provide well for all, without any notion of gain or getting richer over time. The basic mechanism must be giving to others and the community, knowing that you will be given what you need. (for instance contributing to voluntary working bees that maintain the community orchards.)

History can be seen in terms of the damage that the drive to gain eventually does. Often a civilization emerges and for a while has considerable equity, but in time some become more wealthy and powerful, and develop into a class with increasing power and privileges and then dominate the rest. Their desire to gain drives a quest for more and more land, opulence, slaves...and foreign sources of wealth. An imperial phase begins. The wealth of other regions is plundered. Because there is no concept of enough, before long there is over-reach; it becomes impossible to maintain the empire, and the civilization self-destructs. At present the West is passing through the over-reach phase into decline, while China is rising past us, driven by the same old single-minded obsession with getting richer and more powerful. This sorry story will not cease until humans learn to be content with enough.

This is a core theme in "The Simpler Way" analysis -- this society cannot be fixed; its major elements must be scrapped and replaced. (Trainer 2010b) Most obviously, you cannot reform a growth economy to be a zero-growth economy, and you cannot remove the growth element from the economy while leaving the rest of it as it was; you have to build a completely different economy. Above all, you will not solve the many problems the quest for growth is causing without scrapping core structures in our culture, that is until people in general come to be content with what is sufficient and design and run economies that are about subsistence, gift and reciprocity.

Thus most people calling for a stable economy seem not to grasp the implications of their campaign, nor the reasons for thinking that it has a negligible chance of success. Above all they do not seem to have thought through the many and profound associated social changes that must be achieved if growth is to be eliminated.

Is capitalism compatible with a zero-growth economy?

It should now be obvious that a stable or zero-growth economy cannot be a capitalist economy. Capitalism is by definition about accumulation, making more money than was invested, in order to invest the surplus to have even more...to invest to get even richer. It would be possible in a stable economy for a few to still own most capital and factories, and live on the income from these investments, but they would be like rentiers or landlords who draw an income from their property. They could not be driven to accumulate, get richer, increase the amount of capital they possess and invest to get richer. If they did, a very few would quickly take almost all of the fixed amount of income and wealth available...and the system would soon self-destruct.

Some people, such as Herman Daly believe that “productivity” growth would enable capitalism to continue in a zero-growth economy. The counter-argument is that there would be a tendency for this to happen, but that the effect would be trivial and short lived

Many in the emerging “De-growth” movement do not wish to face up to the conclusion that if you get rid of growth then you will also have got rid of capitalism and you will inevitably have (some kind of) “socialism”. That is, the economy could not then be left to competition between people who own capital operating in free markets. At least the main economic decisions would have to be made by deliberate social discussion, debate and planning...because this is the only logical alternative to leaving them to “free markets” and the owners of capital competing to gain.

It is crucial to immediately stress that this does not have to mean we must accept a big authoritarian, bureaucratic state running everything...which no one is likely to prefer. A new economy is sketched below (and detailed in Chapter 4 of Trainer 2010a.) It has the main decisions made collectively, by all people within small community economies (but with most of the economy in the form of private firms.)

What is the alternative?

If we must abandon growth and greatly reduce production and consumption then there is no alternative but to develop an economy which is basically under social control, i.e., in which we discuss, decide, plan and organise to produce that stable quantity of the basic things we need to enable a high quality of life for all. In the coming conditions of intense resource scarcity, viable communities will have to be mostly small, self-sufficient local economies using local resources to produce what local people need. Such economies can only work well if control is in the hands of all citizens, via participatory-democracy exercised through whole town assemblies. This vision would enable most of the firms and farms to be privately owned or community cooperatives, and would involve little role for councils, state or federal governments.

Although the case against the wisdom of pursuing growth and affluence has in my opinion been overwhelmingly convincing for decades, it has been almost totally ignored. Although it is now gaining more attention, on the fringes of the economics profession, unfortunately there is little recognition of just how profoundly radical the notion of zero-growth is. It logically entails the termination of several fundamental structures and processes, values and taken for granted ideas, which have developed over hundreds of years. If the limits

analysis is valid we have only decades to make the enormous transitions. Given that the mainstream, resolutely led by the economics profession, shows no sign of ever attending to these issues, it is difficult to maintain belief that we have the wit or the will to save ourselves.

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