



Economic and Population Growth – a Role for Productivity Science?

A position paper by John Parsons, Australia

'I shop therefore I am' – what's wrong with this picture?

Progress or Plague

Every society lives by its own myths. For the last 50 years for most nations the foremost has been perpetual economic growth. It is also alive and well in the productivity community.

There are three areas of growth that are inextricably linked. These are economic (or gross domestic product, GDP) growth, productivity growth and population growth. And to these we can probably add growth in environmental degradation and all the climatic outcomes that go with it.

The current productivity paradigm implicitly embraces a definition of prosperity that is based on economies growing faster than populations, such that living standards (or GDP per capita) improve. Unfortunately, the very notion of economic growth itself is rarely questioned and, however you look at it, economic growth is *always* accompanied by increases in resource consumption! It is the increasingly undignified (and often destructive) chase for diminishing strategic resources and their conversion into goods and services that are the driving forces for environmental degradation.

According to the *New Scientist*, most economists see growth as essential and 'the only force capable of lifting the poor out of poverty, feeding the world's growing population, meeting the costs of rising public spending ... They see no limits to that growth, ever.' Since redistribution of wealth is decidedly unpopular, the favoured mechanism for 'lifting the poor out of poverty' is the trickle-down method. Unfortunately, it doesn't work that well, as a fifth of the world's population still only earns 2% of global income and it is estimated that to 'get the poorest onto an income of US\$3 would require an impossible 15 planet's worth of biocapacity'.

George Monbiot, inter alia a UK *Guardian* columnist, claims that the logic of corporate capitalism regards anything that impedes growth as an offence to its interests and corporations have a need 'to grow without restraint'. The desire to grow is implicit in almost every community, often to the point where not growing is viewed as failure.

Most scientists embrace the view that, at the very least, there is a connection between our economic activities, global warming and climate change. Political and business leaders are less accepting – probably because they are driven by short-run cost considerations rather than longer-run consequences. One high-ranking UK treasury official was heard to mutter after a discussion on sustainable development; 'Well, that's all very interesting, perhaps now we can get back to the real job of growing the economy.' Commenting on the lack of progress at the recent climate change talks in Bali, German Environment Minister Sigmar Gabriel berated delegates when he said: 'Some political leaders here lack the courage to transform into decisions what experts have elaborated.'



So, with corporate capitalism and big politics singing the tune of the economists (although Keynes was an exception), unbridled growth is top of almost every national agenda. Any challenge to this position, and the extraordinarily powerful vested interests that underpin it, is not only heretical but potentially dangerous.

Australia is both complicit with and vulnerable to the effects of such profligate behaviour. A former advisor to the Howard government suggested that Australia's rosy economic picture was largely built on consumers buying 'stuff' on credit that they didn't need, stashing it away in McMansions that gorge energy and create a carbon footprint equivalent to that of a 'small African country'.

Unprecedented climatic swings have alternatively (even, occasionally, simultaneously) brought drought, bushfires and floods and threatened the very existence of the iconic Great Barrier Reef. Yet, not too long ago, industrialists in Australia (current population around 22 million) were campaigning for a population of somewhere between 50 and 100 million by the end of the century. The treasurer at the time even introduced a baby bonus to encourage families to have 'one for mom, one for dad and one for Australia' even though Australia has one of the fastest growing populations in the world.

Buying energy-efficient appliances is applauded but not buying appliances at all is a crime against society. Tim Jackson writing in the *New Scientist* put it this way: 'The one piece of advice never on a government list is 'buy less stuff' ... Consuming less may be the biggest single thing you can do to save carbon emissions, and yet no one dares to mention it. Because if we did, it would threaten economic growth, the very thing that is causing the problem in the first place.'

And yet, in many instances, it is these same business and political interests that we serve as productivity scientists.

What does all this mean – what are the key issues we face?

Howard V Hendrix describes our situation somewhat brutally as: '*The apocalyptic progress of humanity via overpopulation, environmental destruction [and] aggressive territorial expansion.*'

A little harsh, maybe, but systems thinking does tell us that all systems (physical and biological) eventually impose limits and we find ourselves squeezed into a decidedly uncomfortable position because we forgot one simple fact: the earth is a closed system. There used to be lots of space and abundant resources but, over the centuries, burgeoning populations have used and abused the available land, sea and air until the planet is so stretched it can no longer entertain further claims upon its largesse.

The value system that gave us our present socio-economic model conferred untold benefits on humankind. Along with the industrial and information revolutions, it also brought us multi-party democracy, the scientific method, an entrepreneurial spirit and, through the separation of powers, individual rights and freedoms. But, perhaps inevitably for such a competitive system, it can be unthinkingly manipulative, unashamedly exploitative, excessively materialistic and notorious for taking a relatively short-run approach to business and politics. It is also obsessively prone to seeing more complex technology as the ultimate solution to all our problems.



Unfortunately, technology alone will not save us – a view endorsed by the National Economic Foundation (NEF) as it does not believe that technology can advance rapidly enough to permit 'business as usual'.

Having said that, it is clear that, by and large, our achievement-oriented approaches have been eminently successful in raising living standards around the world. Thus, the ideas being advocated here do not embrace its rejection in favour of a return to living in caves and eating wild berries. However, by perhaps failing to take a genuinely systemic view, our present political, economic and social paradigm has begun to outlive its usefulness.

On the occasion of China becoming the world's largest emitter of greenhouse gases in absolute terms (knocking the US off a perch it has occupied for over a century), Chinese leaders announced that it was emission per capita that really counted and, in this respect, China still lagged a long way behind Western nations. And, those leaders asked, don't Chinese people have a right to the same material living standards as those enjoyed in the West, especially as the greenhouse problem was created long ago by profligate behaviour in the developed countries? This sounds reasonable enough until the notion of a closed system is considered.

Furthermore, developing economies also rely (quite reasonably) on raising living standards by bringing those in the subsistence economy into the market economy. Even if the newcomers are immediately as productive as those already within the market economy, resource consumption will inevitably increase and probably sharply.

In 2006, Ross Gittins said in *The Age*: 'The rapid growth in the global economy is outstripping the ability of the planet's natural resources to sustain it'. Western-type lifestyles and consumption on such a profligate scale are unsustainable. This standpoint does not in any way attempt to belittle the efforts of conservationists and those who foster waste reduction and recycling, nor does it undermine the basic notion of productivity, which has the potential to bring about relative decreases in resource consumption. However, such percentage improvements can in no way compensate for the order of magnitude increases in energy and resource consumption if the poor billions of Asia, Africa and South America are to enjoy the same lifestyle as the rich millions of North America, Europe and Australia – lifestyles conspicuously flaunted on their television screens.

The poor consume far fewer resources but are far more numerous. What is more, the rich (no matter how their riches were acquired) are unlikely to sanction any course of action that smacks of redistribution.

And herein lies the dilemma and the challenge faced, inter alia, by productivity scientists. How can the reasonable needs of the developing world be met without increasing the consumption of resources in absolute terms to the point where the planetary system starts to fail? The earth simply does not have the resources to offer everyone the same lifestyle as the West. The US, with around five per cent of the world's population, requires a quarter of global biocapacity to support itself. Do the maths. It's unfair, but it's a fact.



The problem simply cannot be solved at the level it was created – national responses are insufficient, even if those nations had the political will and clearly most of them do not. A truly global response is required and those who claim to be global organisations or have a global reach have a responsibility to make this happen.

It is no longer defensible to continue engaging (implicitly or explicitly) in a relentless pursuit of economic growth. The situation with productivity or technological interventions as we know them may be better than without them, but it is still not good enough!

It is encouraging that the anti-growth lobby has two main proponents. There are those in favour of eradicating growth to avoid devastating degradation. But there are also those that offer an economic argument to limiting growth. Led by Bill McKibben the emphasis is on the finite nature of our resources (like peak oil) and what this does to production costs, rather than on the effects of their depletion.

However, the scarcity argument opens up the possibility of escalating international tension as nations compete for a diminishing pool of strategic resources. If countries like India and China experience significant shortages of food and water (especially if we exacerbate the situation by making ethanol in large quantities from food crops), we could within a decade have a world in which hundreds of millions of people are on the move – with all the strategic menace that would unleash.

What can be done – is there a role for WCPS?

Jeffrey Pfeffer outlined the challenge when he said: *'Many organisations want change but nobody wants to do anything differently'*.

Our situation is somewhat paradoxical. Peter Farb posited that: 'Intensification of production to feed an increased population leads to a still greater increase in population.' This previously benign but now destructive cycle needs to be broken. Whilst economic growth might remain a political and business virtue, in reality it may already be in the past. Unfortunately, even though energy and other resource use and its consequences are beginning to occupy centre stage, there's little agreement on what to do. Positions and agendas abound, sadly most are fragmented at best and self-serving at worst.

Let's move beyond notions of Western greed or Chinese ambition, we can no longer afford to use such parochial descriptions. We need leaders big enough to frame a compelling vision for the future of the entire planet, one which engages both rich and poor – one that captures our collective imaginations and shows us that there is a light at the end of the tunnel. This should be accompanied by an alternative model of increasing prosperity based on the new realities.

What might such a model look like? This is impossible to say except that it will look quite different to what we have now. Is it about technology? Yes, but this will only be a part. Does green productivity have a role? Yes, but this is not the entire solution. Are the high-level climate change talks the answer? No, but they are a part of the answer. And so on for carbon trading, nuclear power, wind farms, clean coal, alternative fuels, solar energy, hydrogen cars and recycling.



These are options we might exercise in the short and medium term as we journey towards our shared vision. But, until those most sensitive of all possibilities – limiting economic and population growth – are put on the agenda, adequate progress will be impossible. To change their economic thinking, world leaders need to be influenced by world bodies, like WCPS, with economic rather than merely environmental credentials. It is eminently possible to build durable and elegant ways to inhabit the Earth, but we need to abandon the belief that the future will resemble the past.

When there's genuine political will, decisive actions do follow. The US and UK governments swiftly jettisoned decades of economic doctrine as they attempted to rescue the reckless financial system from complete meltdown. Why should it take longer to stop the planetary meltdown brought on by an equally reckless and even more dangerous obsession with growth?

However, given the need for genuine transformational approaches and if, as suggested earlier, our present political, economic and social structures have outlived their usefulness, what might take their place? At a political level the very democratic systems that have served so many of us well have become victims of their own success. How can politicians be expected to take unpopular long-run (even visionary) decisions (however unlikely this may seem to cynical voters) when they cling to power at the whim of fickle electorates and business interests? Australian federal elections are held every three years. By the time the victor has recovered from the euphoria of winning it's almost time to be back on the campaign trail. Tough new political structures not predicated on pandering to short-run ambitions or personal desires need to be found.

Similarly, productivity science needs a new paradigm and this will involve the WCPS revisiting its mission of *Peace and Prosperity through Productivity*. The words are fine; the intent remains noble; but the definition of prosperity has to be clarified in the light of the current, inauspicious global reality. The Montreal Declaration from the 6th WPC stated: 'We believe that organised human activity can be improved, continuously and without end, and that research on and the practice of such performance improvement processes can benefit mankind forever.' Again, this may need a redefinition of the words 'improved' and 'benefit'.

We could, for example, re-specify output to accommodate the entropic and polluting impacts of production and the social costs of global warming (along the lines of the total social factor productivity index). Why does prosperity have to equate to increases in GDP per capita?

Are alternative definitions of prosperity available that relate more to quality of life rather than to mere material welfare? Would those presently aspiring to high living standards accept a revised version of prosperity? And, would such prosperity, if attained, make fewer demands on resources leading to an absolute decline in resource consumption?

Attempts at defining alternative indices that embrace the social and psychological dimensions of prosperity include the index of sustainable welfare, the genuine progress indicator, the ecological footprint and the happy planet index. It has been found that as GDP goes up, the above measures either level off or decline.



Other strategies designed to facilitate prosperity whilst minimising ecological damage that appear in the literature include:

- Reversing the trend towards obsolescence and focussing on repairing and maintaining rather than the production of replacements. Making short-lived disposable goods makes little sense
- Focussing production more on the basic requirements to eliminate poverty – clothing, shelter, and food
- Taking advantage of the inevitable technological advances and general improvements in the productivity of energy, transport, materials, building designs and so on
- Introducing taxation to discourage activities that perpetuate or stimulate growth such as on dwellings that exceed what's required for the number of occupants, fuel and energy from fossil fuels
- Addressing the costs of an aging population by actively encouraging older people to stay in, or re-enter, the labour force rather than relying on population growth to provide the necessary entrants. Currently in Australia, despite skills shortages, older workers are being vigorously ejected from the labour pool to make way for (ostensibly) lower cost young people.

In the literature considerable debate is given over to the need for family planning. Traditionally, as living standards grew, value systems changed and birth rates declined naturally. On the basis that we can no longer wait for this to happen and, anxious to avoid political interference in determining the size of families, the emphasis has shifted to more empowering strategies.

This means (inter alia):

- Ensuring that people have access to family planning services
- Empowering women in developing countries such that they have a large say in reproductive decisions
- Modifying school curricula to include information on population trends and their implications
- Reforming tax laws in a way that encourages couples to have no more than two children.

These ideas are by no means universally accepted in the developed world let alone in developing countries. The religious right in the US and Catholics on principle dislike birth control whilst the liberal left shudders to suggest such things to developing nations as it smacks of colonialism.

'Humanity is now on a collision course with the world's ecosystems and resources. In the coming decades, we will either find ways of meeting human needs based on technologies, policies and cultural values, or the global economy will begin to collapse' (The Worldwatch Institute). We have to forget our favourite remedies. It is up to us to find novel, holistic solutions – uncomfortable, but ultimately challenging. How more noble a cause could there be than to save the entire world?



For more information particularly see:

1. Opinion: Beyond Growth; *New Scientist*; 18 October 2008.
2. Prosperity Without Growth? Tim Jackson; Sustainable Development Commission; March 2009.
3. Breaking the Growth Habit; Bill McKibben; *Scientific American*; April 2010.

Other references available on request.