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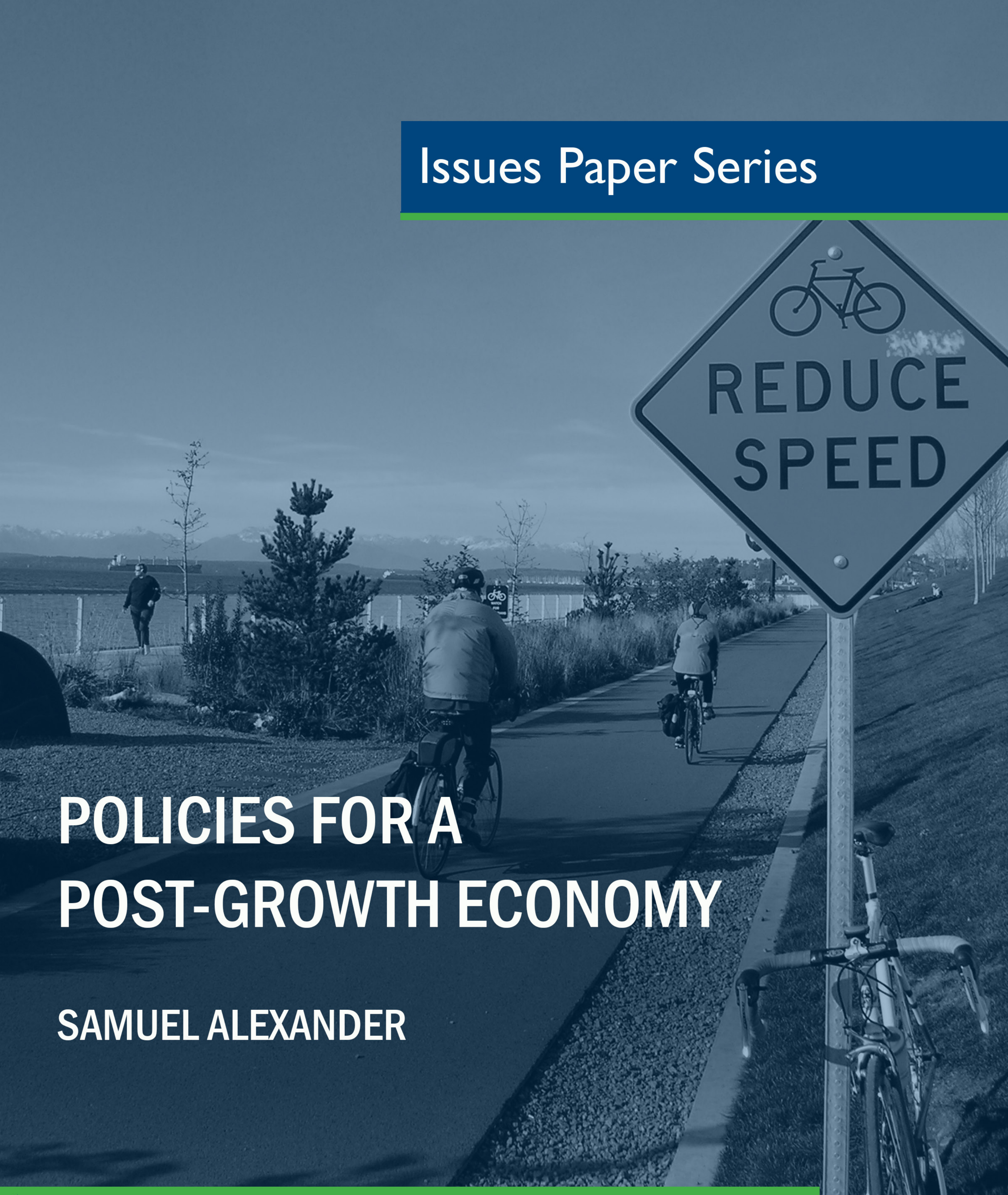

POLICIES FOR A POST-GROWTH ECONOMY

SAMUEL ALEXANDER

THE UNIVERSITY OF MELBOURNE

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Production Editor Claire Denby, Melbourne Sustainable Society Institute, cdenby@unimelb.edu.au

Author Dr Samuel Alexander is a lecturer with the Office for Environmental Programs and a Research Fellow with the Melbourne Sustainable Society Institute, University of Melbourne. He currently teaches a course called 'Consumerism and the Growth Economy: Interdisciplinary Perspectives' into the Master of Environment, University of Melbourne. His books include: *Sufficiency Economy: Enough, for Everyone, Forever* (2015); *Prosperous Descent: Crisis as Opportunity in an Age of Limits* (2015); *Simple Living in History: Pioneers of the Deep Future* (2014); *Entropia: Life beyond Industrial Civilisation* (2013) and *Voluntary Simplicity: The Poetic Alternative to Consumer Culture* (2009).

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Introduction

The 1972 publication of *Limits to Growth* sparked a controversy that has yet to subside. This book argued that if population, resource use, and pollution kept increasing on our finite planet, eventually economies would face environmental 'limits to growth' – with potentially dire consequences. Although evidence is mounting in support of this position (Turner, 2014; Steffan *et al,* 2015), any suggestion that nations might have to give up economic growth, or even embrace a 'degrowth' process of planned economic contraction, is typically met with fierce resistance, especially by mainstream economists. In response to such arguments, most economists tend to insist that technological innovation, better design, and market mechanisms will mean that economies can and should continue growing indefinitely.

Those counter-arguments have shaped the cultural understanding of this debate, meaning that the 'limits to growth' perspective is widely and casually dismissed as flawed. Most people, including most politicians, still believe that sustained economic growth, in terms of Gross Domestic Product (GDP), is necessary for societal progress, and that such growth is consistent with environmental sustainability. For example, questioning economic growth never entered the key discussions at the Paris Climate Summit in December 2015, which implies that mainstream political and economic discourse still deems continuous GDP growth not just consistent with a safe climate, but a precondition for it.

The main political implication of the growth paradigm is that governments shape policies and institutions with the aim of promoting economic growth, giving society a pro-growth structure. This is supported by consumerist cultures that seek and indeed expect ever-rising material living standards. On the flip side, any policies and institutions that would inhibit economic growth are presumptively rejected or not even given a serious hearing.

This paper provides a summary case for why there are, in fact, limits to growth, and outlines a range of bold policy interventions that would be required to produce a stable and flourishing post-growth economy. The analysis draws on and attempts to develop a rich array of thinking from literatures including ecological economics, eco-socialism, degrowth, and sustainable consumption. For decades a huge amount has been written in critique of growth economics, but the literature on what a post-growth economy would look like, or how to get there, is far less developed. This is inhibiting the movement for change. I acknowledge that most people do not recognise the need for a post-growth economy and therefore would reject my policy proposals as unacceptable. But as the limits to growth tighten their grip on economies in coming years and decades, I believe the debate will inevitably evolve, and the question will not be *whether* a post-growth economy is required, but rather *how* to create one – by design rather than disaster.

Definitions

In order to be for or against 'growth' it is important to understand what that term means, so I will begin with some definitions. Growth can be understood in various ways, including:

1. An increase in the resource/energy requirements of an economy (quantitative growth);
2. An increase in the productivity per unit of resource/energy (qualitative growth);
3. An increase in Gross Domestic Product (GDP growth);
4. An increase in wellbeing or happiness (wellbeing growth).

These are all legitimate ways to understand growth but they are not synonymous. One form of growth may or may not lead to other forms of growth. Some forms of growth may have limits, others may not. Fuzzy thinking about these forms of growth has produced unnecessary confusion and disagreement.

So where does the controversy lie?

How the Growth Economy is Defended

Nobody is against growth in wellbeing and even economists agree that economies cannot grow quantitatively forever on a finite planet. The real 'limits to growth' controversy lies in relation to the concepts of GDP and qualitative growth.

Defenders of growth argue that there is no reason why we cannot 'decouple' GDP growth from environmental impact in such a way that avoids any perceived limits to growth. These growth advocates might acknowledge that current forms of GDP growth are not sustainable, but nevertheless argue that what we need is 'green growth'; that is, growth based in qualitative improvement not quantitative expansion.

This view is based in neoclassical economic theory. It maintains that if natural resources begin to get scarce, prices will go up, and this will set in motion two important dynamics. First of all, increased prices will dis-incentivise consumption of that resource and encourage alternatives or substitution, thus reducing demand of the scarce resource and mitigating the problem. Secondly, increased prices would incentivise the development of new technologies, new markets, or new substitutes, which will increase the production of the scarce resource, lead to its more efficient use, and provide new alternatives.

Furthermore, when markets are working properly and all the costs of production are 'internalised', the prices that result will mean human beings will only ever consume natural resources or pollute the environment to an 'optimal' degree. From this perspective, overconsumption of resources can only result from 'market failures', so all we need to do is fix those failures and deregulate the market, and then the environment will take care of itself as the 'invisible hand' maximises overall wellbeing. For these reasons, economists tend to argue that economies will never face limits to GDP growth. Those silly limits to growth theorists just don't understand economics. Growth is good and more growth is better!

The conclusion drawn from this neoclassical code of beliefs is that all nations on the planet (including the richest) should continue pursuing growth in GDP, while aiming to decouple that growth from environmental impact by way of qualitative growth. Not only is this the dominant understanding at the national level, it shapes international discourse too, with the United Nations recently stating that 'sustained growth' is indispensable to achieving the Sustainable Development Goals. I beg to differ.

The Case for a Post-Growth Economy

Such arguments for why there are no limits to growth are often coherent in theory, but when applied to practice their flaws become evident. In *Prosperity without Growth*, for example, Tim Jackson (2009) showed that if developed nations were to grow GDP by 2% over coming decades and by 2050 the global population had achieved a similar standard of living, the global economy would be 15 times larger than it is today in terms of GDP. If the global economy grew at 3% from then on it would be 30 times larger than the current economy by 2073, and 60 times larger by the end of this century.

Given that the global economy is already in gross ecological overshoot, it is utterly implausible to think that planetary ecosystems could withstand the impacts of a global economy that was 15, 30, or 60 times larger, in terms of GDP, than it is today. Even a global economy twice or four times as big should be of profound ecological concern. What makes this growth trajectory all the more implausible is that if we asked politicians whether they would prefer 4% GDP growth to 3%, they would all say yes, and the exponential growth scenario just outlined would become even more absurd. Gaia forbid we get what we are aiming for!

Yes, we need to do our very best to decouple GDP from environmental impact via qualitative growth, by exploiting appropriate technology and implementing smart design. That is absolutely necessary to achieve sustainability. And there is huge potential for efficiency improvements both in terms of cleaner production, increased recycling, and less-impactful consumer choices. Nobody is denying that. But when we think through the basic arithmetic of growth it becomes perfectly clear that compound GDP growth quickly renders the growth model a recipe for ecological and thus humanitarian disaster. We need an alternative model of economic progress, as well as a culture and set of institutions that facilitate a transition 'beyond growth'.

In short, the fatal problem with the growth model is that it relies on an extent of decoupling that quickly becomes unachievable. We simply cannot make a growing supply of food, clothes, houses, cars, appliances, gadgets, etc. with 15, 30, or 60 times less energy and resources than we do today. To make matters worse for the defenders of 'green growth', research published in 2015 by the US Proceedings of the National Academy of Sciences (Wiedmann *et al*, 2015) has debunked the widespread myth that the developed nations are already in process of significant decoupling. It turns out that what developed nations have mainly been doing is outsourcing energy and resource intensive manufacturing and 'recoupling' it elsewhere, especially China. The consequence is that as the world naïvely pursues green growth, the environmental crisis continues to worsen. Technology and 'free markets' are not the salvation they promised to be.

In order to move toward a just and sustainable global economy, the developed nations must reduce their resource demands to a 'fair share' ecological footprint – which might imply an 80% reduction or more (depending on the resource and context) if the global population is to achieve a similar material living standard. But such significant quantitative reductions cannot be achieved if we persist with the dominant economics of GDP growth. It follows that the developed nations need to initiate policies for a post-growth economy at once, and in time the developing nations will also need to transition to a post-growth economy, so that the global economy comes to operate within the sustainable carrying capacity of the planet while providing a sufficient material standing of living for all people. This is humanity's defining challenge in coming years and decades.

Policies for a Post-Growth Economy

As outlined below, a post-growth economy will require, among other things, developing new macroeconomic policies and institutions, confronting the population challenge, and culturally embracing post-consumerist lifestyles of material sufficiency. The following proposals are not intended to be comprehensive, and they are not presented as a blueprint that could be applied independent of context. Instead, the review simply outlines a range of key issues that would need to be addressed in any 'top down' transition to a post-growth economy. After outlining what the structures of a post-growth economy might look like, I consider the question of whether such an economy could be legislated into existence in a globalised market economy, or whether a post-growth economy is inconsistent with globalisation as we know it.

1. **Explicit adoption of post-growth measures of progress:** In order to transcend the growth model, the first thing needed is to adopt better and more nuanced measures of progress than GDP (Stiglitz, Sen, and Fitoussi, 2010). What we measure, and how we measure it, matters. It is now widely recognised that GDP is a deeply flawed measure of societal progress, yet it remains the dominant way to assess politico-economic success. GDP is merely an aggregate of market transactions, making no distinction between economic activities that contribute positively to sustainable wellbeing and those that diminish it. For example, GDP can be growing while at the same time our environment is being degraded, inequality is worsening, and social wellbeing is stagnant. Accordingly, a politics and economics 'beyond growth' must begin by explicitly adopting some post-growth measure of progress, such as the Genuine Progress Indicator (GPI). Although it is not a perfect metric, the GPI takes into account a wide range of social, economic, and environmental factors that GDP ignores, thus representing a vast improvement over GDP. Public understanding of and support for such post-growth accounting systems would open up political space for political parties to defend policy and institutional changes – such as those outlined below – which would genuinely improve social wellbeing and enhance ecological conditions, even if these would not maximise growth in GDP. If we do not measure progress accurately we cannot expect to progress.

2. **Reduce overconsumption via diminishing 'resource caps':** One of the defining problems with the growth paradigm is that the developed nations now have resource and energy demands that could not possibly be universalised to all nations. The quantitative 'scale' of our economies is overblown. It follows that any transition to a just and sustainable world requires the developed nations to stop overconsuming the world's scarce resources and reduce resource and energy demands significantly. Although in theory efficiency gains in production provide one pathway to reduced demand, the reality is that within a growth economy, efficiency gains tend to be reinvested in more growth and consumption, rather than reducing impact. After all, efficiency gains can reduce the costs of production, making a commodity cheaper, thus incentivising increased consumption of the commodity. In order to contain this well documented phenomenon (for a review, see Alexander, 2015: Ch. 1), a post-growth economy would need to introduce diminishing resource caps – that is, well defined limits to resource consumption – to ensure that efficiency gains are directed into reducing overall resource consumption, not directed into more growth. In fact, diminishing resource caps would actually encourage and stimulate efficiency improvements, because producers would know that there would be increasing competition over key resources and so would be driven to eliminate waste and create a 'circular economy' where products at the end of their life are reused in the next phase of production. In an age of ecological overshoot, the overconsuming developed nations need to achieve significant absolute reductions in resource demand (absolute decoupling) not just productivity gains (relative decoupling).

Determining where to set the resource caps, how quickly they should be reduced (e.g. 3% per year to allow markets to adjust), and where they should be aiming to stabilise (e.g. an equal per capita share), are open questions that can be debated. Formulating a workable policy in this domain would require, among other things, a highly sophisticated and detailed scientific accounting of resource stocks and flows of the economy. But the first step is simply to recognise that, in the developed nations, diminishing resource caps are a necessary part of achieving the 'degrowth' in resource consumption that is required for justice and sustainability.

3. Working hour reductions: One obvious implication of diminishing resource caps is that a lot less resource-intensive producing and consuming will take place in a post-growth economy. That will almost certainly mean reduced GDP, although there is still great scope for qualitative growth (technological innovation and efficiency improvements). But what implications will a contracting economy have for employment? Growth in GDP is often defended on the grounds that it is required to keep unemployment at manageable levels. If a nation gives up the pursuit of GDP, therefore, it must maintain employment via some other means. Restructuring the labour market is essential for the stability of any post-growth economy. Today, Australians work some of the longest hours in the OECD, but it is not clear such long hours contribute positively to social wellbeing. Could we work less but live more? By reducing the average working week to, say, 28 hours, a post-growth economy would share the available work amongst the working population, thereby minimising or eliminating unemployment even in a non-growing or contracting economy, while at the same time increasing social wellbeing by reducing overwork (Coote and Franklin, 2013). The aim would be to systematically exchange superfluous consumption for increased free time, which would also bring environmental benefits. While some of the increased free time could be spent enjoying local, low-impact leisure activities, some of it would also be spent engaging in the informal economy, such as activities of self-sufficiency (e.g. various forms of household production, growing food, house maintenance, sharing, volunteering, etc.) and local barter. This increased self-sufficiency and community engagement would also mitigate the impacts of reduced income in a post-growth economy by reducing household expenditure on basic needs. In this way a post-growth economy would not induce spiralling unemployment or hardship as is often feared. A deliberately created post-growth or degrowth economy is very different to unplanned recession. Indeed, planned contraction of the formal economy has the potential to liberate people from the work-to-spend cycle and provide people with more autonomy, meaning, and variety in their working lives.

4. Rethink budget spending for a post-growth transition: Governments are the most significant player in any economy and have the most spending power. Accordingly, if governments decide to take the limits to growth seriously this will require a fundamental rethink of how public funds are invested and spent. Broadly speaking, within a post-growth paradigm public spending would not aim to facilitate sustained GDP growth but instead support the projects and infrastructure needed to support a swift transition to a post-growth economy. This would include huge divestment from the fossil fuel economy and a co-relative reinvestment in renewable energy systems (see next section). But it would also require huge investment in other forms of 'green' infrastructure. The importance of creating new infrastructure highlights the fact that consumption practices in a society do not take place in a vacuum. Instead, our consumption takes place within structures of constraint, and those structures make some lifestyle options easy or necessary, and other lifestyle options difficult or impossible. Currently, many people find themselves 'locked in' to high-impact lifestyles due to the structures within which they live their lives (Sanne, 2002). To provide one example: it is very difficult to stop driving a private motor vehicle if there is poor public transport and insufficient bike lanes. Change the infrastructure, however, and new, low-impact lifestyles implied by a post-growth economy would be more easily embraced.

Greening infrastructure will therefore require a significant revision of government expenditure. Recognising climate change as a national 'security threat', for example, and on that basis redirecting a significant portion of military spending toward renewable energy and efficient systems of public transport, is one path to funding the infrastructure (and other post-growth policies) needed for a stable and flourishing post-growth economy.

5. Renewable energy: In anticipation of the foreseeable stagnation and eventual decline of fossil fuel supplies, and recognising the grave dangers presented by climate change, a post-growth economy would need to transition swiftly to renewable energy and more efficient energy systems and practices. This provides a hugely promising space to meaningfully employ large segments of the population as the fossil fuel economy enters terminal decline. But just as important as 'greening' the supply of energy is the challenge (too often neglected) of reducing energy demand. After all, it will be much easier to transition to 100% renewable energy if energy use is significantly reduced through behavioural changes, reduced production and consumption, and more efficient appliances. Indeed, the extremely tight and fast diminishing carbon budget for a safe climate now makes this 'demand side' response a necessity (Anderson, 2013; Anderson, 2015), yet the significantly reduced energy demand required for a safe climate is incompatible with the growth model, because energy is what drives economic growth (see Ayres and Warr, 2009). Accordingly, a post-growth politics would initiate a transition to 100% renewable energy financed in part by a strong carbon tax, and undertake a public education campaign to facilitate reduced energy demand. Given how hard it will be to fully replace the fossil fuel economy with renewable energy (especially the 94 million barrels of oil currently consumed everyday), it is also worth highlighting that a post-carbon economy will have to adapt to an energy descent context and is likely to be a far more localised economy than the globalised, fossil fuel dependent economy we know today (Moriarty and Honnery, 2008). While there would still be some limited space for global trade in a post-growth economy, most production would seek, by default, to use local resources from the bioregion to meet mostly local needs, thereby shortening the links between production and consumption. As well as running the economy on renewables, a post-growth strategy could also involve placing a moratorium on the cutting down of old growth forests and planting up huge tracts of land with trees to sequester carbon. Any coherent climate strategy must also address the huge carbon footprint of meat (especially red meat) and accordingly promote significantly reduced meat consumption (see Harvey, 2016).

6. Banking and finance reform: Currently, our systems of banking and finance essentially have a 'growth imperative' built into their structures. Money is loaned into existence by private banks as interest-bearing debt, and in order to pay back that debt plus the interest, this requires an expansion of the money supply (Trainer, 2011). Furthermore, there is so much public and private debt today that the only way it could be paid back is via decades of continued GDP growth. This type of banking system requires growth for stability and yet limitless economic growth, as argued above, is the driving force behind the environmental crisis. In order to move toward a stable, post-growth economy, part of the institutional restructuring required involves deep reform of banking and finance systems. This is a complex transition that could take various forms, but at base it would require the state taking responsibility for creating banking and finance systems that do not require growth for stability, and strictly regulating these systems to ensure equity. A post-growth transition might also require 'debt jubilees' in some circumstances, especially in developing nations that are unjustly being suffocated by interest payments to rich world lenders. Developing nations, for example, receive about $136 billion in aid from donor countries but pay about $600 billion servicing debt (see Hickel, 2013). No fancy theorising can plausibly defend such a situation as just.

7. Population policies: As population grows more resources are required to provide for the basic material needs of humanity (food, clothing, shelter, etc.), increasing our demands on an already overburdened planet. It is absolutely imperative that nations around the world unite to confront the population challenge directly, rather than just assuming that the problem will be solved when the developing world gets rich. Population policies will inevitably be controversial but the world needs bold and equitable leadership on this issue. Research suggests that the world is facing a population of around 9.5 billion by mid-century and 11 billion by the end of this century (Gerland *et al,* 2014), which would be utterly catastrophic from both social and environmental perspectives. As Paul Ehrlich famously noted, 'whatever problem you're interested in, you're not going to solve it unless you also solve the population problem.' The first thing needed is a global fund that focuses on providing the education, empowerment, and contraception required to minimise the estimated 87 million unintended pregnancies that occur every year (WHO, 2016). If these unplanned pregnancies were avoided, a significant part of the population problem would be resolved. Furthermore, all financial incentives that encourage population growth should be abolished and the benefits of small families should be highlighted. Command-and-control policies, such as one or two child policies, should be a last resort, but even such controversial policies would arguably be preferable to a world of 11 billion people. I think everyone who casually dismisses the limits to growth perspective should be given a Petri dish with a swab of bacteria in it and watch as the colony grows until it consumes all the available nutrients or is poisoned by its own waste. From a distance, Earth today would look very much like that Petri dish. Bacteria mightn't show the insight to stop growing on a finite resource base – but will humanity? We are at the crossroads and are in the process of choosing out collective fate.

8. Reimagining the good life beyond consumer culture: Despite the environmental necessity of population stabilisation and eventual decline, the fact remains that currently there are 7.4 billion people on Earth, all of whom have the right to the material conditions needed to live a full and dignified human life. Nevertheless, if the global economy is to raise the material living standards of the great multitudes currently living in destitution, this is likely to put further pressure on global ecosystems. Therefore, in order to leave some 'ecological room' for the poorest people to develop their economic capacities in some form, high-impact consumer lifestyles must be swiftly transcended and rich nations must initiate a degrowth process of planned economic contraction. There is no conceivable way that seven billion people, let alone eleven billion, could live sustainably on Earth in material affluence. Globalising affluence, quite simply, would be ecologically catastrophic. Accordingly, members of the global consumer class need to reimagine the good life beyond consumer culture and develop new conceptions of human flourishing based on sufficiency, moderation, frugality, and non-materialistic sources of meaning and satisfaction. From a consumption perspective, this might mean driving less and cycling more; growing local organic food; putting on woollen clothing rather than always turning on the heater; taking shorter showers; flying less or not at all; eating less meat; making and mending rather than buying new; sharing more; and in countless other ways rethinking lifestyles in ways that radically reduce energy and resource burdens. In sum, a post-growth economy would not aim to provide affluence for all but modest sufficiency for all – which is what justice and sustainability requires. A necessary part of any post-growth politics would therefore require a public relations campaign that openly challenged consumerist lifestyles and highlighted the social and environmental benefits of a 'simpler life' with less stuff but more free time. Linked to such an education campaign would be a strategy to minimise exposure to advertising that currently glorifies and encourages consumerism. For example, a post-growth economy might follow the city of Sao Paulo by banning all outdoor advertising on billboards, shop fronts, vehicles, etc.

9. **Distributive justice:** Last but not least, environmental concerns cannot be isolated from social justice concerns. The conventional path to poverty alleviation is via the strategy of GDP growth, on the assumption that 'a rising tide will lift all boats'. Given that a post-growth economy deliberately seeks a non-growing economy – on the assumption that a rising tide will sink all boats – poverty alleviation must be achieved more directly, via redistribution, both nationally and internationally. In other words (and to change the metaphor), a post-growth economy would eliminate poverty and achieve distributive equity not by baking an ever-larger economic pie but by slicing it differently. Any attempt to systemically redistribute wealth via taxation or property reform will be highly controversial, especially in our neoliberal age, but present concentrations of wealth demand a political response. Research published this year (see Elliot, 2016) shows that the richest 62 people on the planet now own more than the poorest half of humanity. Dwell on that for a moment. Furthermore, it has been shown that, as the US seeks to recover from the Global Financial Crisis, 95% of GDP growth has gone to the top 1% of the population (Saez, 2012). This highlights the point that growth itself will not resolve poverty; we need policies that directly redistribute wealth and ensure a dignified material baseline. There is no single best policy for eliminating poverty or achieving a just distribution of wealth, but key policy options include (i) a basic income for all, which guarantees every permanent resident with a minimal, living wage; (ii) an alternative is the 'negative income tax', which guarantees a minimum income for those who earn below a certain threshold; (iii) progressive tax policies (i.e. the more you earn, the higher the tax rate) which could culminate in a top tax rate of 90% or more; (iv) wealth taxes, that systematically transfer 3% of private wealth from the richest to the poorest recognising the large social component in wealth production; and (v) estate taxes of 90% or more to ensure the laws of inheritance and bequest do not create a class system of entrenched wealth and entrenched poverty. These and other tax-and-transfer policies should be explored to eliminate poverty and ensure distributive equity. Obviously, arguments that such policies would inhibit growth do not hold water within a post-growth framework.

I contend that these policy platforms – all in need of detailed elaboration and discussion – should be the opening moves in a 'top down' transition to a post-growth economy. To be employed in concert, they clearly challenge the dominant macroeconomics of growth and would require far more social control over the economy than neoliberal capitalism permits today. Markets work well in some circumstances, no doubt, but leaving everything to the market and thinking this will magically advance the common good has been proven dangerously false. It follows that a post-growth economy must be a post-capitalist or eco-socialist economy, with increased democratic planning and perhaps even some rationing of key resources to ensure distributive equity. The policies above also depend upon a society that sees the necessity and desirability of a post-growth economy, hence the special importance of public education campaigns and the emergence of a new, post-consumerist culture of consumption.

Beyond these policy platforms, it should go without saying that any post-growth transition would require an array of other revolutionary reforms, including policies to create (or recreate) a 'free press'; policies to ensure that campaign financing rules do not permit undue economic influence on the democratic process; policies that ensure affordable housing or access to land; policies to promote alternative corporate forms, such as worker cooperatives; and so forth. I do not pretend to have provided a complete political agenda for a post-growth economy. The proposals above are merely key aspects of such a transition and a good place to begin thinking about how to structure a just and sustainable, post-growth economy.

As well as maintaining and updating the critique of growth and detailing coherent policies for a post-growth economy, it is also important to develop sophisticated transition strategies that would maximise the chances of a post-growth political campaign succeeding. Among other things, this would involve exploring the role grassroots social movements might have to play creating the cultural foundations for a post-growth economy. As suggested above, a clever and sustained 'social marketing' campaign promoting a post-growth economy is critical here, in order to weaken the hold the ideology of growth has on society.

Hard Truths about a 'Top-Down' Transition

I wish to conclude by acknowledging several hard truths about the feasibility of a 'top down' transition to a post-growth economy. The first is to note that cultures around the world, especially in the developed world, are not close to being ready to take the idea of a post-growth economy seriously. In Australia, for example, our current and prospective governments are all firmly embedded in the growth paradigm and they show no signs of questioning it – none at all. At the cultural level, the expectation of ever-increasing affluence (which assumes continued growth) is as strong as ever. In this political and cultural context, the policy proposals outlined above – however necessary they might be to confronting the limits to growth predicament – will strike most people as wildly unrealistic, overly interventionist, and probably undesirable. I am not so deluded as to think otherwise.

The second point to note, subtly linked to the first, is that the powers-that-be would not tolerate these policies for a post-growth economy. To provide a case in point, when a relatively fringe Occupy Movement in 2011 began to challenge undue corporate influence on democracy and make noise about wealth inequality, soon enough the executive branches of government bore down upon the activists and stamped out the opposition. Mainstream media made little effort to understand the movement. Given that a post-growth economy would directly undermine the economic interests of the most powerful corporations and institutions in society, one should expect merciless and sustained resistance from these vested interests if a post-growth movement ever began gaining ascendency.

The third point to note – and probably the most challenging – is that, in a globalised world order, even the bold policies proposed above would be unlikely to produce a stable and flourishing post-growth economy. After all, how would the stock markets react if a government announced a policy agenda that would deliberately aim to contract the economy for environmental and social justice reasons? More specifically, how would the stock markets react if a government, in pursuit of sustainability and global equity, introduced a diminishing resource cap that sought to phase out the most damaging industries and reduce resource consumption by 80% of current Australian levels? I suspect there would be utter turmoil, ultimately leading to an economic crash far greater than the global financial crisis. My point is that it may well be impossible to implement a smooth 'top down' transition to a post-growth economy, even if a strong social movement developed that wanted this. The market economies we know today would be unlikely to be able to adjust to the types and speed of foundational changes required. A 'great disruption' of some form may be a necessary or inevitable part of the transition beyond growth.

To make matters more challenging still, in a globalised economy, it is not clear whether a single nation could adopt a post-growth economy without inducing a range of antagonistic reactions from other nations. On the one hand, there is a web of international 'free trade' agreements that make such a move highly problematic, and could even provoke sanctions from international institutions or other governments. On the other hand, in a globalised economy there is always the threat of capital flight the moment a government threatens to defy the neoliberal logic of profit-maximisation or talks of wealth redistribution. There is also the geopolitical risk of being a leader in a post-growth transition, as this may involve fewer funds available for military forces, weakening a nation's relative power globally. All of these issues radically call into question the feasibility of a 'top down' transition to a post-growth economy, and yet these challenges are rarely acknowledged in the post-growth literature.

Despite a 'top down' transition facing huge, perhaps insurmountable, obstacles, governments are going to act in one way or another, and their influence matters. It follows that we should be pressuring them to do everything they can to assist in the emergence of a post-growth economy, even if, in the end, we may need the build the post-growth economy ourselves, at the grassroots level, with or without state support.

Conclusion

So where does that leave us? In the paradoxical position, I would argue, of knowing that a planned transition to a post-growth economy is both necessary and seemingly impossible. If there are indeed little grounds for thinking that a 'top down' transition is likely or possible without inducing deep economic disruption and instability, one strategic deduction is that a post-growth economy, if it is to emerge, may have to be driven into existence 'from below', with local communities coming together to do it themselves. One could adopt a 'theory of change' based in anarchism or participatory democracy, in which a new, post-growth Economy B is slowly built up at the grassroots level, with active social movements more or less ignoring the state, and over time this new economy becomes dominant as the old, growth-orientated Economy A deteriorates (Trainer, 2010). Indeed, it could be argued that, at this early stage in the transition, the most important thing a concerned citizen can do is to work on changing culture at the local, community level, trusting that, over time, if a large social movement develops which demands a post-growth economy, the structures and systems necessary for such an economy will eventually filter upwards as culture radicalises and develops a more engaged political consciousness. Admittedly, these strategies are unlikely to take down Empire in the near-term, but arguably they embody a more coherent political intelligence than the conventional approach of thinking that a post-growth economy could be smoothly introduced via 'top down' parliamentary politics.

The ultimate message from this analysis, therefore, is that those concerned about limits to growth should be splitting their energies between two main activities: (1) raising awareness about the limits to growth and the inability of capitalism to resolve those limits; and (2) attempting to establish examples of the post-growth economy at the local, community level, and working on building the new systems and cultures required for such examples to proliferate and take root. Fortunately these activities are likely to help build resilience even if they fail to produce a post-growth economy. Thus, if we face a future where the growth economy grows itself to death, which seems to be the most likely scenario, then building up local resilience and self-sufficiency now will prove to be time and energy well spent. In the end, it is likely that only when a deep crisis arrives will an ethics of sufficiency come to inform our economic thinking and practice more broadly.

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www.sustainable.unimelb.edu.au

Melbourne School of Design (Blg 133)
Masson Road
The University of Melbourne
Parkville VIC 3010, Australia

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