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# Editorial Introduction – Special Issue: Economic Growth

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Economic growth as an indicator of national wellbeing is almost universally, and largely uncritically, accepted, and its inevitability and desirability has become both a discursive and material axiom of modern society. This economic orthodoxy is so pervasive that it is sometimes difficult to imagine that it has ever been different. Yet economic growth itself, at least at the rate at which we have come to expect it, is mostly a modern phenomenon. Of course, human history has involved what might be understood as economic growth at various key moments. The transition from hunter gathering to settled agriculture represents one such moment, as does the emergence of the great civilisations and further refinement of the division of labour. However, past civilisations very often met environmental (and social) limits to growth that played a critical role in their demise (Diamond, 2006). In Europe, following the fall of the Roman Empire, economies first shrank and then flat-lined until the industrial revolution (Madison, 2001).

The principle economic theorists of the industrial revolution, such as Adam Smith, David Ricardo, and John Stuart Mill all welcomed the unparalleled growth of wealth created by technical and social changes associated with industrialisation. However, they acknowledged that such growth would be limited by the availability of natural resources, the growth of population and limits on increases in productivity. They believed that in the long run a “stationary state” would prevail where population and stocks of capital would remain constant. Although they thought it inevitable, neither Smith nor Ricardo welcomed the stationary state, with Smith regarding it as “dull” in comparison to the “cheerful and hearty” condition of “the progressive” (growing) state (Smith 2007 [1776] p.68). While Mill shared Smith’s and Ricardo’s view that a stationary state was inevitable, unlike

them he embraced the prospect, but thought it would only be an agreeable condition if population growth was restrained. He wrote:

Even in a progressive state of capital, in old countries, a conscientious or prudential restraint on population is indispensable, to prevent the increase of numbers from outstripping the increase of capital, and the condition of the classes who are at the bottom of society from being deteriorated. Where there is not, in the people, or in some very large proportion of them, a resolute resistance to this deterioration – a determination to preserve an established standard of comfort – the condition of the poorest class sinks, even in a progressive state, to the lowest point which they will consent to endure. The same determination would be equally effectual to keep up their condition in the stationary state, and would be quite as likely to exist.

I cannot, therefore, regard the stationary state of capital and wealth with the unaffected aversion so generally manifested towards it by political economists of the old school. I am inclined to believe that it would be, on the whole, a very considerable improvement on our present condition. (Mill, 1986 [1909], p.321).

For Mill, the link between welfare and population was absolutely clear: human numbers not only played a dynamic role in limiting the accumulation of wealth, but also diluted aggregate wealth thus lowering individual welfare. If population could be prevented from outstripping the benefits of accumulated capital, then the stationary state would be agreeable. However, the congeniality of such a state would be dependent on the wealth created by technical progress being more equitably shared, thus releasing the working classes from the drudgery of labour to live more fulfilling lives. Furthermore, Mill regarded the economic competition consequent on the pursuit of wealth as crowding-out other more virtuous pursuits:

It is scarcely necessary to remark that a stationary condition of capital and population implies no stationary state of human improvement. There would be as much scope as ever for all kinds of mental culture, and moral and social progress; as much room for improving the Art of Living, and much more likelihood of its being improved, when minds ceased to be engrossed by the art of getting on. (Mill, 1986 [1909], p.321).

Mill was also much concerned with the impact of growth on the natural world, the enjoyment of which he regarded as an essential part of an agreeable life:

Nor is there much satisfaction in contemplating the world with nothing left to the spontaneous activity of nature; with every rood of land brought into cultivation, which is capable of growing food for human beings; every flowery waste or natural pasture ploughed up, all quadrupeds or birds which are not domesticated for man's use exterminated as his rivals for food, every hedgerow or superfluous tree rooted out, and scarcely a place left where a wild shrub or flower could grow without being eradicated as a weed in the name of improved agriculture. If the earth must lose that great portion of its pleasantness which it owes to things that the unlimited increase of wealth and population would extirpate from it, for the mere purpose of enabling it to support a larger, but not a better or a happier population, I sincerely hope, for the sake of posterity, that they will be content to be stationary, long before necessity compels them to it. (Mill, 1986 [1909], p.321).

In the age of the Anthropocene, Mill's words seem astonishingly prescient.

In contrast to the other founding figures of classical economics, Thomas Malthus (1998 [1798]) was pessimistic about the ability to achieve a steady-state at all, let alone one much above the level of subsistence. Articulating an early limits to growth theory, Malthus argued that while it was possible to improve the output of agriculture that this was ultimately limited by nature. In the long run, the rate of growth of agricultural production (arithmetic) could not keep up with the rate of growth of population (geometric). Malthus' "principle of population" led him to believe, even with preventative checks (abortion, sexual abstinence, later marriage, etc.) ameliorating the misery of overshoot, that affluence for the lower classes would always be undermined by their numbers.

Deriding Malthus as a plagiarist and an apologist for the ruling class, Karl Marx argued that rather than surplus population being the outcome of a natural law, that capitalism generated a "reserve army of labour" in order to keep wages low and aid capital accumulation.

The labouring population therefore produces, along with the accumulation of capital produced by it, the means by which it itself is made relatively superfluous, is turned into a relative surplus population; and it does this to an always increasing extent. This is a law of population peculiar to the capitalist mode of production. (Marx 1954 [1890] p.591).

Thus, rather than general trans-historical laws of population...

... in fact every special historic mode of production has its own special laws of population, historically valid within its limits alone. An abstract law of population exists for plants and animals only, and only in so far as man has not interfered with them. (Marx 1954 [1890] p.592).

Far from regarding population as irrelevant, for Marx its growth, or at least its stability, was an essential component of his general theory of capitalism, its development and collapse. As Petersen observes: "If the number of people were to decline at the same rate as machines displaced workers..., then there would be no "industrial reserve army," no "immiseration," no Marxist model at all" (Petersen, 1988 p. 80).

It has generally become accepted amongst Marxist scholars that Marx did not believe that there were any limits to material growth and by extension to population (see Petersen, 1988). Moreover, his supposed "Promethianism" has been commented upon by a number of writers (see Benton, 1989; Grundmann, 1991; Löwy, 1997) who regard Marx's characterisation of human kind as "wrestling with nature", and of the forces of technology bringing nature under human control, as implying the potential social transcendence of natural boundaries. Certainly this much quoted passage seems to conform to this view:

Freedom in this field [material existence] can only consist in socialised man, the associated producers, rationally regulating their interchange with Nature, bringing it under their common control, instead of being ruled by it as by the blind forces of Nature; (Marx 1959 [1894] p. 820).

However, a number of scholars have argued that Marx's conception of the human relationship with nature was a great deal more complex and subtle than had been

formerly assumed (Burkett, 2000; Foster, 1999; Saito, 2017). It would be mistaken to think that Marx believed there were no natural limits. Recent research shows that Marx was aware of how the application of the then current capitalist agricultural techniques brought “about disharmonies in the transhistorical “metabolism” (Stoffwechsel) between human beings and nature” (Saito, 2014). While Marx would clearly, and correctly, reject the notion that population size is governed by “transhistorical” laws, it is also clear that he would not have dismissed the idea that it was subject to socio-technical *and* physical limits (see Grundmann 1991).

Regarding the stationary state economy, Marx’s position is more opaque. His historical materialism clearly rejects Smith’s, Ricardo’s and Mill’s view that capitalism can attain a steady-state. For Marx, the contradiction between the forces and relations of production lead to increasing crises and eventually the dialectical transition to the next mode of production. Marx’s analysis of both pre-capitalist modes of production and of capitalism itself constituted the vast majority of his life’s work and we have but fragmentary glimpses of his vision of the end of history in communism. Many have regarded Marx’s prescient view of the development of automated technology as implying that the scarcity problem would be transcended in the communist mode of production – Aaron Bastani’s *Fully Automated Luxury Communism* (2019) reportedly owes much to this reading of Marx (Merchant, 2015). However, the glimpses Marx provides of the good life in a communist society are far from one of excessive conspicuous consumption. In *The Critique of the Gotha Programme* Marx argues that communism will be organised around the principle of “from each according to his ability, to each according to his needs” (1972 [1875], p.165), while in the *German Ideology* he writes:

... in communist society, where nobody has one exclusive sphere of activity but each can become accomplished in any branch he wishes, society regulates the general production and thus makes it possible for me to do one thing today and another tomorrow, to hunt in the morning, fish in the afternoon, rear cattle in the evening, criticise after dinner, just as I have a mind, without ever becoming hunter, fisherman, shepherd or critic. (Marx 1972 [1846] p.33).

It is interesting to note that Marx thought that communism would require the abolition of the distinction between town and country and a more even dispersal of the population into rural areas, and certainly the above passage implies a rural existence with relatively low population density. While Marx acknowledges that the creation of wealth leads to the expansion of wants, on numerous occasions he expresses the same conviction that real "measure of wealth is ... disposable time" (Marx 2015 [1857-61] p. 628) leading to the intellectual and practical self-development of the individual within a community. The fragments of Marx's vision of life in communism are utopian, but appear much closer to a post-materialist lifestyle than one of conspicuous luxury consumption. When Marx was writing world population was little more than a billion (UNPD, 2016) and the population of Britain (including Ireland) was less than half its current level (ONS, 2015). Given his knowledge of the limiting factors of agricultural production and his essentially post-materialist vision of communism, a steady state or extremely low growth economy seems to be implied in Marx's vision of post-capitalist society.

Rejecting the notion that capitalism could not be reformed and of the inevitability its collapse, John Maynard Keynes saw Marx's reserve army of labour not as a means of suppressing wages when they encroached on profits, but as an impediment that "dampens profit expectations by reducing the expected demand for goods" (Skidelsky 2010, p.325). While Keynes thought that mass unemployment and economic disequilibrium could be managed to ensure steady growth, like the classical economists he did not appear to think that this growth would continue indefinitely. His 1930 essay *The Economic Possibilities of Our Grandchildren* gazed 100 years into the future and foresaw an end to economic growth. Like Marx, Keynes predicted that technological development would ultimately reduce necessary labour to a point where basic needs would be universally met. Indeed, somewhat like Mill and Marx, he went further and argued that a point would be soon reached where "we prefer to devote our further energies to non-economic purposes" (Keynes 1930, p. 326). Like Marx, Keynes saw this as an inevitable consequence of technological development, but achieved without overthrowing private property and capitalism. And Keynes concurred with Mill in thinking this a highly desirable condition. However, despite Keynes' great foresight regarding technological development and economic growth we are as far now from a steady-state leisure society as we were when he was writing. Why is this the case?

Keynes assumed that the population of Europe and the USA would not grow significantly. Yet he also recognised that population would be one of the key factors requiring control if his vision of future prosperity was to come to pass. In the 1930 essay he is optimistic about this, but in earlier work he is clearly concerned<sup>1</sup>:

Before the eighteenth century mankind entertained no false hopes. To lay the illusions which grew popular at that age's latter end, Malthus disclosed a Devil. For half a century all serious economical writings held that Devil in clear prospect. For the next half century he was chained up and out of sight. Now perhaps we have loosed him again. (Keynes 1919, p. 8).

His failure to predict large increases in population in the developed world may well have been sufficient for his utopian forecast not to materialise, but he also failed to anticipate the voracious consumerism of the post-war period.

As we have seen, Keynes conceived that higher productivity would universally meet need, and that scarcity would be eradicated. However, he was also clear that this related to "absolute" rather than "relative" needs, the latter of which "may indeed be insatiable", "we feel them only if their satisfaction lifts us above, makes us feel superior to, our fellows" (Keynes, 1930, p. 326).

Looking at the experience of the post-war period, it's hard for us to comprehend why Keynes thought that relative needs would not be expressed through ever more extravagant material consumption, but once more, like Mill and Marx, his concept of status consumption seems to owe much to his wealthy upper-middle class background<sup>2</sup>. For Mill, Marx, and Keynes, status consumption seems to be largely intellectual or experiential rather than material. Keynes clearly thought that material accumulation, while necessary in the development of wealth, was somewhat distasteful and vulgar, and that once a certain level was collectively achieved these proclivities would evaporate from the majority of individuals. Regarding those in which the "semicriminal, semi-pathological propensities" (Keynes, 1930, p. 329) did persist: "the rest of us will no longer be under any

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1. John Toye (2000) has observed that Keynes' views on population were far from static.

2. It is interesting to note that Mill's, Marx's and Keynes' non-materialist values conform to Inglehart's (1977) observations on affluence during childhood leading to post-materialist values in adulthood.



obligation to applaud and encourage them" (ibid). It is almost as if Keynes thought that people would revert to a pre-industrial relationship with money and work. He imagined that the working day would fall to three or four hours (and even then this might be a way of meaningfully occupying time rather than as a means to an end) as people satisfied their basic needs. At the beginning of the twentieth century Max Weber had observed: "A man does not "by nature" wish to earn more and more money, but simply to live as he is accustomed to live and earn as much as is necessary for that purpose" (Weber 1930 [1905], p. 60). For Weber, what drove people to work over and above meeting their needs was the ideology of the work ethic, which he regarded as a necessary but not sufficient condition in the development of capitalism itself. Keynes was actually well aware of the power of the work ethic and the possible difficulty of suppressing it ("[f]or we have been trained too long to strive and not to enjoy" (Keynes, 1930, p. 327)).

The fact that a steady-state economy has never come close to being materialised may well be due to the underestimation of the connection between material wealth and status. Undoubtedly, the development of consumerism very much relied on articulating and strengthening this relationship to fuel post-war growth (see Higgs, 2017). For the classical economists population size relative to resources was a limiting factor to economic growth, and although his take was somewhat more sophisticated, population and the limits of natural resources were factors also recognised by Marx. Post 1945 economic experience normalised the idea of ever increasing wealth, but the realisation of the catastrophic environmental consequences of this, from the 1960s onwards, renewed interest in the connection between resource limits and population size. Writers like Kenneth Boulding (1966), Nicholas Georgescu-Roegen (1971) and Herman Daly (1973), along with the Club of Rome's *Limits to Growth* (1972) report made the connection between economic growth, limited resources and population size explicit, renewing interest in steady-state theories. Anthropogenic climate-change has added further weight to the environmental limits argument and spawned further discussion about the costs of economic growth.

The papers assembled in this special edition of *The Journal of Population and Sustainability* are representative of contemporary thinking about the necessity and desirability of challenging the orthodoxy of continuous economic growth. Current writers not only stress the existence of biophysical limits to growth but

also recognise that these limits have already been breached. They argue that without reconstruction of our economic system that the future for our civilisation is at best precarious. Issues of ecological limits, the welfare of human beings and other species, and the reconsidering of the basic political, ethical and value norms of Western civilisation are recurring themes in these papers. The concept of liberty is perhaps the link between historical advocates of the steady-state economy and present thinkers. For Mill, Marx and Keynes, the wealth created by modern production methods held the key to the creation of the good life. This was not a life of ever growing material consumption, but one of increased free time allowing self-development and the greater realisation of human potential. The concept of freedom employed by these writers was one with the individual as its end, but this individual is a social being, framed by participation in social institutions, culture, and "the Art of Living" as Mill put it. Such freedom is still a highly desirable objective, but it is only possible within ecological boundaries and, as the papers in this issue indicate, its achievement may require the restriction of other liberties which we currently take for granted.

In *Envisioning a Successful Steady-State Economy*, Herman Daly, one of the founding figures in the field of ecological economics, contends that there are two interacting arguments for a steady-state economy, the first based on biophysical limits, the second on ethical desirability. In the first argument Daly observes that in terms of energy flow, the growth of populations of human beings and their "exosomatic" capital (homes, cars, factories, farms, power stations etc.) are dissipative structures limited by biophysical externalities. Any sustainable economic system must function within these fixed boundaries and a large portion of the ecosystem must be left free of human interference to provide ecological services to ourselves and other species as well as being a low-entropy matter/energy source and high entropy waste sink. Such a sustainable economic system would therefore be a steady-state in terms of physical throughput.

Daly argues that "exosomatic" structures represent an extension of human physical evolution that has been "purpose driven" by economic growth. Economic growth has promised more for everyone, but Daly observes that this is not only ecologically unsustainable but also ethically problematic. He argues that "decision-making" elites are committed to economic growth not to provide a good life for all, but to maximise the standard of resource consumption for a small

minority at the expense of future generations, the world's poor and other species. For Daly, this is underpinned by metaphysical naturalism, a "naturalistic scientism" which leads to moral nihilism in respect of the natural world. This metaphysical naturalism, Daly argues, is the most fundamental barrier to the establishment of a steady-state economy that cares about the human impact on the natural world.

Graeme Maxton's *Rethinking Everything* proposes that the idea that economic growth has been the main driver of "progress" in the form of higher standards of living, lower unemployment and higher wages is a myth. On the contrary Maxton argues that economic growth is not a prerequisite for human progress and that it neither creates jobs in the long term, nor reduces inequality, nor helps the poor. More importantly, it rewards the rich while causing devastating ecological damage. Maxton argues that up to the 1980s rising living standards were the due to policies specifically designed to increase *well being* rather than the pursuit of growth as an end in itself. Indeed, economic growth in the post war period was an unintended consequence of increases in population and productivity, and increases in consumption were the result of growth rather than its cause. Maxton points out that, in the long run, an economy pursuing growth through increases in productivity leads to fewer jobs as mechanisation and automation lower demand for labour. Predicting the inevitable demise of the free-market economy, either due to ecological catastrophe or managed transition, Maxton argues that a truly sustainable economy must meet a number of criteria including: the need to prosper for many generations; operation within natural boundaries; ecological stability and the ability to cope with a rise in population without an increase in aggregate ecological footprint; the needs of future generations of people and of all other species must be treated as equal to those of present populations. However, a critical condition of such sustainability would be a transition to a population of around half the current size, but even at this level resource consumption would have to be held at strict limits. Stability in the economy would be critical since extreme fluctuations could lead to conflict and even collapse. Maxton foresees that in the short term, transitioning to a sustainable economy will lead to economic contraction and a fall in living standards.

In the long term, once a stable economy has been achieved, Maxton argues that economic growth would be possible (i.e. of pure services). However, what cannot grow is the use of natural resources. Ultimately, Maxton thinks that society will

become agnostic about economic growth. Growth will no longer be a goal since from the viewpoint of the majority of people it is a pointless objective. As per the title of his essay, Maxton is clear that rethinking the economy requires us to rethink everything including many of the institutions, rights and concepts that have come to define our civilisation. Democracy, freedom, happiness, our relationship with nature, will all need critical reappraisal to achieve long-term sustainability along with high standards of welfare for all.

In his paper *Agrowth Instead Of Anti- and Pro-Growth: Less Polarization, More Support for Sustainability/Climate Policies*, Jeroen van den Bergh observes that one of the major problems in tackling our current ecological problems is essentially psychological in nature. He argues that if people cannot be convinced that environmental policies will not harm economic growth then they will not support such policies. The background to this psychological attachment to economic growth lies in the belief held by the majority of economists and policy makers that economic growth always equates to progress - despite the questionable links between economic stability, full employment and economic growth. Van den Bergh points out that this discourse is reproduced in the media and education system to the extent that it is almost universally accepted that economic growth is the sine qua non for modern society.

Van den Bergh argues that to overcome this psychological attachment to growth we must not reject growth as such, but become "agnostic and indifferent about GDP growth", advocating what he calls an *agrowth* position. He argues that such an orientation to GDP growth can find popular support since GDP is a poor indicator of happiness and welfare. This argument is particularly important in rich countries since in recent decades growth in income has not led to significant increases in social welfare. Van den Bergh's position contrasts with "green growth" and "degrowth" in that it is not focused on GDP at all, but on welfare. An *agrowth* strategy would allow periods of high, low, zero or negative growth to alternate with each other, but this would be of no concern as long as environmental sustainability and social welfare were the primary policy goals. Ignoring GDP information in favour of welfare indicators allows for the possibility that potential GDP growth would be relinquished in favour of environmental goals, greater employment, lowering inequality, increased leisure or improvements in health care and so on.

In respect of population and development an agrowth strategy has important implications. Van den Bergh argues that by focussing on welfare rather than GDP, an agrowth strategy allows less developed countries to have economic growth. With welfare as the key goal the benefits of the accompanying economic growth accelerate demographic transition toward lower birth rates. This contrasts with wealthy countries with low birth rates where low economic growth is a likely transition to a low-carbon economy. However, van den Bergh is clear that an agrowth orientation should not apply to population growth which he argues must be stopped as soon as possible to avoid further overshooting of ecological boundaries.

Theodore Lianos' paper, *Steady State Economy at Optimal Population Size* addresses the issue of the connection between population and a sustainable steady-state economy. Starting from the central economic problem of scarcity, Lianos argues that the problem has been "solved" at the expense of creating ecological debts to be paid by future generations. The drivers of this ecological deficit have been overconsumption and overpopulation. Lianos shows that a number of different methodologies can be used, including energy use per capita, per capita land requirements for food production, and per capita income figures, to calculate an "optimum" population for a given standard of living. He concludes that for a good, but not a luxurious life for all, this figure lies somewhere between 2 and 3 billion people. Lianos argues that only with such a population can a steady-state economy be achieved. To attain this population a globally tradable system of reproductive "shares" could be developed. Three "shares" would be allocated to each couple (or possibly to each woman) with each share giving the right to 0.5 children. The outcome of this would be that the maximum number of children that each and every woman could possibly have would average 1.5. With replacement total fertility rate (TFR) being 2.1, lowering the TFR to 1.5 would therefore lead to a reduction in the population. The ability to trade fertility shares would mean that it would be possible for couples to choose to have a greater number of children. Lianos argues that this would probably result in a transfer of wealth from the rich to the poor and, since the system would need to be global, from the developed to the developing world. While such a system would represent a financial incentive for some, it would require enforcement through a system of fines and possibly moral sanctions which over time would ideally lead to normative compliance. Lianos recognises that, while there are obvious advantages to such a system, ultimately it is coercive. However, following

John Stuart Mill, he argues that liberty cannot be exercised if it causes harm to others, meaning that some of our present liberties must be restrained in order to avoid harm to future generations and their own right to enjoy a good life.

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