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Apologists for growth: passive revolutionaries in a passive revolution

Clive L. Spash

Department of Socioeconomics, Institute for the Multi-Level Governance & Development, WU Vienna University of Economics and Business, Vienna, Austria

ABSTRACT

Popular authors and international organizations recommend transformation to a 'new economy'. However, this is misleadingly interpreted as radical or revolutionary. Two problematic positions are revealed: being pro-growth while seeking to change the current form of capitalism (e.g. Ha-Joon Chang), and being anti-growth on environmental grounds but promoting growth for poverty alleviation and due to agnosticism about growth (e.g. Tim Jackson and Kate Raworth). Both positions involve contradictions and an evident failure to address, or perhaps even a denial of, the actual operations of capital accumulating economies. Thus, economists ostensibly critical of capitalism turn out to be apologists for growth who conform to the requirements of a top-down passive revolution, that leaves power relations undisturbed and the economic structure fundamentally unchanged. The growth economy is shown to include technocracy, productivism associated with eugenics, inequity disguised as meritocracy, competition concealing militarism and imperialism, imposition of development as progress, and financialization and commodification of Nature.

KEYWORDS

Sustainable inclusive economic growth; productivism; military-industrial complex; poverty; post-development; social ecological economics

1. Introduction

A range of arguments have long been made about the problems with the growth economy. Since the rise of the environmental movement in the 1960s, the economic growth paradigm has been subject to social and ecological criticism which bore fruit in numerous books in the 1970s (Daly, 1973; Easterlin, 1974; Hirsch, 1977; Meadows et al., 1972; Mishan, 1969; Schumacher, 1973; Scitovsky, 1976). A key theoretician of how the ecological economic system operates was Georgescu-Roegen (1975/2009). His work highlighted the role of energy and materials in the reproduction of industrial economies and how economic theory failed to take into account ecological, source and sink dependencies. He noted the frivolous use of scarce resources in a consumer society, raising ethical issues about who gets what and for what ends. The problems are social (ethical, political), ecological and economic. I will not rehearse the long standing arguments here, but note that they are the theoretical core of ecological economics (Martinez-Alier, 2013; Røpke, 2004; Spash, 1999), which has informed steady-state, degrowth and post-growth ideas. Over the last thirty years the social aspects of this theory have been increasingly recognized as in need of explicit attention with corresponding links to critical institutionalism, political ecology and political economy (see Koch & Buch-Hansen, 2020;

CONTACT Clive L. Spash clive.spash@wu.ac.at

Spash, 2020b). The theoretical foundations of this paper are those of the emerging social-ecological economic paradigm that calls for radical transformation (Spash, 2017, 2011, 2020d).

A contrast is then to be drawn between reform and revolution, transition and transformation, lifestyle choice and systems change. Mild reformists regard revelation of the failures of the dominant economic system of capital accumulation (whether by USA 'private' or Chinese 'public' corporations, or some hybrid of public-private partnership) as suggesting the need for new organizational approaches and adjustments to institutional arrangements that maintain the basic system intact and reinforce it. The neoliberal and financialized form of corporate capitalism, that became dominant from the early 1980s, excluded the idea of alternative types of economies for social provisioning. Questioning capitalism was no longer legitimate, as exemplified by Margret Thatcher's phrase 'there is no alternative' (TINA). However, the 2008 financial crash stimulated the return of popular criticism of capitalism (especially neoliberalism), corporations, the financial system and the super rich 1%. Economic theories were also targeted as requiring pluralist rethinking (Fischer et al., 2018). A range of populist works, 'best sellers' and articles made their authors highly cited under the guise of being outside the orthodoxy, radical and alternative. For example, Cambridge University's Ha-Joon Chang, an author now cited 30,000 times (Google Scholar), first came to popular attention with his book *23 Things They Don't Tell You About Capitalism* (Chang, 2011). The reorganization of capitalism he advocates is a neo-Keynesian society with strong central government to ameliorate the socially divisive excesses of the economic system. Yet, all Keynesian approaches, in all their various forms, have failed to address the biophysical basis of the economy and so chosen to unscientifically ignore reality. Even less recognized is the type of society such pro-growth economists typically advocate, both in terms of the treatment of Nature (reduced to a resource for human ends), role of humans in society (reduced to labourer/consumer), human motivation (selfish interest, materialism), politics (nationalism, liberalism) and ethics (preference utilitarianism, hedonism).

Yet, Ha-Joon Chang is just one of many claiming capitalism can be reformed and growth maintained for 'the common good' (e.g. GCEC, 2014, 2018; Jacobs & Mazzucato, 2016; OECD, 2020; Stern et al., 2006; von der Leyen, 2019). At the World Economic Forum (WEF) in Davos 2020 the talk was of inclusive 'stakeholder capitalism', resurrecting an idea from when capitalism was in crisis during the 1930s (Denning, 2020). This is offered as the 'new' hope to counter a range of criticisms that capitalism is socially unjust, rewards an elite, dispossess the poor, supports psychopathic corporations and self-serving financiers, as well as causing ecological destruction (Bakan, 2004; Bienkowski, 2013; Leonard, 1988; van Huijstee et al., 2011). Amongst the invited guest speakers at Davos 2019 and 2020 was Greta Thunberg whose emotive calls to address the 'climate emergency' have added urgency to the latest reformist 'solutions'. Her speeches have been direct and included strong anti-corporate elements (Aronoff, 2019), but remain unfocussed in terms of political content and unspecific on necessary action or what to do about the powerful organizations she is criticizing. Thus, her and others' strong direct language of a climate catastrophe/emergency/crisis can be and has been adopted and redirected by fossil fuel and corporate interests for their own purposes (Spash, 2020c, 2020a).

While only one of many environmental problems, human induced climate change has come to represent the failings of the current economic system. It is ever more present in the mind of humanity as extreme weather events become more frequent, temperature records are consistently broken year on year, ice sheets and glaciers melt, wild fires spread, and the threat of unknown catastrophic events looms larger. The 'climate emergency' has pushed transformation to the top of the political agenda, where it contests with other threats to the financial markets and stability of the

world economic order, such as the Coronavirus pandemic (Spash, 2020b). The importance allocated to addressing human induced climate change has led to two reactions: denialism and reframing policy within terms that protect and enhance capitalism. The latter is the concern here. Direct attempts to supress problems of fossil fuel industrialism under a capital accumulating growth economy have come from members of the Davos elite in the guise of the Global Commission on the Economy and Climate (GCEC, 2014, 2018) and billionaire Richard Branson's B-Team and Carbon War Room that attempt to justify his Virgin corporation's aerospace and airline industrial expansion with carbon offsetting and trading. Financiers, bankers and super-rich entrepreneurs are rebranded as planetary saviours in our time of crisis.

Corporations, pro-growth governments and bureaucrats, have already adopted FridaysForFuture (FFF) and Extinction Rebellion (XR) calls for urgent action to advocate a range of environmental 'deals', such as the European Commission (EC) 'Green Deal' (European Commission, 2019), the United Nations (UN) Conference on Trade and Development (UNCTAD) 'Global Green New Deal' (UNCTAD, 2019), and the UN Environment Programme (UNEP) 'New Deal for Nature' (UNEP, 2019). Continuation of the capital accumulating economic structure remains key to these initiatives, and their aim is to organize society to fit. At the UN Framework Convention on Climate Change (UNFCCC) Conference of the Parties (COP) meeting in Madrid, EC President, Ursula von der Leyen (2019) announced the European Green Deal as

> Europe's new growth strategy. It will cut emissions while also creating jobs and improving our quality of life. For that we need investment! Investment in research, in innovation, in green technologies. […] EUR 1 trillion of investment over the next decade. […] This will include extending emission trading to all relevant sectors. CO_2 has to have a price.

The role of price-making markets, corporations and capitalism are not in question. Typical of all these 'deals' are claims of coordinating and organizing stakeholders, having civil society and government work with, or more accurately for, 'industry', with promises of economic growth, jobs and climate stability.

The top-down approach to diverting attention from the need for systems change is something Gramsci (1971, pp. 106–114) referred to as a 'passive revolution'. This relates to the passive integration of subordinate segments of society while keeping them powerless. The potential revolutionary or oppositional intellectuals and leaders are absorbed into the system (see also Candeias, 2011). If successful those in power remain, the basic structure of the system is unchanged, and radical and revolutionary thinkers are co-opted into powerless positions and/or support roles. What I will argue is that just such a passive revolution is evident in populist books by self proclaimed radical economists. For example, Kate Raworth's *Doughnut Economics*, shortlisted for *The Financial Times* best economics book of 2017, is entirely oriented around economic growth and criticisms of mainstream economics, but fails to take any stand against economic growth, let alone capitalism. Tim Jackson with over 22,000 (Google Scholar) citations produced *Prosperity Without Growth*, a book that has over 7,000 cites. Yet, as I will show, he also adopts a position that advocates growth as essential for 'development'.

In covering and explaining these positions I address some of the silences and absences in theorizing about economic growth in terms of its implications for social organization, how growth impacts on poverty and social inequality, what are the institutional foundations of growth ideology, how alternatives to growth are delegitimized, and in so doing specify a range of organizations attempting to prevent transformation away from growth and the capital accumulating economy. Geo-political and macro-economic structures and mechanisms maintaining the economic growth

imperative are identified along the way. The paper is distinct from, but complementary to, my other article in this forum issue of *Globalizations* (Spash, 2020b). There I focus on drawing out lessons from the Coronavirus pandemic about concrete structural aspects of the operation of actual economies, which are then placed in the context of long running systems critiques from ecological economics and fallacious arguments by mainstream economists denying limits to growth. Both papers complement others in this special issue that expose the failures of economics as a discipline (Galbraith, 2020; Keen, 2020) and the related necessity of and potential for alternative approaches that connect economics to social, political and ecological reality (Gills & Morgan, 2020; Koch & Buch-Hansen, 2020).

In order to understand why systems change is necessary, and how it might be achieved, the structural aspects of that system must be understood, including the mechanisms by which it operates and reproduces itself. In Section 2, the organization of society to maintain a productive growth economy is shown to have multiple unsavoury implications some of which are acknowledge while others are rarely mentioned, such as links to eugenicist positons held by several famous economists (e.g. Keynes, Edgeworth and Meade). The claims made for capitalism, being inclusive and providing freedom from coercion, contrast with the advocacy of a smart, competitive meritocracy and an actualized world order built on the militarized and securitized nation State. In Section 3, the claims for economic growth being the means to development are shown to have been part of a foreign policy agenda of the United States of America (USA) that was adopted, maintained and promoted via international organizations such as the UN, World Bank and International Monetary Fund (IMF). Bodies of the UN have supported the continual rebirth of economic growth – as development, progress, sustainable development, Green growth, Green New Deal. In Section 4, I then turn to explicit coverage of how the ecological crisis, and specifically human induced climate change, is employed to support a new era of growth. In both Sections 3 and 4 I make explicit reference to some populist authors whose work has appeared growth critical and anti-capitalist but has in fact been neither.

This paper reveals how various attempts by different individuals and organizations to claim that growth is good, justifiable or even neutral, form part of a passive revolution that fails to address some basic social and ecological realities. Economic works publicized as critical and progressive prove to be otherwise. One set of ostensibly critical approaches to capitalism claim the right form is all that is required to avoid problems but fail to properly consider climate and ecological crises (e.g. Ha-Joon Chang and post-Keynesians). They also ignore the growth economy's negative psychological and ethical implications (that Keynes explicitly recognized), undesirable productivist aspects, and tendency in times of crisis to foster extreme right wing political groups. Another set of ostensibly growth critical approaches is explicitly environmentally concerned, but still advocate policies promoting growth (e.g. Jackson, Raworth). These regard growth as necessary for 'development' but pay no attention to the competitive asymmetry it entails and lack analysis of the structure of capitalism. Their pragmatic commitment to economic growth results in maintaining capitalism by default and contradicts concern for the evidence of material impacts and social inequities of the system, its tendencies to exploit and create crises.

2. The social organization of humanity for growth

Since the end of World War II, the governments of all major nation States have been committed to a macroeconomic model termed by its advocates the 'growth economy', and by its critics growthmania (Daly, 1992; Georgescu-Roegen, 1975/2009, p. 349). Built on a fossil fuel industrial economic

structure, such growth has long been confronting environmental limits, and even longer the social inequities created by worldwide resource extraction and the profit motive (Brand & Wissen, 2017). Yet, it has repeatedly been adjusted and saved from ultimate collapse as explained by the French Regulation School building from the 1976 book 'Régulation et crises du capitalism' (Aglietta, 1979/2015). In this section I illustrate how apparently radical heterodox economic critique of capitalism plays its role in a passive revolution supporting economic growth. That the recommended economic system requires social adjustment and normalization of humans to the system and the type of adjustments required are concealed, denied or simply ignored. Here some of these basic social implications and potentialities are specified.

2.1. The Keynesian productivist society

The work of Ha-Joon Chang has been marketed as a critique exposing many fallacies of capitalism commonly held and perpetuated by economists, the media and politicians. His work has been well received in heterodox economic circles as providing a critique of mainstream economics and austerity politics. However, Chang is no radical anti-capitalist seeking an alternative system and restricts his critique to 'free-market' neoliberalism. He quotes Winston Churchill, who quipped that capitalism is the best economic system because all the others are worse (Chang, 2011, p. 253); the same position as Thatcher's TINA.

Chang (2011) offers a mixture of post-Keynesian and neo-Austrian economics that recommends a (collective) entrepreneurial capitalist economy operating within a welfare State. This is something reminiscent of the post-war compromise in the West between labour and capital, and a form of Polanyian double-movement (Polanyi, 1944). Consistent with the rejection of alternatives, this approach promises to use economic growth to benefit a wider public. Full employment and more growth is then associated with more social benefit. According to Chang (2011, p. 253), one of the problems with 'free-market' capitalism is that it 'slows down the economy', i.e. economic growth. A core idea amongst his conclusions, for tweaking the system to make it less socially divisive and objectionable, is that: 'Industrial policy needs to be redesigned to promote key manufacturing sectors with high scope for productivity growth' (Chang, 2011, p. 259). An approach otherwise commonly known as productivism and associated with expansion of economic output via ever increasing inputs.

Among the things Ha-Joon Chang (2011) 'does not tell us' about his advocated productivist industrial growth economy is where the inputs come from, or how it will avoid resource wars, prevent the ecological crises and protect the non-human world. Typical of most non-ecological economists, his worldview excludes Nature, and has no conception of the necessary ecosystems that sustain economies (Spash & Smith, 2019). Keynesian economics is at core based on the idea of boosting aggregate demand (i.e. consumerism) through government expenditures to fully employ resources (including humans and non-humans) and maximize growth, i.e. throughput of energy, materials and so waste. The ecological consequences are far reaching but so also are the social ones.

Keynes (1930) regarded the growth economy as a temporary phenomena lasting 100 years. He believed that growth would solve the economic problem, specified as meeting people's absolute needs. In the process, unethical values and undesirable behaviour would be promoted and institutionalized: greed, usury and the desire for ever more money. Abolishing such practices would only be possible on reaching the end goal. At that time:

> We shall be able to rid ourselves of many of the pseudo-moral principles which have hag-ridden us for two hundred years, by which we have exalted some of the most distasteful of human qualities into the

> position of the highest virtues. We shall be able to afford to dare to assess the money-motive at its true value. The love of money as a possession—as distinguished from the love of money as a means to the enjoyments and realities of life—will be recognised for what it is, a somewhat disgusting morbidity, one of those semi-criminal, semi-pathological propensities which one hands over with a shudder to the specialists of mental disease. All kinds of social customs and economic practices, affecting the distribution of wealth and of economic rewards and penalties, which we now maintain at all costs, however distasteful and unjust they may be in themselves, because they are tremendously useful in promoting the accumulation of capital, we shall then be free, at last, to discard. […] But beware! The time for all this is not yet. For at least another hundred years we must pretend to ourselves and to everyone that fair is foul and foul is fair; for foul is useful and fair is not. (Keynes, 1930, p. 97)

This prescription requires that we value the useful over the good in the blind pursuit of future wealth, ignoring our actions' 'own quality or their immediate effects on our own environment' (Keynes, 1930, p. 97). In two generations transformation to a more ethical society would be permissible, but here Keynes appears politically and institutionally naïve, ignoring psychological, social and political lock-in and the creation of powerful interests vested in maintenance of the growth economy. A problematic organizational aspect is the creation of a professional managerial class rotating jobs between business and government enabling regulatory capture. This controlling corporate elite is what Galbraith (1967/2007) termed the technostructure.

There is another, potentially more sinister, side to the social organization of a Keynesian productivist economy that 'they don't tell you', but in this case neither did Keynes. A growth economy requires certain types of people and is not designed to cater for existing diversity (e.g. indigenous cultures), but on this topic modern economists and growth advocates appear silent. Yet, this easily becomes 'economics because the economy matters' in contrast to Schumacher's (1973) 'economics as if people mattered'. Most obviously, the productivist economy discriminates against the 'unproductive' and ascetic. More bleakly, in connecting ideas of efficient, productivity and competitiveness, with an idealized workforce that is fit to the tasks of production and consumption, there is a potentially short step from economics to eugenics. This worrisome association deserves more attention because in times of economic and political crisis the extreme right once again offers to become the saviour of capitalism.

The connections of productivist economics to eugenics go back to the origins of modern economics both in the USA (Leonard, 2005) and the UK (Aldrich, 2019). The rise of neoclassical economics from the late 1800s created a focus on utilitarian ethics and the pain/pleasure principle that became individualized (i.e. as preference utilitarianism). Utilitarianism was combined with growth and consumerism to promote hedonism as the ultimate, individual and (under methodological individualism) societal, goal. Oxford Professor, Francis Edgeworth (1845–1926) connected this to eugenics using his 'Hedonic Calculus', which recommends replacing those less able to enjoy hedonic pleasure by individuals with a superior capacity for doing so, in order to increase societal happiness. He was inspired by the idea of social sanctions to discourage the multiplication of the inefficient and encourage reproduction of the most efficient (Aldrich, 2019).

Eugenics was a popular movement and Keynes joined the Cambridge Eugenic Society, as its Treasurer, on its foundation in 1911. From 1937–1944 he held offices in the (British) Eugenics Society – Fellow, Director, Vice-President. At the end of his life in 1946, when eugenics had fallen from grace due to the Nazi extermination camps, he praised Galton (its founder) and claimed eugenics was 'the most important, significant and, I would add, genuine branch of sociology which exists' (Aldrich, 2019). There is some speculation that his eugenic references to the quality of the population meant increasing the 'best and noblest intelligences' relative to others (Aldrich,

2019), and offered him an ultimate means of transformation for his unethical growth society (Singerman, 2016). This would match the technocracy – breeding an elite to run society – also advocated amongst his contemporaries in the Oxbridge elite. For example, Julian Huxley promoted technocracy and eugenics, in association with H.G. Wells, and this inspired his brother Aldous to write the dystopian novel *Brave New World* (Huxley, 1932). However, there appears to be no explicit eugenics policy in Keynes economic writings (Aldrich, 2019). The same is not true of other economists. Even into the 1970s, Cambridge Professor, James Meade (1907–1995) was arguing for 'the reduction of the relative fertility of those with low earning capacity' (Aldrich, 2019, p. 50).

A strong State promoting a productivist fully employed economy then appears potentially oppressive with a dark side that Chang and others (e.g. Jacobs & Mazzucato, 2016) fail to register. A national growth economy aimed at creating a productive population is totally consistent with the politics of having 'the right people' populate society. From Nazi propaganda of the 1930s through to campaigns of modern right-wing parties and fascists in Europe today, the association of the deserving, fit, hard working, nationalist is set against the undeserving, unfit, lazy, immigrant 'other'. Nationalism is easily connected to such political rhetoric, and both derive support from the more common and accepted discourse promoting the competitive race for growth and leadership.

2.2. The smart competitive meritocracy

Economic growth is marketed as if a harmonious new world order were on offer, where the poorest will join the richest. Some, like Ha-Joon Chang (2011, p. 263), advocate changing the rules to allow poor countries 'breaks to have a hope of catching up'. This ignores how competitive growth institutionalizes and rationalizes the fight over energy, materials and ecological space. Competition is then a good and efficient means of determining winners, whose gains are justified as being won on the basis of their own merit. A large question mark hangs over how a stable and just world is meant to be achieved by increasing national and corporate competition for technology, resources and markets!

The contradictions are evident in the 2020 policy agenda set by the European Commission's (2010) *Strategy for Smart, Sustainable and Inclusive Growth*. They define 'sustainable growth' in traditional economic terms as promoting a more resource efficient, greener and more competitive economy.

> An industrial policy for the globalisation era to improve the business environment, notably for SMEs, and to support the development of a strong and sustainable industrial base able to compete globally. (European Commission, 2010, p. 4)

However, the report notes the intensifying competitive pressure coming from both developed (i.e. North American) and emerging (i.e. Chinese) economies, affecting exports and resource availability. The sustainable growth strategy requires exploiting Europe's leadership in the race to develop new processes and technologies before others. The European Union is noted as 'largely a first mover in green solutions, but its advantage is being challenged by key competitors', and it should maintain its lead in the market for green technologies; in fact 'we must improve our competitiveness vis-à-vis our main trading partners through higher productivity' (European Commission, 2010, p. 12). Boosting market consumerism is central and the internet a key part of the strategy with the vision of 'a Digital Single Market based on fast and ultra fast internet and interoperable applications, with broadband access for all' (European Commission, 2010, p. 12). The idea of a responsible citizen, contributing to society, is defined in terms of being a good consumer buying and consuming as much and as fast as possible.

> To gear the single market to serve the Europe 2020 goals requires well functioning and well-connected markets where competition and consumer access stimulate growth and innovation. […] Citizens must be empowered to play a full part in the single market. This requires strengthening their ability and confidence to buy goods and services cross-border, in particular on-line. (European Commission, 2010, p. 19)

The priorities are clear, in 30 pages, there are 84 references to markets, 83 to growth, 45 to innovation, 38 to competition, 29 to technology, 17 to consuming/consumers and 14 to greening.

Sustainable growth will make 'us' winners in the global competition, if 'we' can stay ahead of everybody else, i.e. be more productive and grow faster. Allowing poor countries to catch-up defies the specific economic logic of competition – efficiency, innovation, copyright, private ownership, cost-shifting, entrepreneurship and growth as progress – with the most economically advanced being the winners in a meritocracy. This is not, and cannot be, an inclusive project where rich and poor all obtain global-North modes of living. Indeed, as Josef Ackermann, the CEO of Deutsche Bank has made very clear, this is a race for leadership:

> Make no mistake: a new world order is emerging. The race for leadership has already begun. For the winners, the rewards are clear: Innovation and investment in clean energy technology will stimulate green growth; it will create jobs; it will bring greater energy independence and national security. (Statement made December 2010; cited by Jaeger et al., 2011)

Make no mistake, where there are winners there will be losers, as there always have been in the geopolitics of the competitive industrial growth economy, 'sustainable' or otherwise. Germany wins, Spain, Portugal, Italy, Greece lose; China wins USA loses; USA wins Europe loses; and so on.

2.3. A secure militarized system

Another ignored aspect of the competitive growth economy is how it is backed by military force, as and when necessary, to secure supply chains, resources and markets for trading. The current political economy is built on fossil fuel expansion. Government plans are to pour trillions of dollars in that direction (International Energy Agency, 2014) to secure a traditional leadership position in the growth race; a strategy backed by military concerns over security and demands from the fossil fuel and associated industries (e.g. aerospace, automobiles). Fossil fuels must be secured, requiring military investment.

Modern growth economies are heavily militarized. Twenty eight governments spend 10% or more of their budgets on the military. Table 1 shows the top ten nations by military expenditure. The dominant imperialist status of the USA is quite self-evident, with a military budget larger than the next seven highest military spenders combined. If Western Europe is taken as a whole then it ranks second both on military spending and Gross Domestic Product (GDP). The strong connections between ranking of military expenditure and GDP continues as one moves through such data. That is, extending beyond Table 1, the next three countries (Brazil, Italy, Canada) rank 8th, 9th and 10th by GDP and 11th, 12th and 14th in terms of military expenditure, and so on.

The strong association of corporate industrialism with a productivist technologically driven militarized nation State, and a permanent armament industry, was an outcome of World War II. In 1961, former Supreme Allied Commander in Europe and five star General, Dwight D. Eisenhower, made his final televised speech as President of the USA. He felt the need to warn the nation that: 'In the councils of government, we must guard against the acquisition of unwarranted influence, whether sought or unsought, by the military-industrial complex'. The modern industrial nation State was established as combining military supremacy with advanced

Table 1. Top ten military nations (expenditure by country 2018).

			Military expenditure			
		GDP world rank	Amount (millions US$)	GDP (% of)	Per capita (US$)	Government expenditure (% of)
1	USA	1	648798	3.2%	1986	9.0%
2	China*	2	249997	1.9%	177	5.5%
3	Saudi Arabia*	19	67555	8.8%	2013	24.6%
4	India	5	66510	2.4%	49	8.7%
5	France	7	63800	2.3%	978	4.1%
6	Russia	11	61388	3.9%	426	11.4%
7	UK	6	49997	1.8%	751	4.6%
8	Germany	4	49471	1.2%	601	2.8%
9	Japan	3	46618	0.9%	367	2.5%
10	Korea, South	12	43070	2.6%	842	12.4%

Notes: Data on GDP from The World Bank, latest figures for 2017.
Data source on military expenditure Stockholm International Peace Research Institute (SIPRI).
Figures are in US $ in current prices, converted at the exchange rate for the given year.
*Figures are SIPRI estimates.

technology in a race for material growth and capital accumulation. The apologists for growth broker no discussion of the military-industrial complex, how supply chains and resources are secured or society is oppressively structured. Yet the evidence is in the news everyday: military power displays, political and military intervention, surveillance, militarized police, violent suppression of dissent, secret service supported terror, militias and coups, and ultimately war.

3. Poverty and progress: old bad, new good

Alternative ways of living are either co-opted into the economic growth paradigm or condemned as backward or primitive. Alternative approaches to development are removed from the policy agenda (Gudynas, 2016). A society condemned as backward and primitive is then prey to those of the more 'advanced' world who claim moral authority to impose 'development'. Peoples that oppose this 'development logic' are deposed and dispossessed, indigenous cultures are denigrated and destroyed and their autonomy removed. Indeed, the term primitive economies is used in an inherently derogatory way associated with undesirable living conditions caricatured as 'mud huts' and 'hair shirts'. This is where the next class of passive revolutionary, apologists for growth, enter. Here we find those who appear critical of economic growth on ecological and social grounds, but contradictorily leave economic growth, as development, firmly in place. The 'hair shirt' is a repeated, societal level, metaphor employed rhetorically to deride alternative economies and to equate them with an undesirable past. In particular, Kallis et al. (2012) cite the phrase as regularly employed to deride others in talks by Tim Jackson, and similar occurrence in the work of Juliet Schor against advocates of 'simplicity' and materially minimalist living (e.g. degrowth). Authors, such as Jackson and Schor, promote the idea of a 'new economy of prosperity' (Kallis et al.. 2012), so that apparent criticism of capitalist growth is combined with retention of some of its core structural elements and claims. The idea of a 'new economy' that is supposed to solve problems without changing the fundamental structure of capitalism is prevalent amongst apologists for growth.

3.1. Growth as development: the passive revolution

As a former World Bank chief economist and corporate executive, Lord Stern has heavily promoted the growth = development synonym, which he associates with poverty alleviation. In a press interview he stated:

> To those who want to knock out growth from objectives, I find they're close to reprehensible … I think to say that we should just switch off growth is to miss big aspects of what matters about poverty. And so it worries me. It's also politically very naive. If you turn it into a pissing contest between growth on the one hand and climate and environment on the other and say you've got to choose, you're setting yourself up for failure. (Confino, 2014)

This kind of rhetorical bullying ignores the history and geo-politics of economic growth as development as well as the actual impacts it has on 'poor people'.

The post-development school documents how equating development with growth has been an imperialist policy, initiated by the USA for its own benefit (Sachs, 1999/2015). President Truman's 20 January 1949 inaugural address set out the agenda for a technical and scientific programme to assist 'backward' areas of the world in the context of the Cold War. The fourth objective of this foreign policy speech set-out an agenda for promoting growth, scientific advance and industrial progress of underdeveloped areas where 'economic life is primitive and stagnant' and poverty is 'a threat both to them and to more prosperous areas'. The threat being that of becoming anti-USA, anti-capitalist and aligned to the USSR. This became a government funded project called the 'Point Four Program'. Contrary to the political rhetoric of helping poor people, the actual programme was for extraction of other countries' minerals to avoid resource shortages in the USA and to secure the supply chains of their corporations.

Black (2016) documents how public–private collusion in the USA operated to reorder political and legal institutions and their operation in foreign countries to favour the global spread of capitalism.

> U.S. decision-makers grasped for a way to extract foreign minerals without triggering anti-imperialist alarms, and Point Four—a systematic effort to improve conditions in the developing world—became a chosen vehicle toward that material end. (Black, 2016)

The USA's government field agents advanced national interests by using a time-tested procedure to achieve resource extraction: (i) conduct geological surveys, (ii) perform laboratory tests, (iii) implement mining operations, (iv) revise local mining laws, and (v) bring-in interested corporations from the USA (Black, 2016).

Rather than simply empowering and enriching lives, development policy has also denigrated and destroyed the cultures of non-industrialized countries, livelihoods of the rural and materially poor, and removed their autonomy. Sachs (1999/2015) differentiates the materially poor into what can be described as living frugally, suffering deprivation and living under systems of economic scarcity. The implications are summarized by Spash and Smith (2019) as follows. Traditional societies have economic systems of social provisioning that are structured on frugality and sufficiency. Interventions to 'develop' their economic circumstances have typically resulted in expropriation and forms of primitive accumulation. Culture is destroyed along with sustainable livelihoods. Land is grabbed, resources exploited, agriculture is industrialized and the environment is polluted. The result is exponential growth in urban slum dwellers, more than a billion on conservative UN estimates more than a decade ago (Davis, 2006, p. 23). A class of people ready for exploitation as commodified labour due to their newly-created wage dependency and their new lives as those saved from 'poverty' to live in the economy of material scarcity measured by money. As discussed below, the World Bank has focussed on increasing money income as an improvement that removes people from poverty, but ignores the structural and social changes that typically transform self-sufficiency in rural communities within social networks into industrial dependency in urban slums as isolated individuals living in polluted environments, working under dehumanizing productivist conditions.

Sachs (1999/2015) explains how the growth = development agenda has been repeatedly adjusted and revised in response to problems becoming overwhelmingly obvious. Sustainable development then appears as a response to the environmental criticism of the 1970s and specifically the limits to growth literature (Meadows et al., 1972). The World Commission on Environment and Development, established in 1983 by the UN, under chairwoman Gro Brundtland, produced the widely employed definition of sustainable development, but this is normally quoted without the follow-on sentence. The two together read as follows:

> Sustainable development seeks to meet the needs and aspirations of the present without compromising the ability to meet those of the future. Far from requiring the cessation of economic growth it recognises that the problems of poverty and underdevelopment cannot be solved unless we have a new era of growth in which developing countries play a large role and reap large benefits. (World Commission on Environment and Development 1987, Chapter 1, para. 49)

The Commission recognized no insurmountable conflict with the environment and they looked forward to a five to ten fold increase in economic growth. Neither would growth in the global economy exclude expansion of the industrially developed countries' economies.

> The medium-term prospects for industrial countries are for growth of 3–4 per cent, the minimum that international financial institutions consider necessary if these countries are going to play a part in expanding the world economy. Such growth rates could be environmentally sustainable if industrialised nations can continue the recent shifts in the context of their growth towards less material—and energy—intensive activities and the improvement of their efficiency in using materials and energy. (World Commission on Environment and Development 1987, Chapter 2 para. 32)

This claimed 'solution' to social-ecological crises, that 'decoupling' economic growth from environmental destruction is feasible, has become increasingly common in recent times, because otherwise the contradictions become overwhelmingly obvious. It provides the magic bullet solution (for criticisms of decoupling see Fletcher & Rammelt, 2017; Giampietro, 2019; Parrique et al., 2019).

Over the history of engagement by the UN on environment and development, going back to the 1972 conference, the discourse has been pacified and alternatives to capitalism, and more generally economic growth, delegitimized. Early principles claimed concern over futurity, equity, public participation, and environmental integrity. Some affirmation of intrinsic values in Nature was also recurrent (e.g. as in IUCN, UNEP, and WWF, 1980 Sec.9 ft.nt.3, Sec.10 figure; United Nations General Assembly, 2012, p. 38). However, circa 1980, the emphasis became utilitarian use, economic market instruments, natural capital maintenance, production and economic efficiency. Thus, the support is for neoliberal Green Growth not post-growth, degrowth or post-development. This then relates to a conflict and divorce between what may be believed by individuals and what is regarded as acceptable to express in international political and administrative circles, such as those of the UN (Craig et al., 1993). To be accepted, play a role and have a seat at the table requires conforming to the system and its discourse. The result being a new environmental pragmatism matching the rise of neoliberalism (Spash, 2009; Spash & Aslaksen, 2015). Hence, there should be little surprise that the 2015 UN Resolution on sustainable development goals promotes the oxymoron of 'sustainable economic growth', uses the rhetoric of decoupling to dismiss environmental concerns and seeks 7% growth rates.

The underlying claim that growth is the 'solution' to poverty has two false but common subsidiary claims. First, the argument is that the more the economy grows the more happiness will increase. This has been effectively deconstructed by Easterlin (1974, 1995, 2003) and Hirsch (1977). The basic point being that hedonic pleasures are limited in their relationship to well-

being. Happiness via income has relative meaning of worth in relation to the status of others so that more income for all does not mean more happiness for all (Easterlin, 1995). In addition, status free, or non-positional, contributions to well-being are undervalued by the materialist and money oriented growth society. People then invest in gaining things that do not make them happier (material stuff, bigger objects, the latest things) while side-lining substantive non-material contributors (e.g. friends, family, relationships, health).

> Once it is recognised that individuals are unaware of some of the forces shaping their choices, it can be no longer argued that they will successfully maximize their well-being. (Easterlin, 2003, p. 11181)

Such a conclusion runs counter to the claims of those supporting liberal and neoliberal political ideologies as well as economists supporting consumer sovereignty and minimalist government.

Second, is the myth that income inequity is addressed by economic growth because of trickle down. This is the myth that rich people allow the crumbs to fall from the table that enrich the poor. The persistence of poverty and increasing inequity in the richest nations offers the counter experience, as does the dependency of the wealthy and wealthy nations on exploitation of the poor and poorer nations for their labour and resources. Moreover, there is nothing in economic theory to support trickle down. Even Stiglitz, part of the establishment who firmly believes growth = development, had to admit that, after thirty years of the World Bank trying:

> The evidence was overwhelming that growth did not *necessarily* reduce poverty. Trickle-down economics did not *necessarily* work. If growth was accompanied by increasing inequality, poverty could actually increase. The problem was that many of the Washington Consensus policies that the Bank and the IMF had argued for in the past had contributed to—or had at least been associated with—increasing inequality. (Stiglitz, 2009, p. 144)

3.2. Prosperity after growth: the passive revolutionary

A widely cited and apparently growth critical work is, ecological economist, Tim Jackson's book *Prosperity Without Growth.* Jackson's arguments appear to be anti-growth with strong critiques of the prospects for decoupling the economy from environmental damages. He adopts a post-growth position with the recommendation of a 'new economy' based on services. Unfortunately, this might not actually address the problem because, in practice, the move to such economies has been 'systematically linked to an increase in per capita energy and material consumption' (Krausmann et al., 2008, p. 197). So the form of alternative economy is in question, but the implication is that some serious restructuring is necessary, and, with growth gone, apparently this means the abolition of capitalism. However, Jackson (2009, pp. 197–202) fudges the issue, weakly joking that he is actually advocating 'capitalism, but not as we know it', and asking rhetorically 'Does it really matter?' Capital accumulation appears as an optional extra for capitalism, while capitalism itself remains basically unaddressed and undefined.

Jackson advocates contract and convergence, stating that, 'A key motivation for rethinking prosperity in the advanced economies is to make room for much-needed growth in poorer nations' (Jackson, 2009, p. 175). He equates economic growth with development. In particular, he notes how self-reported happiness studies show increases in happiness before it declines as growth continues.

> These [life satisfaction] data underline one of the key messages of this book. There is no case to abandon growth universally. But there is a strong case for the developed nations to make room for growth in poorer countries. It is in these poorer countries that growth really does make a difference. (Jackson, 2009, p. 41)

Now, this position is no different from that of Keynes, Stern or the international pro-growth lobbies. Yet the practical implications are left out. What does it mean in practice to advocate growth as the means of poverty alleviation?

According to the UN there are 1.34 billion people (19% of humanity) across 105 countries living in multidimensional poverty – reflecting acute deprivation in health, education and standard of living.[1] The World Bank's preferred measure of extreme poverty is the US dollar. The threshold set in 1990 at $1/day, increased to $1.25 in 2005, adjusted in 2011 to $1.90 purely for inflation and exchange rate changes, i.e. they claim $1.90 (2011) buys the same as $1.25 (2005) in poor countries. The World Bank (2018) then triumphantly proclaims growth policies have halved extreme poverty since 1990. Others disagree with their approach and claims, while pointing out the increasing inequities are actually created by growth.

That the cost of living varies by country is recognized by the 2018 World Bank report including higher thresholds – $3.20 per day and $5.50 per day – to represent extreme poverty in lower-income and upper-middle-income countries. As shown in Table 2, 46% of humanity live below $5.50 per day. If the requirement is moved higher to $10/day then 71%. Such figures hide distributional inequity, regional and national differences. Table 2 shows greater income poverty amongst rural populations, while some countries may have much higher than 10% in extreme poverty. India, for example, has over 30% below the $1.25/day threshold, while growth there between 1980 and 2016 increased the income share of the richest 10% by more than 20%, giving them 55% of all income (Nilsen, 2018).

What all this means for Jackson's call to address poverty by economic growth is mass expansion of the industrial economy for the vast majority of humanity. In order to reach the basic poverty threshold of the USA would require growth for almost the entire world's population on an ongoing basis. Even a level 60% below that threshold (i.e. $10/day) would mean imposing the growth economy on 71% of the world's population. He is certainly not then calling for *Prosperity Without Growth*! However, the issue here is not only the hidden advocacy of such a massive global expansion of economic production, but also that growth itself has been highly problematic as a means for addressing poverty. As Nilsen (2018) notes the majority of the world's poor live in countries that have experienced strong economic growth and the growth strategies these countries have practised

Table 2. Population in poverty.

	Population (%)	Income/yr (US $)	Source
Population below US$1.90 per day according to World Bank	10.0	694	http://www.worldbank.org/en/topic/poverty/overview
Indian population below international poverty line of US$1.25 per day 2007–2011	32.7	456	http://www.unicef.org/infobycountry/india_statistics.html
Population below US$2 per day in rural areas	60.0	730	http://www.un.org/en/globalissues/briefingpapers/ruralpov/vitalstats.shtml
Population below US$3.20 per day according to World Bank	26.3	1168	World Bank (2018, p. 8)
Population below US$5.50 per day according to World Bank	46.0	2007	World Bank (2018, p. 8)
Population on US$10 per day or less	71.0	3650	https://www.pewresearch.org/fact-tank/2015/09/23/seven-in-ten-people-globally-live-on-10-or-less-per-day/
USA 2016 Federal Poverty Guidelines income threshold below		11880	http://familiesusa.org/product/federal-poverty-guidelines#2015
USA 2017 Official Poverty rate	12.3		https://www.census.gov/library/publications/2018/demo/p60-263.html

create and reproduce poverty. In addition, as shown in Table 2, poverty has not been removed even from the richest nations in the world and in some it is institutionalized and increasing (e.g. Jacksons' own country, the UK, the sixth richest nation in the world by GDP, has been criticized for increases in extreme poverty, while, as shown in Table 2 the USA, the richest country in the world, has over 12% officially living in poverty).[2]

4. Organizing a green and growing 'new' economy

That environmental problems are an all pervasive part of modern economic systems is a core lesson of ecological economics based on the laws of thermodynamics and conservation of matter. Energy and materials that go into the economic system are not destroyed but transformed, degraded in terms of human usefulness, and returned to the environment in equal mass. The correlation between GDP and greenhouse gas (GHG) emissions directly results from this basic biophysical reality. Such natural scientific understanding is ignored by economists' externality theory which treats pollution as a minor aberration in an otherwise perfectly functioning market system (Spash, 2021). As one-off correctible market failures pollutants are treated as singular policy problems not systemic failures.

The resulting policy reductionism has facilitated exclusion of all other environmental problems by climate change, and then reducing GHG mitigation policy to focus on CO_2 (typically termed 'carbon') as the principle concern. That even this singular gas is a systemic problem related to the growth economy, rather than a one-off aberration, seems rather self-evident. The majority of world CO_2 emissions comes from the same handful of high GDP nations as shown in Table 1. These are China (30%), USA (15%), India (7%), Russia (5%), Japan (4%) and Germany (2%). As a collective the EU28 would rank 3rd (10%) with highest polluters Germany followed by the UK, Italy and France (around 1% each). The nine highest CO_2 emitting countries rank in the top eleven countries with the highest GDP.[3] Yet the institutionalization of a passive revolution has sought to effectively turn reality on its head to claim economic growth as the solution to, not the cause of, human induced climate change.

4.1. Better growth, better climate: the green passive revolution part I

The Paris Agreement (Article 2) has a stated aim of holding global average temperature increases to well below 2°C, and an aspiration of pursuing 'efforts to limit this to 1.5°C, in order to reduce the risk and impacts from climate change'. Article 2 is qualified by the phrase: 'in the context of sustainable development and efforts to eradicate poverty'. Indeed the whole Paris Agreement is set within the context of the Sustainable Development Goals (SDGs), which promote economic growth, technology, industrialization and energy use (Spash, 2016b, 2016a). SDG Goal 8 is to sustain per capita economic growth at a rate of at least 7% GDP per annum in the least developed countries. The expected environmental destruction is to be addressed by the 'endeavour to decouple economic growth from environmental degradation'. This would require absolute decoupling which is simply impossible for the SDG envisioned industrial economy promoted in Goal 9. The Paris Agreement follows suit with techno-optimism and growth; Article 10 states that: 'Accelerating, encouraging and enabling innovation is critical for an effective, long-term global response to climate change and promoting economic growth and sustainable development'.

The resource extracting, fossil-fuel driven economies of the world are claiming they can stop the exponential growth path of GHG emissions, while making no substantive change in the structure of

the growth economy or society, and indeed by promoting capitalist financial markets as 'the solution' (Spash, 2016b). At the UNFCCC COP25 conference in Madrid 2019 the major contention and dispute concerned what the doublespeak of Paris called 'internationally transferred mitigation outcomes' (clause 108 and Article 6). This was the term that appeared in the Paris Agreement instead of emissions trading, carbon markets, cap and trade or offsets. In short the Paris Agreement is being directed towards establishing financial markets based on carbon trading because this offers a business as usual approach.

For example, if aviation were a nation State it would be the seventh largest CO_2 emitter.[4] Yet increasing flying is at the leading edge of growth. Manufacturers expect to double the passenger aircraft fleet, with 'emerging' economies, and especially China, tripling those flying. The cost, $5.3 trillion by 2036 for the new commercial fleet, and more for training over half a million new pilots.[5] Already 550 new airports are planned or under construction, combined with new runways and airport expansion there are an estimated 1200 new airport infrastructure projects (Smith, 2019, p. 18). Christiana Figueres – former Executive Secretary of the UNFCCC and now member of Richard Branson's B-Team – justifies this massive expansion as 'carbon neutral growth' (Figueres & Tubiana, 2016). The means on offer for claiming the possibility of such neutrality are the notoriously problematic market-mechanisms of carbon trading and offsetting (Spash, 2010, 2015; Spash & Theine, 2018).

Similarly, the highly publicized report by Stern et al. (2006) advocated emissions trading while pronouncing that: 'Tackling climate change is the pro-growth strategy for the longer term, and it can be done in a way that does not cap the aspirations for growth of rich or poor countries' (Stern et al., 2006, p. viii). In 2014, the self-aggrandizing Global Commission on the Economy and Climate (GCEC) published *Better Growth Better Climate: The New Climate Economy Report* with Stern as lead economist. Apparently ' … set up to examine whether it is possible to achieve lasting economic growth while also tackling the risks of climate change' (GCEC, 2014, p. 8). Actually, a purely rhetorical question because the answer was already given by Stern in 2006. Unsurprisingly then, 'The report's conclusion is that countries at all levels of income now have the opportunity to build lasting economic growth at the same time as reducing the immense risks of climate change' (GCEC, 2014). Their 2018 report headlines 'the inclusive growth story', but the real concern seems to be capturing government investment for corporate business interests by diverting 'US $90 trillion to build the right infrastructure now' in order to 'deliver a new era of economic growth' (GCEC, 2018, p. 10). The 'new' growth seems very much like business-as-usual: rapid technological innovation, infrastructure investment, increased resource productivity, jobs, economic savings, competitiveness and market opportunities (GCEC, 2018, p. 8). The inclusiveness also seems illusionary because, once again, the competitive race is on: 'Leaders are already seizing the exciting economic and market opportunities of the new growth approach' and 'laggards' are losing out (GCEC, 2018, p. 9).

Stern and others have been keen to promote climatic disaster prevention as bringing economic prosperity. Similarly, Jaeger et al. (2011) describe GHG emissions reduction as a new opportunity to increase growth rates. A key part of such stories is that pricing and marketing non-market goods, internalizing externalities via full cost accounting, and pricing 'carbon', will correct market failures, increase efficiency and provide a Green and growing economy. In the process there is money to be made from GHG commodification and for bankers and financiers.

> Capital markets, banks and other financial institutions will have a vital role in raising and allocating the trillions of dollars needed to finance investment in low-carbon technology and the companies

> producing the new technologies. […] Trading on global carbon markets is now worth over $10bn annually. (Stern et al., 2006, p. 270)

As Hirsch (1977) pointed-out long ago, there is no economic welfare gain from such 'defensive expenditures'. More resources for environmental protection (like those on the military or police) are not signs of increasing human well-being but societal failure. The more pollution created, the more clean-up activities required and the higher is GDP, because it merely measures activity, not why activity is required. Stern and colleagues make a most basic economic error in claiming GDP growth due to attempting to prevent a human induced climatic disaster is a good thing.

There is also a strong underlying claim that price-making markets can reflect 'true costs'. This form of market has prices resulting from 'negotiations' between actors (e.g. firms-consumers; employer-employee) in contrast to being set by an administrative, or other, authority (Polanyi, 1957). The GCEC (2014, p. 42) state that 'Competitive markets in which prices properly reflect the full costs of production are vital to enable resources to flow to where they are most productive'. In order for prices to 'properly reflect the full costs' would require knowing all the damages related to all the GHG pollutants in the world across time and space for every level of production in order to create a marginal shadow price. As discussed in the next section, this engages in universal commensurability and converting everything (e.g. loss of life) into money values, and means planning all prices via explicit cost calculations (Spash, 2002). Regardless of ethical concerns, the technical problems are totally insurmountable and the idea absolutely impracticable, but calls for 'full cost accounting of externalities' keep appearing (e.g. GCEC, 2018). The only way to interpret such claims is as a rhetorical power play, aimed at convincing non-economists that markets are efficient resource allocators, and where markets fail they can be corrected by expert informed price adjustments.

The GCEC (2014) State 'we can create lasting economic growth', but who are we? In this case those speaking for the 'global we' are a political elite (two majors, five ex-heads of State, two associated with the UN), thirteen financers and bankers and four leaders of international organizations (World Bank, IEA, OECD, ITUC), plus Lord Stern. They are backed-up by 'The Economic Advisory Panel' comprising nine economics professors/Nobel winners and six other experts in economics/finance (in total two women, thirteen men). GCEC is a mainstream economics lobby group for international financers and businessmen. Ultimately their concern is the threat to and protection of the capital accumulating growth economy, above all else.

> In the long term, if climate change is not tackled, growth itself will be at risk. (GCEC, 2014, p. 9).

The rhetoric of environmental and social concern thinly veils the aim of getting government funds for the transition to a 'new economy' that will be socially and economically unchanged, and merely produce different products, while trillions of dollars are poured into corporate pockets.

4.2. Nature as a financial capital asset: the green passive revolution part II

In 2011, the UNEP initiated a campaign for the 'Green Economy', with a report over 600 pages long (UNEP, 2011b), aimed at influencing the 2012 Rio Plus 20 meeting. This includes expressions of concern for the poor, the seriousness of environmental problems and the need for change. For the UN the Green Economy 'is a new development path that is based on sustainability principles and ecological economics' (UNEP, 2011a, p. 1). However, the approach is built around market mechanisms and economists' (or rather accountants') ability to conduct shadow pricing to value

the environment – 'a common language of comprehensive ecosystem valuation' – and to institutionalize those values via private property rights for private gain.

> In the transition to a Green Economy, policymakers should ensure that the full range of goods and services provided by ecosystems, including those which are currently non-monetised, are fully integrated in decision making and public policy. […] Placing a value on ecosystem services through mechanisms that facilitate investment in ecosystems will at the same time benefit local people and the private sector who are rewarded for good environmental stewardship. (UNEP, 2011a, p. 3)

The mythical full cost accounting is central. The UNEP (2011a, p. 7) makes clear that they want to use 'economic models for wealth creation, to focus increasingly on the value of ecosystem goods and services and natural capital'. They believe that, 'Compared with previous development paths, the uniqueness of a Green Economy is that it can directly turn natural capital into economic value whilst maintaining it, and conduct total cost accounting' (UNEP, 2011a, p. 8). Ecologists can be replaced by accountants as the environment neatly slips off the agenda and is replaced by growth, jobs, capital investment and wealth accumulation.

Neither is the growth model new. Growth is designated Green because it will promote specific types of productivism (e.g. solar and wind electricity generation, electric cars, digital economies) assumed, but not shown, to have lower environmental impacts (e.g. on cars see Morgan, 2020). This does nothing to address the scale of energy and material throughput, social impacts of accelerating the mode of living and continually introducing new technologies. Nor does it address how advancing new interventions into the environment destroys natural systems' structure and functioning, and partially substitutes for this with technology dependent upon low entropy concentrated minerals (e.g. fossil fuels), while causing an increase in unwanted surprise events. Thus, arguments for decoupling and circular economies fail to address the relationships between human systems and ecosystems (Giampietro, 2019). The concern here is not really maintaining ecological or environmental systems, but once again a financially driven growth economy.

The UNEP's association of their Green Economy with ecological economics relates to researchers who have promoted the adoption of natural capital as a means of reflecting ecological value (Jansson et al., 1994) and claim to have valued the worlds ecosystems (Costanza et al., 1997). Criticism of such work has extended from the actual studies (e.g. Norgaard & Bode, 1998; Toman, 1998) to the more general unscientific form of new environmental pragmatism that this entails (Spash, 2013). Natural capital is also a long contested concept (Spash & Clayton, 1997), and the adoption of the capital approach from mainstream economics highly problematic.

The mainstream economic argument is that, even in the absence of any technological progress, exhaustible resources do not pose a fundamental problem if reproducible man-made capital is sufficiently substitutable for natural capital (Dasgupta & Heal, 1979; Hartwick, 1977; Solow, 1974). In terms of sustainability criterion, the concern is to achieve a non-declining income flow from capital which maintains or increases utility. If natural capital is reduced then man-made capital will need to compensate for the yield lost. Thus, the Hartwick (1977) rule suggests achieving intertemporal efficiency in resource allocation by investing depletable-resource rents in man-made capital, and so maintaining a constant consumption stream. However, the simple Hartwick rule depends upon man-made capital: (i) failing to depreciate, (ii) being a substitute for, rather than a complement to, natural capital, and (iii) being unrelated to rather than produced from natural capital (Victor, 1991). The self-evident lack of realism is ignored. Instead an extreme position on substitution is adopted by the capital approach, namely that:

> We can pass on less environment so long as we offset this loss by increasing the stock of roads and machinery, or other man-made (physical) capital. Alternatively, we can have fewer roads and factories so long as we compensate by having more wetlands or mixed wood lands or more education. (Turner et al., 1994, p. 56)

As Munda (1997, p. 217) has stated this weak sustainability approach requires a very strong assumption, namely perfect substitutability between the different forms of capital. All values are equated and everything is made commensurate and can be substituted.

4.3. Do nought economics: the passive revolutionary

Kate Raworth's book, *Doughnut Economics*, is entirely oriented around economic growth and criticisms of mainstream economics. She associates economic growth with social and environmental problems, and planetary boundaries (Rockström et al., 2009). Various links, loosely drawn and briefly made, connect to an ecological economics perspective, but primarily the anti-growth work of Herman Daly. However, when recounting having to choose between Green growth and degrowth (mentioned once), Raworth (2017/2018, p. 244) goes on to sympathetically, if critically, discuss the former, while totally dismissing the latter. In the penultimate chapter her position is made explicit 'Be Agnostic About Growth' she proclaims. Her attempt to distinguish this from apathy leads to a definition that claims she wants to be 'agnostic in the sense of designing an economy that promotes human prosperity whether GDP is going up, down, or holding steady' (Raworth, 2017/2018, p. 245). Her final recommendations for a future economy provide a mix of ecological modernization, Green Economy and techno-optimism.

On her website, Raworth claims the mantel of being a 'renegade economist', but her apologetics for growth are clear in the linked blogs: 'GDP could grow, so long as it remained compatible with staying within social and planetary boundaries'.[6] This fundamentally misunderstands the role of capital accumulation, corporations, profit seeking, competition and consumerism in the structure of the modern economy. Despite passing references to Karl Marx (Raworth, 2017/2018, p. 88,142, 165, 272), her book makes no connection between systemic issues and the structure of capitalism. Capitalism is mentioned in passing a dozen times, but it is never defined in the book nor regarded as a serious concern; indeed for Raworth, like other apologists for growth, it can be redesigned to a new updated version. All the criticisms of growth that she references appear irrelevant because Raworth's position is basically that there are no *a priori* problems with economic growth itself, this is something that does or does not result from economic practice, a side issue to the practical problem of designing the right (capitalist) economy. She asserts, with no evidence at all, that: 'No country has ever ended human deprivation without a growing economy' (Raworth, 2017/2018, p. 245); which is an amazingly ahistorical and ill-informed statement, and if she believed this to be true it would seem to commit her to growth not agnosticism. Indeed, the evidence shows that no growth economy has ever ended human deprivation. What totally passes-by Raworth in making this claim is the role that economic growth has played in causing inequality and deprivation.

Raworth also exemplifies how apologists for growth argue around issues, rather than directly addressing them. For example, Meadows et al.'s (1972) limits to growth thesis is mentioned (Raworth, 2017/2018, pp. 154–155), but emphasis is placed on pollution not resources. The idea of a 'circular economy' is later promoted with rhetorical claims of potential 98% efficiency (Raworth, 2017/2018, pp. 220–222), which merely reproduces the fallacies of closed systems thinking inherent in the macroeconomic circular flow diagram of GDP, criticized earlier in her book. The text then

evidences repeated failures to understand the logic of the critical literature cited.[7] In order to counter material reality, 'knowledge' is introduced as if it could avoid the laws of physics. Despite Georgescu-Roegen (1971) receiving passing acclamation (Raworth, 2017/2018, p. 252), the implications of economic growth for materials and energy throughput, and the role of entropy in the economic process, are basically absent or bypassed with another bout of rhetorical flourish. The fact that Georgescu-Roegen (1979/1995) concluded in favour of degrowth is also totally ignored.

Faith in economic prosperity through capitalism is an underlying theme. Despite critical reflections on neoliberalism, and linking it to the neo-Austrian economists of the Mont Pèlerin Society (for more depth see Mirowski & Plehwe, 2009), she supports the core Austrian economic and neoliberal belief in entrepreneurs as central economic actors, business as the source of innovation and technology as progress. Thus, digital futures, robots and knowledge economies are combined, to suggest a decoupled economy that saves the basic capitalist structure, as new corporate forms enable the Davos elite to become socially and environmentally responsible in the belief that they will happily reform themselves and stop shifting-costs on to others.

As a senior associate at the Cambridge Institute for Sustainability Leadership, Raworth unsurprisingly leaves a large role for business and corporate entrepreneurs as the future leaders. That Institute's website states their commitment to working with multinational businesses.[8] Their clients include major corporations and financial interests (e.g. Shell, Coca-Cola, Unilever, Deloitte, General Electric and Nestle). Connecting to the Davos elite, Raworth has contributed to the World Economic Forum, where her 'renegade' claims are dropped, and mild reform appears in an ecological modernist mode of Green corporate capitalism.

George Monbiot has claimed Raworth to be the Keynes of this century.[9] Her book bears no comparison to his work at all. It is a popularly written collection of anecdotally and metaphorically structured arguments, presented as a series of stories, lacking depth of attention to cited sources and offering no coherent economic theory. Typical of apologists for growth it offers comforting pictures of positive futures that will build upon the basic structures of Western capitalism and sustain it. Therein lies the contradiction, the arguments for alternatives stand in opposition to the arguments for keeping business-as-usual. The only proximity to Keynes is in an attempt to save the capitalist system from itself by *a posteriori* corrections to its inherent tendency for exploitation of, and cost-shifting onto, 'others'. Of course, as discussed above, Keynes himself was the ultimate apologist for growth.

5. Concluding discussion

Economic growth is synonymous with progress and development, yet the phenomena is a relatively new one. The modern economic growth paradigm was popularized after World War II both academically and politically. Academically, Keynes (1936/1978) invented macroeconomics and formalized the operations of modern capitalism, including the role of money as already recognized by Marx (1867). Keynesian economics justified government intervention to stimulate growth. Politically, the foreign policy of the USA adopted economic growth as synonymous with development, and development with progress, as a means of international intervention (Black, 2016). Organizations such as the IMF and the World Bank helped push the imperialist agenda (Sachs, 1999/2015). The Cold War added an arms race. As a geo-political tool, the capital accumulating growth economy had soon spread globally from market capitalism to centrally planned productivism.

Capitalist price-making markets contribute their own dynamics of commodification, competition over market share, power over suppliers and consumers, cost-shifting and profit seeking.

Structured to maximize 'exchange values', such markets must grow because the reasons for capital investment is to increase returns through the exchange process. Thus, the on-going promotion of economic growth as development by Western governments has promoted materialism, consumerism, trade, commodification of Nature, reduction of values to monetary metrics, corporate profiteering, the military-industrial complex and cultural imperialism.

The growth economy is a hegemonic power structure. Hegemony is a political concept describing an ideological position that comes to dominate,

> to prevail, to gain the upper hand, to propagate itself throughout society – bringing about not only a unison of economic and political aims, but also intellectual and moral unity, […] thus creating the hegemony of a fundamental social group over a series of subordinate groups. (Gramsci, 1971, pp. 181–182)

The consensus across political systems and parties is that economic growth forms the unquestionable goal of modern society to which all should aspire. More than this, the expressed belief is that imposing economic growth on all others is a moral duty to help them 'develop', and not to do so is reprehensible (as noted by Lord Stern).

The basic physical, social, economic and psychological criticisms of the resulting economic system, as raised in the 1970s, have never been addressed. As social-ecological economists have repeatedly noted, most economists have wilfully ignored the biophysical reality of economic processes and the social structure of actual economies (Spash, 2017). As social, ecological and economic crises increasingly become actualized so do the pundits with their old growth wine in new economy bottles – neo-Keynesian productivism, climate economy, Green growth, Green economy, Green new deal, new deal for nature, sustainable development, sustainable economic growth, bio-economy, circular economy, digital economy, knowledge economy. Whatever the title the contradiction remains between sustaining capital accumulating industrial growth and reducing the social-ecological impacts of its material and energy throughput.

For the top few per cent of the worlds' population who own the vast majority of its wealth, and run its corporate businesses's, ecological and economic crises are just another opportunity to make money. One person's loss is another's gain. Disasters are potential trade openings for the business men and women with the right goods and services in the right place at the right time (Spash, 2012). That is the whole thrust the EC's 2020 vision, GCEC and Stern's new climate economy and the UN's Green Economy. Trillions of dollars are just waiting to be grabbed in the transition to the next form of capitalism. One may speculate as to their motives but they presumably believe in either short termism or that they can survive regardless of general and widespread catastrophes and suffering of others; in both cases there appear to be psychopathic and sociopathic traits in the corporate world (Bakan, 2004; Black, 2001).

The elite of financiers, bankers, billionaires and corporate managers appear less concerned about social-ecological crises than that the disenfranchised majority might get rebellious and demand a reorganization of the economic and political system. Rather than circuitous economic growth and promises of trickle down they might demand redistribution, social justice, goods and services in-kind, public ownership and social provisioning to meet social needs. The hard-line response is alliance with the right-wing, shutting borders to immigrants, designating critics as terrorists and threats to national security, authoritarian control using securitization via police and military power. This is an on-going process across nations, including Western democracies. The soft-option is a continuing series of passive revolutions to appease subordinate segments of society with mild reformist agendas from the top that keep the elite in power. What the review and critical

reflection presented here shows is the prevalence of such conformity across a range of societal actors and how this involves the absorption of potential revolutionary or oppositional intellectuals and leaders.

The resulting policy recommendations represent superficial change that does nothing to address the fundamental social-ecological crises created by the structure of modern economies and their problematic systems of social provisioning (see my other article in this special forum: Spash, 2020b). That systemic change is necessary is well founded on basic biophysical principles whose importance for sustained social provisioning is core to ecological economics. Recognizing how systemic change is being prevented is necessary to activate counter mechanism to achieve social-ecological transformation. What has been shown here is that any serious transformation away from growthmania will need to address a set of international organizations ideologically committed to economic growth that is integrally linked to corporate interests and the militarized nation State. In addition, a range of supposedly radical and critical thinkers can be identified as compromised partners in maintaining the system. The apologists for growth help secure the passive revolution.

Notes

1. http://hdr.undp.org/en//2018-MPI
2. The UK's failures were cited by the UN Special Rapporteur on extreme poverty and human rights 16 November, 2018 https://www.ohchr.org/en/NewsEvents/Pages/DisplayNews.aspx?NewsID=23884&LangID=E
3. Switching to total GHGs, from just CO2, and including emissions from land use change and forestry pushes Indonesia and Brazil up the league table into fifth and sixth positions, but the list of countries accounting for about 70% of GHG emission, and those at the top, remains the same.
4. https://www.fern.org/climate/aviation/ [Accessed 20/07/2019]
5. http://news.airwise.com/story/airbus-says-world-jet-fleet-to-double [Accessed 02/09/2017].
6. Accessed 3rd February 2018, https://www.humansandnature.org/economy.
7. The problems with the circular economy and its failure to understand biophysical reality are explained by Giampietro (2019) with reference to the work of Georgescu-Roegen.
8. Accessed 3rd February 2018, https://www.cisl.cam.ac.uk/about/who-we-work-with/clients.
9. Accessed 14th May 2019, https://www.theguardian.com/commentisfree/2017/apr/12/doughnut-growth-economics-book-economic-model.

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Notes on contributor

Dr. Clive L. Spash is Professor of Public Policy & Governance at WU in Vienna, Editor-in-Chief of *Environmental Values*, and former President of the European Society for Ecological Economics. As an ecological economist he has promoted the need for social-ecological transformation and a paradigm shift in economic thought. He has published widely in the fields of economics, political economy, social psychology, project and policy evaluation, environmental policy, philosophy and ethics. Over thirty years he has conducted research on climate change, biodiversity loss, air pollution, conservation and land-use. His books include: *Routledge Handbook of Ecological Economics: Nature and Society* (Ed., Routledge, 2017), *Ecological Economics: Critical Concepts in the Environment, 4 Volumes* (Ed., Routledge, 2009), and *Greenhouse Economics: Value and Ethics* (Routledge, 2002). More information can be found at www.clivespash.org

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