

Growth and growthers: a study in fervent devotion

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At the end of the day, growth is the goal and imperative. Introducing anything or doing any kind of tactical activity that doesn't create growth is just not worth the trip. Anyone who studies, reads or tries to educate himself or herself is trying to grow. It's the same with making money. When you are trying to make more money, you are trying to grow...[H]ire people who have the idea and vision that growing is the only way to go. If you don't grow, what will happen is what happens to us as humans – if you don't grow, you die.

Sergio Zyman, Former Chief Marketing Officer, Coca Cola Company¹

The ultimate truth is penultimately always a falsehood. He who will be proved right in the end appears to be wrong and harmful before it.

Extract from the Diary of N.S. Rubashov²

This essay is about belief systems. This isn't something with which most economists feel comfortable. But it's a topic that cannot be avoided, especially when dealing with exponential growth, which many uncritically see as a good thing whilst discounting its disturbing undertones. But where should such a discussion begin? As a guide I have relied upon the works of Arthur Koestler (1978), John Gray (2002), Yuval Noah Harari (2011) and Robert Heilbroner (1974). In essence, the essay will show that once one grasps the character and purpose of *Homo-sapiens* (from now on referred to as *Sapiens*), the mystique of growth and those who promote it – *growthers* – become explicable.

Arthur Koestler, a déclassé ex-Communist, was a writer, thinker and polymath who influenced many academics in a number of different disciplines, but not notably economics.³ Koestler makes a bold statement about *Sapiens*. He claims that it is a deeply flawed species, and in all

¹ From Zyman, S. (1999), pp. 154-155.

² From Koestler, A. (1940), p. 81.

³ There is one exception, Frederick von Hayek, who did interact with Koestler.

probability an evolutionary mistake. Its ultimate flaw is that it combines exceptional creativity with dangerous levels of paranoia. The tragedy of humankind, according to Koestler, is not an excess of aggression but an excessive capacity for fervent devotion to tribe, empire, church, ideology, or theory.

Let's explain this bold vision in more detail. Koestler argues that every sub-atomic particle, atom, molecule, organelle, cell, tissue, organ, organ system, organism, person, social group has a *dual* character. They are simultaneously a 'whole' – stable, integrated, self-regulating, with a degree of autonomy – and 'part' of a wider system. Hence, atoms are 'wholes' – stable and self regulating – but form 'part' of a wider molecular structure; cells are both integrated, semi autonomous 'wholes' and at the same time 'parts' of tissue structure; a person is a whole – self regulating, with a degree of autonomy – but also 'part' of a family or tribe or corporation. This is what Koestler refers to as the *Janus Principle*.⁴ This means that within every living organism and collective social grouping there is a tension, a polarity, between what Koestler calls the *self-assertive tendency* – the expression of wholeness – and the *integrative tendency* – the expression of partness, or the urge to integrate with a wider whole. Most definitely, this is the case with *Sapiens*.

Koestler claims that much religious and moral instruction of *Sapiens* has concentrated on the vices of the self-assertive tendency, but less has been made of the dangers of the integrative tendency. It is to the latter which he directs his attention. He notes that the integrative tendency in *Sapiens* has three overlapping sources: submission to an authority figure(s); identification with a social group; uncritical acceptance of the belief system of the group. It is the shared credo which binds a group together; it creates what Koestler calls a 'group-mind' requiring that each member (part) sacrifices their own critical facilities in order to integrate within the wider whole. The group-mind also constructs an acceptable common code of conduct – the do's and don'ts of social interaction. Each group-based belief system – Harari refers to it as an 'imagined order' - carries a powerful emotional charge; for it not only incorporates moral principles and imperatives, but it helps construct a self-identity for each of its members. To be sustained it needs true believers, passionate advocates, who never admit that the order is imagined and seek to educate others in the details and attributes of the belief system. Koestler further notes that belief systems are not restricted to religious or political domains, but extend through to the scientific community. He argues that the 'commitment to a scientific theory can be as charged with emotion as a religious credo – a subject much in evidence throughout the history of science' (1978, p. 165). Certainly Koestler's arguments will resonate with anyone who has sought to debate with fervently devoted mainstream

⁴ Koestler refers to living organisms and social groups as *holons*, from the Greek *holos* (whole) and the suffix *on*, as in proton and neutron (or part).

(self-styled 'scientific') economists.⁵ The same is evident in dialogues with growthers – the true believers in economic growth.

This analysis explains one of Koestler's most contentious claims: that the greatest danger to the future of *Sapiens* comes not from the vices of the self-assertive tendency, but from the fervent devotion to a belief system inherent in the integrative tendency. The 20th century provides a rich source of evidence for the validity of Koestler's assertion. The deaths and despair generated by envy, jealousy, greed, gluttony and the like, pale in significance compared to the mass slaughter instigated by true believers in the dogmas of Fascism and Communism, *ad majorem gloriam*.⁶ Of course, it's not just *Sapiens* which is threatened by fervent devotion. Consider the fervent devotion of growthers whose promotion of worldwide exponential economic growth has destroyed the habitats of thousands of other species. As will be shown later, the 'success' of *Sapiens* is responsible for a shoah of other species.

What can be said of the state of belief systems in the early 21st century? In this context John Gray's insights are helpful. Intellectuals in the early 21st century live in interesting times, when the great, defining, transcendent world views of the last two to three hundred years are all thought to have failed, to a greater or less degree. From Socialism to Communism, Fascism to nationalism, free market fundamentalism to social Darwinism. Of course, each specific world view still has adherents; the stubborn minorities, resistant to disproof and challenge, clinging passionately to their faiths in an uncertain world. But, as Gray notes, one belief system, which influenced the other transcendent viewpoints, remains firmly in place within the group-mind of the intellectual elite: *Humanism*. This system of beliefs is derived from the Enlightenment, and the project to replace faith in God with faith in humanity as a whole.⁷ Its central tenant is faith in *progress* through the development and application of scientific knowledge. In this imagined order knowledge can free *Sapiens* from the limits imposed on other species, and allow 'conscious mastery of our existence' (Gray, 2002, p. 38). In this sense, Humanism is similar to Christianity in seeing *Sapiens* as separate from, and superior to, other planetary species.⁸ Ultimately, this belief system suggests that knowledge sets *Sapiens* free, perhaps even from death itself.⁹

⁵ None are as passionate as those who believe that science and objectivity is on their side.

⁶ Translated this means for the greater good.

⁷ Two alternatives exist to Humanism. First, targeted oppositionalism, represented by various "anti" movements; second, passive nihilism. The problem with targeted oppositionalism is that is that it's much less satisfying when compared to calming certainties of an imagined order; it allows anger to be expressed, but not hope? Nihilists are equally unhappy; they want to be fervently devoted to something, but don't know what.

⁸ This can be called *species-ism*, which is analogous to racism.

⁹ Harari notes the existence of the *Gilgamesh project* designed to make *Sapiens* a-mortal.

This, inevitably, raises the question of how progress can be defined and measured. Clearly, anything which indicates an expansion of the scale of techno-science is useful – like increased numbers of qualified degree graduates or research grants awarded. In more practical terms, it is measured through reduced mortality rates, an expansion in diseases eradicated, increasing rates of patents registered, and so on. But, what of the economic realm; how can progress (advancement, expansion, development!) be quantified in terms of economic activity? Smith's answer was the vague notion of an increased 'wealth' of a nation. By the nineteenth century economists such as Cannan, Marshall and Pareto were content to measure it using the nebulous idea of 'material welfare' (Robbins, 1932). But since World War 2 economists have calculated economic progress within each nation state using two measuring rods: the rate of growth of GDP and the growth rate of GDP per person. This accounts for what Godin (2009) calls the *mystique* of growth; economic growth equates to progress, and progress leads to freedom for *Sapiens*. Who could oppose that?

At this point it is interesting to digress slightly to consider the background to the Post World War 2 mystique of growth. This is a topic normally brushed over in academic discussion. Economists concentrate on the technicalities of measuring total economic activity – Gross Domestic Product – and the growth of GDP and GDP per capita (or per worker, or per hour worked). But, what is rarely debated is *why* the National Accounts were developed and *how* the growth fixation was established. Doing so, however, offers insights into the Humanist belief in progress, and offers support to Koestler thesis that *Sapiens* combines creativity and paranoia in almost equal measure.

The Great Inter-War Depression and Second World War were the main drivers of inquiry into measuring aggregate activity. In the USA Simon Kuznets (1934) argued that it was one thing for an informed observer to grasp the massive collapse of American output during the Great Depression, but it would be very valuable to have a precise quantitative appraisal of the state of the economy. Kuznets' contribution was relatively sophisticated and, crucially, he made the inventive distinction between 'consumers' outlays' and 'capital formation'.¹⁰ But two other Americans were equally creative pioneers. Clive Warburton, who started his work just before Kuznets, was the first to use the phrase 'the value of gross national product'; and Lauchlin Currie, working at the Federal Reserve, promoted crude forecasting techniques using the categories in the nascent National Accounts (Carson, 1975). Meanwhile, in the UK, Colin Clarke was also making innovative strides. By 1932 he had worked-out the basis for defining and measuring inter-temporal changes in aggregate activity; in 1937 he identified the three different methods for measuring total activity – income, expenditure and product; and in 1940

¹⁰ Kuznets statistical work on capital formation was very helpful for Keynes, who cited it in the *General Theory*.

he provided a template to make inter-national comparisons of national income using purchasing power parities (Maddison, 2003).

Carson notes the irony that this ingenious statistical work was not used to cure the Great Depression and address mass unemployment. The techniques were, however, very valuable for World War 2 planners seeking to avoid a repetition of the rapid inflation experienced during World War 1. It facilitated the production of estimates of the Inflationary Gap in a fully-employed war-economy, and framed policies to prevent prices spiralling upwards. This success established National Accounts as a reputable tool in official circles. By the end of World War 2 the United Nations had published 'the first fully worked out and detailed national accounting system' (Bos, 2008, p. 24). But, for the purposes of this essay, what was of critical importance was that once it was possible to make comprehensive inter-temporal and internationalised estimates of GDP the next logical step was to measure the growth of GDP and GDP per capita. The statistical foundation for the mystique of growth was established.

The next creative leap was made in 1956-57 by Robert Solow, who formalised the technique of growth accounting. He decomposed the rate of change of GDP to estimate that which was attributable to changes in the capital stock and the workforce. He was left with a residual, the portion of the growth of GDP caused by neither capital nor labour. Kuznets stated that this residual was caused by 'technical change'; he estimated that 90 per cent of economic growth was due to technical change (though subsequent studies lowered the figure to 30 per cent). Later researchers devised novel multi-factor productivity equations to carefully capture the impact of technical change on growth rates. And, a 'magic ratio' was identified: that a 1.1 per cent increase in spending on research and development expanded aggregate output by between 1 and 1.5 per cent (Godin, 2009).

It is hard to under-estimate the ideological power of this analysis. It chimed with the fervent devotion of Humanists that progress resulted from advances in scientific knowledge. This partly explains Godin's claim that Solow's work on science, growth and productivity quickly became an established *social fact*; that is, one not subject to debate or criticism. The 'fact' justified an inveterately supply-side analysis: advances in techno-science increase productivity, the capacity to produce, GDP per worker and, hence, GDP.¹¹ This reasoning ignored the possibility that techno-science might work on the demand side, stimulating consumption spending and, thereby, national expenditure.

But the last reason for the mystique of growth speaks to the collective paranoia of *Sapiens*. Post-War politics was dominated by Cold War mistrust between the world's two superpowers – the USA and the

¹¹ It is rarely grasped that the fixation with growth is consistent with the Mainstream focus on the problem of scarcity and choice. For, if products are always and everywhere scarce relative to customer demands, the best way to reduce the scale of this 'problem' is to increase production. Although more output never eliminates scarcity, it makes it less pressing.

USSR. Western Europe in American minds acted as a powerful bulwark against Soviet expansionism. The problem for war-ravaged Europe (after the immediate fear of famine was addressed) was its poor economic performance relative to the USA – the so-called *productivity gap*. Hence, a constituent part of the Marshall Plan for European reconstruction was the establishment of a European Productivity Agency (EPA) tasked with fostering higher output per worker. The urgency of the work was amplified by the fear that even the USSR was outpacing Western Europe in terms of both productivity and GDP growth rates. In the early fifties the initial solution identified by the EPA was technology transfer – in terms of sales methods, patents, management techniques, and the like - from America to Europe. Later on, influenced by Solow and paranoia about Sputnik, EPA policy focused upon European-led technological developments (Godin, 2001 and 2002). This was the setting in which the OECD was established in 1961. Its task was to internationalise GDP and techno-science data across developed nations, using the USA as the benchmark. It also sought to identify best practice and outstanding performance by specific nation states. The hope was that the competitive spirit between nations, based on mistrust of others and fear of being left behind, would ratchet-up overall growth performance.¹² The OECD was a perceived success, especially when European nations began to outperform the USSR from the 1970s onwards. Its influence in internationally embedding the mystique of growth should not be under-rated.

The digression has shown that it is only in the last 70 or so years that the ingenuity of economists has allowed the scale of total economic activity to be coherently measured. By comparison, the expansionary drive of *Sapiens* has lasted very much longer, approaching 70,000 years. The persistence of the expansionary drive is usually ignored by economists, and in-so-doing they suggest that the history of the last 300 years is exceptional and distinctively different from earlier times. Actually, the expansionary drive is a consistent trait of *Sapiens*' history. To justify this contention it is useful to sketch-out the expansionary drive through the ages.

Prior to doing so, it is necessary to recognise the *sine qua non* of *Sapiens*' expansionism. Once again, the work of Koestler is helpful in this respect with his insights on the *purposiveness* of species. Koestler rejects the neo-Darwinian view that evolution is entirely a matter of chance genetic mutations, determined by a throw of the dice. He cites Jacques Monod who claims that although chance is the primary driver behind evolutionary processes, there is something else at work which is common to all species: 'that of being objects endowed with a purpose or project,

¹² To make it simple for politicians the OECD identified two 'magic ratios' to guide policy: a GERD/GDP ratio of 3 per cent, and basic/applied research ratio of 10-20 per cent. In addition, it set a 50 per cent growth target for its members over the decade of the 1960s. (Godin 2001 and 2009)

which at the same time they exhibit in their structure and carry out through their performance...' (Monod; cited by Koestler, 1978, p. 191). Monod called this purposiveness *telenomy*. Koestler claims that purposiveness is what separates animate living organisms from inanimate objects; it's goal-directed activity, pursued using flexible strategies; it allows a species to both adapt to an environment and adapt the environment to fulfil its goals.

This immediately raises the question of what is the distinctive purposiveness of *Sapiens*, what drives it onto action? Beyond the exploratory drive, which it shares with many other species, I propose that *Sapiens* purposiveness with respect to its environment is characterised by the urge to *conquer* and *dominate*, to *design* and *control*, pursued through many varied strategies.¹³ Koestler does not treat all *Sapiens* as equally purposeful or equally capable of driving forward evolutionary progress. Therefore, a species' progress depends on 'enterprising individuals', those filled with the Promethean spirit, the most intelligent, ambitious, inquisitive, aspirational and daring. It is they who introduce new ideas and invent new ways of doing things. Over tens of thousands of years these enterprising individuals have been at the vanguard of the drive towards expansion. Koestler does not, however, recognise that over the last 150 years a different type of 'person' has led the charge; namely the separate legal person of the limited liability corporation.¹⁴ These 'persons', tasked with maximising shareholder value, display *Sapiens*' purposiveness in its purest form free from moral constraints, mitigated only by the fear of being caught-out (Bakan, 2004). Today the most successful – the large transnationals - operate activities across the globe, each one running complex networks of subsidiaries, controlled from the centre but with some discretion granted to the periphery, and employing hundreds of thousands of people - including the most able marketers and techno-scientists (Dicken, 2014; Ietto-Gillies, 2012). It is rivalrous transnationals which are now at the forefront of *Sapiens* expansionary drive and evolutionary progress.¹⁵

Sapiens purposiveness underpins how this creative and paranoid species has progressed, advanced, expanded, developed and grown over tens of thousands of years. According to Harari experts believe that *Sapiens* first emerged between 150,000 to 200,000 years ago in East Africa. For the first hundred thousand years or so the species remained in

¹³ Heilbroner notes that *Sapiens* subjugates nature and designs societies in which its members are freed from animal bondage. Gray refers to *Sapiens* that has conscious mastery over its conditions. Harari refers to *Sapiens* as the dominant planetary species and terror of the ecosystem.

¹⁴ Of course, this new entity was the creation of the modern western state (primarily in the UK and USA) and sophisticated legal processes (Commons, 1924; Ireland, 2007).

¹⁵ It's strange that although much contemporary attention is given to biological, cyborg and inorganic life engineering in transforming the nature of life, the creation of a legal imagined order in which corporations have the status of a person is rarely commented upon.

this geographical location.¹⁶ Then around 70,000 years ago something remarkable happened. Experts call this watershed the *Cognitive Revolution*. *Sapiens* began to become both more ambitious and more creative (i.e. designing boats, oil lamps, bows and arrows, needles and art forms). Why this happened when it did is a matter of conjecture; the conventional wisdom is that *Sapiens* experienced as genetic mutation that transformed its purposiveness. *Sapiens* started to expand its geographical reach and become more numerous. The first lands newly occupied were the Arabian Peninsula, then onto Eurasia and later east and south-east Asia. These areas were previously the domains of other human species – members of the same genus *Homo* (man) – *Homo erectus* (which existed for 2 million years in east Asia), *Homo neanderthalensis* (located in western Eurasia), *Homo denisova* (occupying Siberia), *Homo soloensis* and *Homo floresiensis* (found in south-east Asia). About 45,000 years ago *Sapiens* became the first of its genus to reach north Eurasia and Australia, and finally, about 16,000 years ago, the American continent (through modern-day Alaska). Today *Sapiens* is the one truly global species; its creativity allows it to inhabit almost any planetary environment on every continent.

The global expansion of this creative and paranoid species also instigated the *First Wave Extinction* of other species, which were hunted and harassed into oblivion. Consider, as an exemplar, the marsupial lion, which was only found in Australia. Within a remarkably short interval after *Sapiens* arrived on that continent this particular species of the *Panthera* genus simply 'disappeared' from the archaeological records. However, it was not only the marsupial lion that was annihilated. *Sapiens* engaged in a shoah of other mammal species on the Australian continent. That which was true for Australia applied equally to other continents. Perhaps the most depressing aspect of the First Wave of Extinction was that it included all of *Sapiens* close genetic cousins within the *Homo* genus. Around 10,000 years ago *Sapiens* became, quite literally, the last man standing. And, as the lands of its genetic cousins were conquered and dominated, *Sapiens* hunted and gathered free from close rivals.¹⁷

Having achieved a monopoly status within its genus, *Sapiens* renounced hunting and gathering and embarked on its next technological leap forward: the *Agricultural Revolution*. As more land was expropriated

¹⁶ At one point, around 140,000 years ago it's likely the species was threatened with extinction due to climate change. This is reflected in the extremely narrow range of DNA differences between different groups of *Sapiens* across the global. Its creativity saved it.

¹⁷ Harari notes the debate about whether *Sapiens* incorporated other human species – the *interbreeding theory* – or eliminated them – the *replacement theory*. As is true with most binaries, both are correct. But replacement is likely to have predominated. There is further debate about whether other, less creative, human species became extinct because of climate change or through their obliteration by *Sapiens*. Once again, both are probably true, but, given the paranoid character of *Sapiens*, obliteration was probably the dominant reason. Finally, note should be made of the poignant efforts by modern *Sapiens* to find another species with whom to communicate (even on another planet), when it was probably largely responsible for the extermination of other humans with which it could communicate.

to yield agricultural crops, and other specific species were domesticated for productive purposes, the population of *Sapiens* multiplied. Over the next 9500 years *Sapiens* mastered its environment, increased food production, built cities, established empires, created sophisticated trade-networks and experienced new and diverse consumption patterns. This extended time-span was marked by epochs of dominant kingdoms and empires. Each intense epoch instigated rising consumption and rapid population growth with which, despite technical change, the essentially agricultural economic base could not cope. The common trend was for over-development, crises, wars and eventual collapse (Reade, 1887; Wright, 2006).¹⁸ Harari also makes an intriguing claim about the consequences of the Agricultural revolution. It was that most classes of *Sapiens* were worse off compared to the lifestyle of their hunter-gather predecessors. This occurred because of the Malthusian population trap; where the population growth of lower castes exceeds the growth rate of food made available to them. Not all groups of *Sapiens*, of course, suffered from famine; societal elites continued to enjoy lavish lifestyles in good times and bad. Yet for most *Sapiens* the revolution created a closed system, easily entered but from which there was no exit. The alternative to famine is voluntary population controls; but who will volunteer to be exterminated for the greater good of the species? Once the population expanded beyond a critical point, '[t]here was no going back. The trap snapped shut' (Harari, 2011, p. 87). By contrast, the Agricultural Revolution led to the planned elimination of other species – 'pests' – and the devastation of ecological conditions incompatible with agricultural requirements. Hence Harari notes that the Agricultural Revolution was responsible for the *Second Wave Extinction* of other species.

Around 500 years ago Harari notes the *Great Awakening* associated with nascent stirrings of Enlightenment thinking and the 'discovery' of the American continent.¹⁹ The last 300 years has witnessed the most dramatic transformation, a gigantic leap forward, in the fortunes of some *Sapiens*: measured by exponential growth in the system of abundance (Sheehan, 2010). Its cradle was England, triggered first by a consumer revolution in the mid- eighteenth century which spawned the Industrial Revolution. From there it spread quickly: to North American cities by the late nineteenth century; to all social classes in the developed world by the last quarter of the twentieth century; and to large numbers in the developing world with the onset of post-Cold War globalisation. The revolution in the capacity to produce new exciting products in vast numbers has been facilitated by rapid advances in techno-sciences organised within enterprising, rivalrous corporations. Today the system of abundance is experienced by the most affluent 2 billion *Sapiens*; corporate techno-science facilitates the production of a rich cornucopia of

¹⁸ Reade's forgotten classic charts the rise and fall of civilisations in Africa and the Mediterranean, and is strongly recommended for those interested in the ancient world.

¹⁹ Not that it was lost. It had been discovered by *Sapiens* of Mongolian heritage 14,000 years earlier.

products unparalleled in human history. This system has, for all practical purposes, solved the problem of production²⁰; it's the epi-centre of the growth society. This, however, still leaves 5 billion members of the peoples of poverty and adequacy, inhabiting respectively the systems of scarcity and sufficiency, which experience much less in terms of material possessions compared to the people of plenty.

What is distinctive about the system of abundance is how it treats ostentatious, frivolous, status-driven, indulgent consumption. Earlier civilisations' common demise was instigated by turning away from what had made them successful and their decent into affluent consumption. By contrast the system of abundance relies on affluent consumption to fuel exponential growth; ostentatious, frivolous, status-driven and indulgent spending is a virtue not a vice. The key systemic problem is the *threat of under-consumption*; the peril that affluent consumers, who already have so much 'stuff', become bored with, and/or guilty about, wanting more. When the threat materialises the willingness of affluent consumers to spend fails to keep pace with the techno-corporate capacity to produce. In these circumstances, the system faces crisis, gluts, recession and slump. To address the danger the system *spontaneously* generates the *institution of marketing* which gives priority to spending. The steady flow of propaganda produced by the institution instigates a consumer mega-culture, creating the most propitious conditions for affluent spending. Additionally, the institution makes the culture *hot* - subject to perpetual reformulation, refinement and revision – to provide a continuous flow of new reasons to spend. And, if the efforts of the institution are not enough to prevent gluts, the modern 'Keynesian' state steps in to save the system from collapse. Witness the events of 2008-09 to see an exemplar of how it works.

Harari provides some statistics to illustrate the scale of population and economic growth over the last 500 years or so. In terms of population there were around 0.5 billion *Sapiens* in 1500, whilst today there are 7 billion and rising. In 1500 *Sapiens* consumed roughly 13 trillion calories per day of energy to produce output, today the figure is nearer 1.5 quadrillion calories. Lastly, in 1500 global GDP (measured in today's prices) was roughly \$250,000,000 whilst today it is some 240-times larger. Finally, note that this exponential growth set-off the *Third Wave Extinction* of other species. This generates considerable contemporary cultural angst, without recognition of *Sapiens* track record during the First and Second Waves of Extinction. The new twist to the story is that exponential growth might threaten survival of *Sapiens*, also framed as a threat to the planet, due to climate change.²¹ This possibility

²⁰ This is not to deny that production constraints exist for specific branded products or raw materials or skilled labour. But they are the exceptions to the rule; and, through entrepreneurial innovation and investment in new capacity, the constraints can be quickly relaxed.

²¹ Only *Sapiens* is so self-absorbed as to think that its extinction will mean the demise of the planet. Tell that to the dinosaurs! Actually, the planet, and its remaining species, will do considerably better without this evolutionary mistake.

unsurprisingly engages *Sapiens'* attention, although political disputations occur around whether the threat is taken seriously enough.

Finally, let's consider the growthers – the fervent believers in exponential growth. The first question to address is: who are they? The best way to categorise growthers is as a loosely-defined 'movement', with an eclectic mix of groups who share a common belief. The most prominent group can be broadly referred to as the 'business community', or, more specifically, corporations tasked with maximising shareholder value. And, of these, the leading lights are the major transnationals and the global corporate elites that manage them. What motivates them is easy to understand. Maximising shareholder value requires an overall expansion of corporate-guided markets, higher sales and greater production; and to create the optimal conditions requires growth – nationally, regionally and globally. By contrast, crises, slumps, and gluts frighten business interests; the game is loaded against them; many will fail, and be eliminated or absorbed by more successful rivals. This explains why corporate-lobbying entities (i.e. employers' organisations, chambers of commerce, trade associations and the like) are unanimous in their passionate support for policies to buttress economic growth.

A second leading group of growthers is public policy-makers, of all political persuasions, in both developed and developing nations, and both nationally-based or within supranational agencies. Their motivations are equally easy to comprehend. Economic growth generates higher tax revenues (allowing more spending), rising affluence, and (usually) more employment. Additionally, if the growth rate exceeds the growth rate of state borrowing, the ratio of national debt to GDP declines, giving the appearance of sound-finance. Finally, and importantly, growth lessens pressures from aspiring lower and middle-classes, and lower and middle-income nations, for socially-explosive redistributions of income and wealth. Conversely, contractions of GDP threaten all these positive outcomes whilst instigating rapidly rising public debt levels, as tax revenues shrink and welfare spending swells. Unsurprisingly, therefore, when public policy-makers mix with corporate elites, say at the World Economic Forum in Davos, fervent support for growth is the unifying mantra.

There are a number of other vested interests groups who play a prominent part in the growthers' movement. They are rentiers, techno-scientists, marketers, trades unions and economists.²² Rentiers self-evidently prosper from exponential growth but they play a particular role within the growthers' movement. They provide the 'muscle', through the threat of 'capital strikes', to discipline 'rogue' policy-makers who question the merits of exponential growth. Techno-scientists provide the mantle of scientific objectivity and progress behind which growth can prosper; growth also justifies larger research and development budgets for techno-scientists. Marketers clearly gain from ever-larger corporate-guided

²² Rentiers are shareholders and money-lenders, in misleading modern parlance 'investors'.

markets which increase the demand for their talents. Additionally, the institution of marketing instigates the hot consumer mega-culture which underpins growth in the system of abundance, and sells the 'good life' to the mass of the population; it even defines that to which *Sapiens* should aspire: to become fully-fledged consumer-citizens. Trades unions represent workers who fear for their jobs due to the onset of new technology. This threat is real when the growth rate of labour productivity exceeds the rate of growth of total output; the situation is further aggravated when GDP declines. Therefore, the labour movement and corporate elites find common ground in their deep-seated support for growth-orientated policies. Lastly, the ideological high-priests of exponential growth are mainstream economists. They provide the statistical foundations for measuring growth and techno-science; they impart the scientific explanation for how growth occurs (although it is thoroughly flawed); they explain how higher output objectively leads to more happiness (though many doubt it); they grasp the challenges posed by jobless, or ruthless, or futureless growth, and provide comforting solutions to each.²³ Put succinctly, they provide the growthers' movement with intellectual ballast. According to them, if the right policy formula is pursued, *Sapiens* can have it all in the future: never ending progress, exponential growth, perpetually widening affluence, plus protection of the ecosystem and the planet – it's called 'green' growth (OECD, 2011; Jacobs, 2012).

But neither economic theory nor are appeals to vested interests are sufficient to justify the pursuit of perpetual growth to the mass of the population. Consequently, growthers must be astute in the different ways they justify their belief system to others. A common opening gambit is to claim that exponential growth is a vital pre-condition for raising the standards of life of the 2 billion or so *Sapiens* who experience extreme poverty. For example, roughly 20,000 children under the age of five die each day due to lack of food, clean water or basic medical facilities, the equivalent of an Auschwitz every four months. The solution proposed by growthers is to promote 'audacious' growth rates in developing nations which will raise living standard more generally (O'Neil, 2011). The rapid growth experienced by China and India in the last twenty years has done more to alleviate extreme poverty than the efforts of all charities combined together. However, to achieve audacious growth, developing nations must export to rapidly expanding developed economies with their affluent consumers. Therefore, in a variant of trick-down theory, spending by the latter indirectly helps the poorest to have a better life. What is more, ending growth would condemn billions of *Sapiens* to a life of extreme penury.

²³ Ruthless growth is associated with rising income inequality; jobless growth occurs when the growth rate of total output matches the growth rate of labour productivity; futureless (also known as 'brown') growth is gained at the expense of seriously a depleted eco-system upon which all species rely (United Nations, 1996).

If appeals to a sense of social justice don't wash, growthers utilise a range of other justifications. One is designed to attract those with a libertarian attitude who hate paying taxes. It goes something like this: governments tax and spend; if the economy stagnates, the government taxes more to cover its own requirements; however, when the economy grows rapidly, the appetite of governments for tax revenues is satiated whilst rates of tax can be reduced; a further iteration of this is that lower tax rates stimulate higher growth rates and tax revenues (i.e. the Laffer curve). For those concerned about unemployment and social welfare, growthers have a third rationalisation for growth framed in the following way. Recessions lead to unemployment, rising public deficits and threats to dismantle the welfare state. Strong growth increases employment opportunities, and opens the opportunity to extend welfare protections as public finances improve. For those opposed to rising levels of debt, growthers deploy a fourth argument: that high income growth allows past debts to be repaid and removes the need for new debt to finance additional spending. The fact that growth in the system of abundance is driven-on by debt-fuelled consumption is tactfully ignored.

And, if all these different appeals fail, growthers set-out one final justification which is almost always effective: they prey on national paranoia. It's framed like this: strong growth is a 'good' that any nation ignores at its peril; when others are growing and we are not, we become relatively weaker; crisis is the inevitable result, with metaphors of disease, defeat and decline utilised as required; lastly, history shows that weak nations are absorbed into stronger ones (i.e. a variant on survival of the fittest). Hence, each nation must at least match the growth performance of other compatible states.

However, despite all these persuasive efforts, a minority reject both the necessity and desirability of perpetual exponential growth. Intriguingly, it's through their reaction to this minority that growthers truly reveal their intense fervour. To neutralise opposition growthers' tactics follow a familiar pattern. First, there is stunned incomprehension; they profess genuine shock that the self-evident truth of the 'goodness' of growth should be doubted. Second, those who question the growth imperative are summarily dismissed as unrealistic or naïve, even unpatriotic. But such aspersions are mild compared to the epithets reserved for those who propose *degrowth*— that is a shrinking of economic activity.²⁴ This third tactic involves calling degrowthers 'cranks', 'radicals', 'extremists', 'utopians', even 'fools'. The intention is to frighten those who

²⁴ Two leading degrowth authors are Latouche (2010 and n.d.) and Jackson (2009). Latouche's analysis is rooted in a radical tradition, whilst Jackson writes from an eclectic perspective, which is both a strength and weakness. Let me relate a short story. I had the pleasure to listen Jackson talk about his 2009 publication at the University of Leeds. At the end I made a comment: that his analysis implied the end of capitalism. It disorientated him. He finally responded that he was not questioning private property, which was the *sine qua non* of capitalism (at least, according to Baumol). I doubt Latouche would have been non-plused by the question.

might be sympathetic to degrowth into silence, for fear of being thought beyond the pale of mainstream opinion.

In the growthers' belief system exponential growth is a panacea which simultaneously cures multiple ills. It's a very successful dominant discourse which is culturally influential in both the developed and developing worlds. Its' most evident success occurs when the disinterested observer states that growth is 'just the way of the world'. One way to challenge this belief system, the versimilitudious wisdom, is to reflect upon a few 'what if' questions in order to provoke critical thought.

It's a conventional wisdom to suppose that science, technology and innovation are 'goods' – for both the individual and society. *But, what if advances in techno-science lead to adverse outcomes.* Heilbroner highlights three major problems facing *Sapiens* – population growth, weapons of mass destruction and ecological disaster. Techno-science can clearly offer a range of solutions to each, but, Heilbroner recognises, it was advances in techno-science that created the problems in the first place. Another 'take' on this is that *Sapiens* has reached the stage where techno-science creates technologies which are not necessarily better than those of the past, but *different*. Each 'advance' instigates outcomes, some beneficial and some not. Take, as an exemplar, email which considerably eases global communication; roughly 138.8 million messages are sent every minute. Yet, in a work environment, this creates a problem: coping with the sheer volume of messages and the associated stress-levels. This is just one example. Hundreds others could be offered-up to illustrate the point. Additionally, Heilbroner points out that 'advances' in techno-science creates a potentially serious malaise in the human condition: life lived by the clock, organised, planned, controlled and obsessed with material achievements. On top of all of which he adds the 'pillage of nature' resulting from techno-science's efforts to tame the environment.

A second conventional wisdom is that progress in techno-science impacts on economic growth through its capacity to magnify productivity. Whilst this is partially true, it's not the whole truth. *What if the relationship between techno-science and growth works through the demand-side?; as Gray argues, to keep boredom at bay by inventing ever-more exotic needs.* This reasoning is entirely consistent with Galbraith's *dependency effect* and my contribution that innovative product design provides affluent consumers with new reasons and justifications to engage in further bouts of spending (Galbraith, 1958; Sheehan, 2010).²⁵ Consider, as an exemplar, the 'smart' phone, first launched in 2007. Obviously, some technical advances associated with this product innovation facilitated its mass production, but most were incorporated to make it attractive to affluent consumers; so attractive that persons of

²⁵ The dependency effect occurs when corporations first manufacture products and then fabricate customer needs to stimulate demand for these products. Hence, the demand for products depends on what corporations produce.

plenty, in vast numbers, dumped their fully-functioning old-style mobile phones in order to purchase the new product. And once that was done, further iterations of the smart phone were devised, using even more advanced technical wizardry, to tempt existing customers to dump their fully-functioning old smart phones for a newer version. What's true for the smart phone applies with equal force to an array of gadgets and labour-saving devices which persons of plenty accumulate. And, as Harari intriguingly argues, the result is a *luxury trap*: in searching for an easier life we invent devices that make our lives more stressful; we produce vast numbers of labour-saving devices and are busier than ever before; the world is transformed but not in a way anyone wanted or envisioned.

The last conventional wisdom worthy of consideration is that 'green' growth is technically feasible; that is, growth is unfettered by environmental damage through advances in techno-science. But, *what if the degrowthers are right and a growth system inevitably pillages nature, instigates ecological dangers, and annihilates other species? What if it's another closed system, easily entered into but from which it is difficult to exit. What if the pursuit of perpetual growth is one final illustration of how purposiveness Sapiens, an evolutionary mistake, cannot live in balance with the eco-system on which all species depend?* Degrowthers seek to introduce some logic into Sapiens long-term predicament. They argue the species should accept its planetary limits and instigate a contractionary plan of action. But is that a course of action Sapiens is likely to implement? The answer is, probably not. As Gray pointedly argues: 'A high-tech Green utopia, in which a few humans live happily in balance with the rest of life, is scientifically feasible; but its humanly unimaginable. If anything like it comes about, it will not be through the will of [S]apiens' (2002, p. 184). Planetary limits will, however, eventually impose constraints and force change to occur, but it is likely to be 'convulsive' in character; that is, 'change forced upon us by external events rather than conscious choice, by catastrophe rather than calculation' (Heilbroner, 1974, p. 132).

Those with a deep-rooted attachment to a belief system abhor the heretic, until the latter is shown to be right. Only then does the conventional wisdom undergo a metamorphosis. So consider a last few 'what ifs'. What if we don't die when we fail to grow? What if we can prosper – differently defined along the Latouchian lines of frugal abundance and the convivial society – as we contract? What if other species also prosper from *Sapiens'* contraction? Now these really are challenging ideas.

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Abstract

This essay is about belief systems, with specific reference to exponential growth and its fervent supporters - growthers. *Sapiens* is a deeply flawed species, an evolutionary mistake. Its ultimate flaw is that it combines exceptional creativity with dangerous levels of paranoia. Its tragedy is not an excess of aggression but an excessive capacity for fervent devotion to systems of belief. *Humanism* is a belief system derived from the Enlightenment, and the project to replace faith in God with faith in humanity as a whole. Its central tenant is faith in *progress* through scientific knowledge. Since World War 2 economists have calculated economic progress within each nation state using two measuring rods: the rate of growth of GDP and the growth rate of GDP per person. The essay makes a slight digression to consider the background to the mystique of growth; namely, *why* the National Accounts were developed and *how* the growth fixation was established. Next, it sketches-out the expansionary drive of *Sapiens* through the ages; it is explained in the context of the purposiveness of *Sapiens* – to conquer and dominate, to design and control. It shows that *Sapiens* expansionary success has been bought at the cost of the contraction and annihilation of other species and the pillage of the ecosystem. The essay then considers the growthers – the fervent believers in exponential growth. It identifies the key groups that make up the growthers' movement and the astute ways in which they justify their belief system to others. Finally, the essay challenges growthers' beliefs by reflecting on a range of 'what if' questions.