Understanding and Undermining the Growth Paradigm

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ABSTRACT: For three centuries the primary aspiration of Western governments has been constant economic growth but with the Industrial Revolution this objective became troublesome. In the 20th century unprecedented levels of industrial production and social consumption caused palpable harm to humans and the environment. Hannah Arendt and John Kenneth Galbraith turned their pens to such concerns and Bill Mollison and David Holmgren advocated a permaculture approach to growth, one that strives to limit human interference in natural growth processes. Today's precarious economic and ecological imbalances could be stabilized by a shift in applied growth paradigms, from capitalist to permaculturist.

RÉSUMÉ : Depuis trois siècles, les gouvernements occidentaux aspirent à une croissance économique constante. À la suite de la Revolution industrielle, cet objectif est devenu troublant. Au cours du 20e siècle, les niveaux de production et de consommation sans précédent sont devenus manifestement malsains pour les êtres humains et dangereux pour l'environnement. Hannah Arendt et John Kenneth Galbraith se sont intéressés à ce sujet. De même, Bill Mollison et David Holmgren ont recommandé d'appliquer à la croissance économique une stratégie semblable à la permaculture, qui cherche à limiter l'intervention humaine dans les processus naturels de croissance. Les circonstances écologiques et économiques précaires d'aujourd'hui pourraient être stabilisées par un virage appliqué d'un modèle capitaliste à un modèle permaculturiste.

Keywords: Arendt, Galbraith, economics, growth, permaculture, sharing, unemployment

Introduction

Two formidable thinkers turned their pens in the mid-20th century to a shared concern that human beings had lost their balance, a concern that remains

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pressing today. Socio-economic inequality is increasing in many communities across the world. The planet Earth is warming at an exponential rate, likely due in part to human activity. And great numbers of workers are expected to be made redundant by robots in this century. In *The Human Condition*, Hannah Arendt documented how human social organization had become predominantly utilitarian, and how nature had become a mere means to human ends. Today's 'sharing' economy exemplifies how important utility has become to socio-economic life, as many individuals rent out their otherwise idle cars and private residences to strangers on an unprecedented scale. Arendt asked implicitly whether a meaning of life remains beyond economic usefulness. Certainly some human behaviour must always be useful just because useful effort enables many people to acquire sustenance, material comfort, and security. But once subsistence and comfort are achieved, an ethos or imperative that activity be useful requires some ulterior justification, as Arendt well understood.[1] Constant unilineal economic growth cannot cogently supply that justification.

In *The Affluent Society*, John Kenneth Galbraith exposed how American society had become physically sick from overconsumption and expressed concern about the extent to which American economy policy prioritized production. Galbraith also showed that this policy, which prioritized the production of frivolous goods for private consumption at the expense of important public services, held sway simply because it belonged to the "conventional wisdom" of economists, not because it tended to respond or adapt well to changing social circumstances, which it has not done.[2]

Fifty years later Daniel Ben-Ami urged his readers to "launch a counter-attack against the ideas" espoused in *The Affluent Society*. Economic growth did not "necessarily" lead to environmental degradation, he contended, and it gave "humanity the ability to reshape the environment for its own benefit."[3] This is precisely the utilitarian view of nature that concerned Arendt: that nature should be *reshaped* to serve human interests, especially in the violent ways it had been rended to date.

Today many public intellectuals, leading scientists, and committed activists are attempting in their own ways to lessen the extent to which human beings have "act[ed] into nature," to use Arendt's expression.[4] This article contends that these efforts will remain relatively ineffectual until economists and politicians abandon their irrational desire for non-periodic, unilineal private-sector economic growth. This desire once had an intelligible basis but endures only because of two irrational fears. Over the short term, politicians and their

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1 Arendt, *The Human Condition*, at 154.

2 Galbraith, *The Affluent Society*. Galbraith's discussion of the "conventional wisdom," an expression Galbraith coined, is contained mostly in Chapter 2.

3 Ben-Ami, "The Midwife of Miserabilism."

4 Arendt, *id*. at 231 and 238.

economic advisors fear the arrival of economic winter (more Great Depressions and Great Recessions), because financial hibernation habitually engenders mass-scale unemployment, which in turn raises the specter of social unrest. This fear is irrational because major socio-economic problems do not have to flow from lulls in or stoppages of productivity. Over the longer term, politicians aspire to be technological leaders and pioneers, for fear of being perceived as technologically backward. This fear is not one of failing to remain economically competitive, which is rational. Economic insecurity was not the creative impetus for doorstep drone delivery of unessential goods.

If human society is to encroach less precariously upon the natural world than it currently does, the economic paradigm of constant (non-periodic) unilineal growth will need to be replaced by a permaculture paradigm of growth. Theoretically, permaculture reflects an understanding of growth that is thoughtfully guided and not compulsively forced. It recognizes that human beings will be able to intervene in the natural world (for example, via agriculture, urban planning, and the exploitation of natural resources) over a longer term when their interventions are designed to allow surrounding environments to thrive according to their own natural rhythms. Thus, permaculture understands that overgrowth, the biological equivalent of economic overproduction, either destroys some aspect of a surrounding environment or is naturally prevented from occurring by the organic interrelationships of that environment. Permaculture recognizes that growth and production perennially end in temporary periods of barrenness and that these latter periods must be left temporarily as is, not artificially stimulated. It understands that in a well-balanced eco-system growth *will* occur in undulating cycles and will occur *naturally*, but growth rates will be differential among the different participants in the eco-system.

This article's analysis of the prevailing economists' paradigm of growth is organized historically, dating back to the 18th century. Because 'permaculture' was not coined until the 1970s, it is not discussed in this article as an alternative paradigm in its own right until the analysis of growth reaches the mid-20th century mark. However, permaculture concepts will be introduced at earlier junctures when they serve as points of contrast to prevailing growth concepts.

I. The Birth of Classical Economics and the Growth Paradigm

The problem of unilineal economic growth began in 18th century Europe, evidently in response to concerns about potential population growth. The human population "accelerated considerably after 1700," Thomas Piketty wrote, "with average growth rates on the order of 0.4 percent per year in the eighteenth century and 0.6 percent in the nineteenth."[5] But the productivity of human labour at that time was limited. Most labourers lived hand-to-mouth. Arendt referred to them as 'animal laborans.' They quickly consumed the modest fruits

[5] Piketty, *Capital in the Twenty-First Century*, at 78.

of their labours and stored little that could be useful to their private lives or to others in any enduring sense. Arendt wrote, "Labor's products, the products of man's metabolism with nature, do not stay in the world long enough to become part of it."[6] The biological process of labour itself, which John Locke regarded as the sole source of personal and real property, was "unending," according to Arendt.[7] It was but one feature of "nature's prescribed cycle, toiling and resting, laboring and consuming, with the same happy and purposeless regularity with which day and night and life and death follow each other."[8] Edwin Markham expressed this condition well for *The Dearborn Independent* in 1925. He wrote,

> … as a hard-worked, sun-burned boy, I hoed and weeded the orchard and garden from dawn to dusk on my father's farm and range, in the little Lagoon Valley in the Suisun Hills that spur the Coast Range of California. A thousand times I have felt the ache in the back and the utter weariness of the long unbroken day's work, with no prospect ahead but another day's work.[9]

The 18th century knew many such labourers, but it also witnessed increases of wealth, which consisted of capital, assets, and personal possessions enjoyed almost exclusively by a minority, propertied class. Jean-Jacques Rousseau wrote of the great majority, "the supernumerary inhabitants, who were too weak or too indolent to make such acquisitions in their turn" and who "remained the same" while "everything about them changed."[10] Incremental developments in analogical technology facilitated differential improvements in living standards across 18th century Europe. The labouring poor would have noticed and felt the increasing affluence of the rich. The situation was precarious for everyone, but "[t]he rich in particular" had more to lose from social unease.[11] Rousseau postulated that society's elite convinced the uneducated poor that *everyone* would benefit by following rules of universal applicability, knowing full well that such rules would disproportionately benefit themselves.[12] This promise of substantive equalization via the rule of law could not have ensured social security if the poorest members of society were not lifted a little higher from their arduous lives. Jeff Madrick wrote of this time, "Continued material improvement was

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6 Arendt, *id*. at 118.

7 Arendt, *id*. at 105. See also Locke, *An Essay Concerning the True Original, Extent and End of Civil Government*, Chapter 5, at para. 27.

8 Arendt, *id*. at 101 and 105-106.

9 Markham, "How I Wrote 'The Man With the Hoe.'"

10 Rousseau, *Discourse on the Origins and the Foundation of Inequality Among Mankind*, at 225.

11 Rousseau, *id*. at 226.

12 Rousseau, *id*. at 226-228.

necessary to reinforce people's confidence and newfound beliefs."[13] Classical economics was born from precisely this challenge of how to circulate wealth systematically in order to increase the standard of living *for all*. This social reform-minded focus was the root of the economic growth paradigm that prevails to this day, a "conventional wisdom" that exclusively governs social policy in all Western countries.[14] But in 1972 William Nordhaus and James Tobin begged to differ. In their view, the "mainstream of economic analysis" was "not comfortable with phenomena of change and progress,"[15] a proposition that seems patently at odds with history's "march of events"[16] and mainstream economic policy.

For reform-minded analysts of post-revolutionary France, such as Thomas Malthus, the economic challenge was not to end the daily struggle *to subsist*, for subsistence had been accomplished. It was to ameliorate hand-to-mouth living among the burgeoning population of peasants and menial labourers.[17] The world in which Malthus, Adam Smith, and David Ricardo lived had been so poor for so long that "nothing was so important as to win an increase in wealth."[18] Malthus made clear that he was concerned with how population growth "Affects the Future Improvement of Society." His mathematical premise, that human population growth increased exponentially ("in geometrical ratio"), whereas the earth's food supply increased only "in arithmetical ratio," underpinned his real concern about "the perfectibility of the mass of mankind."[19] He was concerned that *all the members* of society could never live "in ease, happiness, and comparative leisure" if population growth was not appropriately curtailed.[20]

Malthus' concern reflected prevalent thinking that natural resources, or at least human abilities to access them, were scarce. At least in theory, Europe's significant population growth in the 18th century threatened to intensify competition among individuals for the means of subsistence. The notion of competition was fundamental to the "central tradition" of economics, which Galbraith defined as the "main current of ideas in descent from [Adam] Smith."[21] In 1930 John Maynard Keynes wrote, "the economic problem, the struggle for subsistence, always has been hitherto the primary, most pressing problem of the

13 Madrick, *Seven Bad Ideas*, at 21.

14 See Galbraith, *id*. at Chapter 2.

15 Nordhaus and Tobin, "Is Growth Obsolete?," at 1.

16 See Galbraith, *id*. at 13.

17 Malthus, *An Essay on the Principle of Population,* at 9; and Veblen, *The Theory of the Leisure Class*, at 21.

18 Galbraith, *id*. at 31.

19 Malthus, *id*. at 5.

20 Malthus, *id*. at 4-5 and 33-34.

21 Galbraith, *id*. at 24 and 40.

human race—not only of the human race, but of the whole of the biological kingdom from the beginning of life in its most primitive forms."[22] Malthus wanted this struggle to be softer, consistent with his belief in the perfectibility of humankind.

Significantly, Malthus recognized that human population growth appeared to put pressure on the employment opportunities of labourers. He understood that increased competition for remunerated work led more labourers to work harder and to accept lower earnings for their work, which in turn financially enabled "cultivators" (i.e., farmers or land owners) to employ more labourers, thereby producing greater yields or "means of subsistence" from land. Increased yields in turn improved the living standards of the extended labouring demographic, leading to increased population growth among them, such that "the same retrograde and progressive movements with respect to happiness [would be] repeated." Malthus believed that this cycle of human population growth, mass poverty, and population de-growth in America would take longer to materialize because "the reward of labour [was] at present so liberal" there.[23] He was correct in very broad strokes. The American population growth rate increased sizably in the 19th century, trailed off slightly in the 20th century, and is expected to decrease to zero by the end of the 21st century.[24]

Scarcity was perceived to be the premise of the cyclical socio-economic problem Malthus had identified, so his solution was to alter that premise. Malthus proposed that only a concerted *policy* in favour of constant economic growth could de-couple the links of the cycle he had postulated. He contended that populations had not grown as "demanded" in Europe[25] because "the funds necessary to support" increased populations had not been prepared. By his reasoning, if "cultivation" was *promoted*, then "the demand for agricultural labour" and "the produce of the country" would both increase. In turn, "the condition of the labourer" would improve and, most important, "no apprehensions whatever" would need to "be entertained of the proportional increase of population."[26] Thus, if the necessary funds were advanced—one may think of 20th and 21st century stimulus policies—Malthus believed that purposeful, unilineal material productivity and economic growth could indefinitely support population growth.[27] Such a belief was the very seed of the economists' growth paradigm that prevails today.

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22 Keynes, "Economic Possibilities for our Grandchildren," in *Essays in Persuasion*, at 366.

23 Malthus, *id*. at 9 and 41.

24 See Piketty, *id*. at 79 and 150-152.

25 They grew at a rate of 0.2% between 1500 and 1700: Piketty, *id*. at 77.

26 Malthus, *id*. at 42.

27 Malthus, *id*. at 42.

Europeans had not experienced long-term or sustained economic growth prior to the 18th century. Galbraith observed, "[e]nduring success was at odds with all history and could not be expected."[28] Arendt traced the conceptual origins of "a limitless accumulation of wealth" to Smith's *An Inquiry into the Nature and Causes of the Wealth of Nations*.[29] Smith had "aggregate wealth" in mind and optimistically envisioned an economically "advancing national community, not a stagnant or declining one."[30] Arendt emphasized that Smith's model of economic growth was auto-genetic and in that sense naturalistic. The belief that "money begets money" owes "its plausibility," she contended, "to the underlying metaphor of the natural fertility of life."[31] This much is true, but natural fertility is not necessarily consistent with unyielding growth for any particular individual or species. As a biological norm, growth is limited for almost all of life's flora and fauna. Ursula Franklin wrote, "Growth occurs; it is not made. Within a growth model, all that human intervention can do is to discover the best conditions for growth and then try to meet them. In any given environment, the growing organism develops at its own rate."[32] This observation is a perfect statement of a permaculturist understanding of and approach to growth.

Smith's "invisible hand" is consistent with an auto-genetic growth or fertility metaphor.[33] Capital does not *automatically* bloom. Its petals derive from a stem, which is rooted in the earth. National economies do not auto-genetically grow. As Madrick explained, "Through the Invisible Hand, consumers registered their desires and business received signals about where to invest or divest. The economy thus grew. This theory swept aside many of the seeming complexities of economic incentives and fairness, allowed them to be reduced to a single economic mechanism."[34] This magical force is metaphorically naturalistic just because nature does not make self-evident all the "seeming complexities" by which her regenerative processes operate. Mother Nature cannot answer the question: Why is there anything (such as nature) rather than nothing?[35] Thus, unwavering free-market economists today speak of such economies as *self*-correcting *because of* the invisible hand.[36] Within a permaculture paradigm, an economy could self-correct, but the self-correcting mechanism would be the invisible and visible organic interrelationships of the wider eco-system in which it is located.

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28 Galbraith, *id*. at 24.

29 Arendt, *id*. at 101.

30 Galbraith, *id*. at 24-25.

31 See Arendt, *id*. at 105.

32 Franklin, *The Real World of Technology*, at 27.

33 See Arendt, *id*. at 42, nt. 35.

34 Madrick, *id*. at 24.

35 See Grant, *Technology & Justice*, at 63.

36 See Galbraith, *id*. at 45.

Arendt rightly noted that the underlying logic of Smith's economic free-market expectations rested on empirical or factual assumptions that were contestable. In particular she noted that classical economists "assumed that man … acts exclusively from self-interest" and is driven solely by "the desire for acquisition."[37] The validity of this assumption is difficult to test but David Hume proposed that "[m]en often act knowingly against their interest" and discussed how and why.[38] Nordhaus and Tobin accept that "the philosophical problems raised by the malleability of consumer wants are too deep to be resolved in economic accounting."[39]

Because many variables influence the formation of personal and public wealth, the tendentious rhythm of economies is periodic, from growth to recession, and over again. Galbraith wrote that the "etymology" of the "so-called business cycle" emphasized *the rhythm*, not just the depressions, that would be followed by "good times," just as "bad times followed good."[40] Smith's unidirectional economic hope for national economies was a dismissal of eternally recurring natural rhythms[41]—of the "purposeless regularity" with which the dead of winter follows the life of spring, to borrow Arendt's expression.

II. The Growth of Real and Artificial Consumer Demand

In the 18th century national wealth in Europe showed "a steady and persistent improvement," an achievement, Galbraith noted, that "must be counted one of the momentous events in the history of the world."[42] Even so, economic problems were emerging that were only obtusely connected to the stubborn problem of sustaining society's numerous poor. In the late 18th century productivity was increasing as "the factory began to replace the household at an accelerating rate as the center of productive activity."[43] This development exemplifies Arendt's observation that labour had moved gradually from the confines of private or domestic life into the public sphere.[44] In the 18th century and first half of the 19th century discreet socio-economic groups benefitted differentially from the ever-increasing material output of labourers and machinery. Galbraith noted that "the improvement in the masses was far less evident than the increase in industrial and mercantile wealth."[45] Even so, improvements in standards of living were marked partly by increases in *material* comforts and

37 See Arendt, *id*. at 42, nt. 35.

38 Hume, *A Treatise of Human Nature*, at 418.

39 Nordhaus and Tobin, *id*. at 8.

40 Galbraith, *id*. at 44.

41 See Nietzsche, *Ecce Homo*, at 273-274.

42 Galbraith, *id*. at 21.

43 Galbraith, *id*. at 22.

44 See Arendt, *id*. at Chapter 2.

45 Galbraith, *id*. at 23.

possession of *durable* goods. A comparatively greater number of these durable or *useful* goods were being produced, meaning products not intended to be immediately consumed for nourishment, such as agricultural produce. Manufacturers expected that their wares would be used over the long term. A vicious economic circle was emerging from this expectation and, not coincidentally, "[e]conomic ideas began to take their modern form."[46]

The rate of production of durable goods was threatening to exceed personal need and the question needs to be asked: *Why*? Why did durable goods begin to be made on a scale that exceeded their necessity for personal subsistence or even modest levels of comfort? This question begs the further question: Why has anyone ever wished to produce any *unnecessary* thing. This question cannot be answered decisively but it must be addressed in order to make an important point about technological advancement.

Necessity was likely the mother of invention up to an historical point and then only again after invention became necessary to resolve problems it had created. Undoubtedly human subsistence and endurance were once facilitated by the creation of physical techniques and tools such as arrow heads and shafts, fishing nets, or snares, but any anthropologist, historian, or cognitive scientist would be hard pressed to prove that the mere stirring of the human imagination or intellect has always been contingent upon a need to subsist. Pan's flute, John Keats' Grecian urn, and Vincent van Gogh's Starry Night were not conceived from economic necessity.

Human intellectual activity is indefatigable and humankind wishes to *realize* or to fabricate the products of its mind. As H.G. Wells observed, "Man lives to make—in the end he must make, for there will be nothing else left for him to do."[47] In the 19th century men who felt a strong impulse to create or to invent things were no less desirous of earning an income for their creative efforts than the likes of Michelangelo and Leonardo da Vinci had been centuries earlier. Other persons who might seek to suppress the creative application of mechanical know-how must defend their selectivity—their belief that some imaginary designs deserve to see the light of day while others should remain in private minds.[48]

During the Industrial Revolution the capabilities of invention promised higher standards of material living for an increasingly wider segment of society. As more wooden chairs and tables were made by more factory hands, more personal demand for these products arose. Whether chairs, tables, and other 'goods' enhance one's quality of daily life might be debatable among people of different

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46 Galbraith, *id*.

47 Wells, *The Future in America*, at 41.

48 This is a qualitatively different issue from the proposition that the state could discourage social usage of harmful products by making them expensive. See Nordhaus and Tobin, *id*. at 17: "The proper remedy is to correct the price system so as to discourage these technologies."

societies and cultures, but M. Germaine Garnier astutely wrote, "The amendment and extension of culture, and consequently the progress of industry and commerce, *have no other cause than the extension of artificial wants*."[49] Increased consumer demand for durable goods determined the progress of industry and commerce because it gave inventors a reason to spend their time and energy inventing—namely, to *sell* their inventions to buyers. As Joseph Schumpeter noted, "inventing itself" tends to be a function of "the capitalist process."[50]

In the late 18th and early 19th centuries consumers could be said to have wanted chairs and tables *artificially* for at least two reasons. First, the furniture made their daily lives more comfortable, and second, persons of higher status were known to have chairs and tables. Thorstein Veblen demonstrated convincingly that personal desire to possess goods that wealthier persons possess has been a highly influential factor in consumer demand throughout history. In his words, "[t]he motive that lies at the root of ownership is emulation" and "the propensity for emulation is probably the strongest and most … persistent of economic motives" other than "the instinct of self-preservation."[51] In short, people want not only to survive but to have what the Joneses have. So, when Carrie Meeber arrived in Theodore Dreiser's Chicago, "the sight of wealth and the merry life of the city had awakened in her a desire to reach something higher and to live better." The "less expensively dressed" men who patronized Hurstwood's saloon emulated "the more expensively dressed."[52] Such was the economic power of emulation as Veblen understood it.

As technological know-how advanced during the Industrial Revolution, the process of transforming ideas into products became more capital intensive. Production methods became more mechanically complicated, not simpler, and the design, trial, and retrial of advanced mechanisms involved increasing capital outlays. Antoine Louis Claude Destutt de Tracy understood that industrial innovation depended on "enormous advances" and that men with capital were careful about the risks involved in bringing scientific ideas to commercial viability.[53] Even so, to withhold capital from potentially useful inventions was to impede progress. Such conventional wisdom persists today.

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49 This quotation is from Garnier's *Elementary Principles of Political Economy Abridged* (1796), as reproduced in Destutt de Tracy, *A Treatise on Political Economy*, at 207. Emphasis added.

50 Schumpeter, *Capitalism, Socialism and Democracy*, at 110. The significant role that patents have played in capitalist economies is beyond the scope of this article. See Reich, *Saving Capitalism: For the Many, Not the Few*, for a contemporary discussion of this issue.

51 Veblen, *id*. at 21 and 75.

52 Dreiser, *Sister Carrie*, at 45-46 and 138.

53 Destutt de Tracy, *id*. at 114.

So Destutt de Tracy invited his readers "to think with the man who broke all his furniture, to encourage industry."[54] He understood that individuals would prefer to keep their hard-earned furniture intact but his economic logic was simple: the only financial purpose of industry was to produce goods for which there was meaningful consumer demand (enabling a return on investment), yet consumer demand would dwindle as consumers acquired more *durable* goods. Such reasoning explains why "industry" would want to create *ever more* (i.e., 'artificial') consumer demand from the man with durable furniture. Destutt de Tracy also recognized that, by this same logic or theory, pro-growth governments needed their citizens to consume freely. He explained:

> … consumption is the cause of production, that is its measure, that thus it is well it should be very great. They [politicians] affirm that it is this which makes the great difference between public and private economy. They dare not always positively say, that the more a nation consumes the more it enriches itself. But they persuade themselves, and maintain that we must not reason on the public fortune as that of an individual, and they regard those as very narrow minds which in their simplicity believe that in all cases good economy is to be economical, that is to say to make an useful employment of his means.[55]

Thus, a man with furniture is encouraged to be wasteful (or is discouraged from being "economical") for the sake of the broader socio-economic system because he *depends* upon wider cycles of consumption and production for his own economic security. Destutt de Tracy understood precisely why early 19th century politicians either urged or should have urged citizens to consume material goods: to stimulate investment in technological innovation, which would enrich everyone's lives.

Destutt de Tracy was a prototypical utilitarian. He believed that France's idle elites should parcel out their large capital reserves to entrepreneurs who, by transforming seed capital into manufacturing enterprises, would improve material living conditions for everyone. He wanted "industrious men" to acquire capital for their ventures so as to be able to employ *useful* labourers.[56] This redistribution of capital to the "industrious class" would "economise" otherwise wasteful funds.[57] France's economic elite could serve their own financial interests by facilitating a healthy national economy, in particular a demand-driven economy.

Both Destutt de Tracy and Arendt understood human consumption as the eternally recurring binary opposite of labour.[58] Destutt de Tracy regarded it as

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54 Destutt de Tracy, *id*. at 204.

55 Destutt de Tracy, id. at 207.

56 Destutt de Tracy, *id*. at 205. Emphasis added.

57 Destutt de Tracy, *id*. at 206.

58 Arendt, *id*. at 118-135.

the natural and necessary "contrary" of production.[59] More specifically, he saw consumption as "the destruction of utility" and reasoned that, because consumption "continually destroys that which it has produced," the "motion of riches" remains "perpetual."[60] Arendt proposed that, as a psychological matter, an increasing abundance of durable goods leads consumers to treat such goods as *non*-durable; to turn them over and dispose of them while they are still useful. For her, the 'good things' in life tend to be perceived as those that can be consumed immediately—akin to natural produce that spoils if not consumed quickly. She explained, "we must consume, devour, as it were, our houses and furniture and cars as though they were the 'good things' of nature which spoil uselessly if they are not drawn swiftly into the never-ending cycle of man's metabolism with nature."[61] But many of the good things of life are understood to be precisely those goods that can be stored or preserved—things that will not spoil over the mid-term. Winter storage and preservation are critical to human subsistence and animal survival in many parts of the world. This plain biological reality is critical to the permaculture paradigm of growth, which emphasizes that growth is most enduring when left to its naturally periodic cycles of growth and dormancy. Galbraith noted of 17th century America, "In a country that was being carved from the wilderness, thrift and labor were the obligations of everyone, for they conserved and enlarged the supply of goods which sustained life itself."[62] Abundance followed by personal thrift meant increased resilience to potential danger and insecurity. Moreover, as a psychological matter, household accumulation of high-quality and durable but unessential possessions has been viewed as a hallmark of socio-economic status and success throughout history.[63] Valuable fine art and race car collections reflect social superiority. Both Veblen and Galbraith noted that the strictly ornamental features of durable goods are precisely what gives social status to the goods themselves.[64]

III. The Importance of a Belief in Progress to the Growth Paradigm

The notion of progress is critical to the economist's growth paradigm. Henri Claude de Rouvroy, Comte de Saint-Simon, was a contemporary of Destutt de Tracy, who expressly desired to see the great mass of French citizens lifted from poverty. He believed that technological creativity was the key to their salvation and to social progress.[65] Saint-Simon, like Destutt de Tracy, was a

59 Destutt de Tracy, *id*. at 198.

60 Destutt de Tracy, *id*. at 197-198, 201, and 204.

61 Arendt, *id*. at 125-126.

62 Galbraith, *id*. at 289.

63 See Veblen, *id*. at Chapters V and VI.

64 See, for example, Veblen, *id*. at 67, and Galbraith, *id*. at 290.

65 See MacIver, "Saint-Simon and His Influence on Karl Marx," at 240-241.

consummate utilitarian or instrumentalist. Alice MacIver wrote that, for Saint-Simon, a bright future for man depended upon industry and "the only productive work to be done was to increase the nation's wealth by trade, commerce and industry."[66] Saint-Simon believed that "industrial chiefs" should be society's leaders.[67] Arguably he got his wish because economic and technological considerations have since strongly influenced Western political management of domestic affairs, which is entirely in keeping with Arendt's observation that the public sphere has become predominantly utilitarian. Robert Hébert and Albert Link noted that Saint-Simon "believed that social policy should be adopted to the needs of production" and "welcomed the disintegration of feudalism and the advent of its replacement, industrialism." By 'industrialisme,' Saint-Simon meant "the triumph of technology over backwardness, of science and reason over superstition and custom."[68] His English contemporary, Mary Shelley, presented a sanguine picture of what that triumph could look like.

Shelley's *Frankenstein* was published just a year before Saint-Simon's *Parable* was published. *Frankenstein* delivered a gothic morality tale about the grand expectations man had for science. Having listened to Professor Waldman praise the breakthroughs of 18th century chemists—how they had acquired "new and almost unlimited powers; [how] they can command the thunders of heaven, mimic the earthquake, and even mock the invisible world with its own shadows"—Victor Frankenstein knew he could achieve more yet, so he created one of the most well-known monsters of Western literature.[69] And, just as he eventually came to regret his achievement and felt the need to kill it, so today scientists, politicians, and activists desperately try to undo the great destruction that their technologically preoccupied forebearers have wreaked upon nature. Modern concerted efforts to combat acid rain, CO_2 emissions, and global warming or climate change through all manner of regulations, treaties and accords simply reflect a belated recognition that the dangerous beast created by *industrialisme* and the impetus to human and social perfection need to be restrained.

Shelley had read Humphry Davy's *A Discourse, Introductory to a Course of Lectures on Chemistry*, which observed, "science has done much for man but it is capable of doing still more."[70] Fifty years earlier Rousseau proposed that the characteristic of humankind that sets it apart from other animals is its "faculty of improvement" or *perfectibilité*, which, according to translator Lester G. Crocker, "means the capacity to make progress."[71] To recall, Malthus also wrote

66 MacIver, *id*. at 239-240.

67 See MacIver, *id*. at 240, quoting from Saint-Simon's *Du Système Industriel* (1821).

68 Hébert and Link, *A History of Entrepreneurship*, at 22.

69 See Shelley, *Frankenstein*, at 47.

70 See Shelley, *id*. at xxv.

71 Rousseau, *id*. at 187.

of "the perfectibility of the mass of mankind." This 250-year-old belief in human perfectibility and progress remains the irrational yet central driving force behind Western governments' perpetual push for economic growth.

In 1895 Wells parodically depicted one possible state of human perfection. His Time Traveller glimpsed human life in the year 802,701 A.D. and observed "[s]ocial triumphs" such as "mankind housed in splendid shelters" and "gloriously clothed." No one was engaged in "toil" and there was "neither social nor economic struggle." Such observations "strengthened" the traveller's belief "in a perfect conquest of Nature."[72] While actually travelling to America in 1906, Wells surmised,

> One is led unawares to believe that this something called Progress is a natural and necessary and secular process, going on without the definite will of man, carrying us on quite independently of us …. Most Western Europeans have this delusion of automatic progress in things badly enough, but with Americans it seems to be almost fundamental. It is their theory of the Cosmos, and they no more think of inquiring into the sustaining causes of the progressive movements than they would into the character of the stokers hidden away in the great thing somewhere—the officers alone know where.[73]

By mid-19th century Destutt de Tracy's entrepreneur had become the fulcrum of technological advance and increased social prosperity. Galbraith wrote that "in the early years of the Industrial Revolution … [i]t was the wealth of the new entrepreneurs, not that of their workmen, which was everywhere celebrated."[74] By the end of the 19th century, however, the economies of Britain and America were in dire straits. Another economic winter had set in. Edwin Burrows and Mike Wallace observed that "capitalism's ability to supply goods" had outpaced "the American market's ability to consume them" and that overproduction was widely considered responsible for the lackluster economic state.[75]

IV. The Vicious Circle of Overproduction

As was to be expected of a non-stop economic growth paradigm, the professionally prescribed remedy for overproduction was more consumption of durable goods. Destutt de Tracy had articulated this logic when he wrote, "consumption is the measure of production, for wherever sale ceases production stops" and "industrious men produce only because they find consumers for their productions."[76] By the end of the 19th century the systemically increased speed

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72 Wells, *The Time Machine*, at 39 and 43-44.

73 Wells, *The Future in America*, at 22-23.

74 Galbraith, *id*. at 23.

75 Burrows and Wallace, *Gotham*, 1186 and 1210-1211.

76 Destutt de Tracy, *id*. at 208.

at which goods were being produced had intensified or entrenched some economists' beliefs that increased consumption was critical to socio-economic growth and prosperity. John Hobson explained,

> Improved machinery of manufacture and transport enables larger and larger quantities of raw material to pass more quickly and more cheaply through the several processes of production. Consumers do not, in fact, increase their consumption as quickly and to an equal extent. Hence the onward flow of productive goods is checked in one or more of the manufacturing stages, or in the hands of the merchant, or even in the retail shop.[77]

"Checked" production meant machine owners would slow down their machines' output and reduce their employment of human bodies and hands. A "large quantity of labour" would be lost.[78] So unemployment was the real and immediate fear and machines were identified as the preferred means of alleviating that fear because machine production required at least semi-skilled and unskilled workers. The deeper concern was that capitalists who profited little or lost money on their machine investments would be reluctant to re-invest in technological innovation, thereby causing "industrial disease"[79] or economic stagnation.

With such reasoning the vicious circle of economic growth was fully underway. The ouroboros serpent of overproduction had to consume its own tail in order to remain alive. As Arendt put it, abundance had to be depleted by consumption. Consistent with this view, Hobson and Alfred Mummery wrote, "in the normal state of modern industrial communities, consumption limits production and not production consumption."[80] The economic objective was not to temper production to levels consistent with normal human consumption tendencies—to let growth *happen* as it might—but rather to increase levels of consumption to meet increased levels of machine production.

Hobson, Mummery, and Destutt de Tracy's views were perfectly consistent with Garnier's view that "artificial wants" drove technological innovation, but on the cusp of the 20th century the wants of England's various social echelons were arguably becoming *increasingly* artificial. People were not necessarily

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77 Hobson, *The Evolution of Modern Capitalism: A Study of Machine Production*, at 179-180. Hobson re-published these thoughts verbatim in 1906 and 1919. He was writing of "depressed" trade and communities in general, not of a particular historical moment, as machine production had arrived for a permanent stay.

78 Hobson, *id*. at 180.

79 Hobson, *id*. at 179-186.

80 Hobson and Mummery, *Physiology of Industry: Being an Exposure of Certain Fallacies in Existing Theories of Economics*, at v-vi.

happier,[81] but the material comforts of household life and public utilities were increasing, however slightly. Producers were putting more effort into creating consumer desire by employing print advertising and in burgeoning cities consumer emulation did this promotional work for them, just as Dreiser had depicted in *Sister Carrie*. Henry Ford soon devised assembly-line production of automobiles and increased productive efforts to 24-hour cycles in three consecutive eight-hour manpower shifts. He understood that more goods could be bought if more people could afford them. His pay increase to $5 per day heretically violated the Iron Law of Wages, being that wage earners should earn only enough to subsist.[82] It gave his auto workers spare income to purchase comparatively more goods. Their reduced eight-hour daily shifts gave them leisure time and therefore the incentive to own motor vehicles.

Edward Filene imagined that Ford's heightened production techniques and consumer-sensitive approach to business could bring prosperity across the globe. He believed that the bottlenecking problem identified by Hobson and Mummery was a pseudo problem, as competition would lead producers to develop increasingly low-cost methods, which in turn would make their goods affordable to the millions of people "living with almost no buying power as yet."[83] Consumers with buying power could purchase goods at a pace that met production or withhold their earnings, so they were in the driver's seat. The mass-producer was at their behest. If a global economy based on mass-production was to succeed, citizens of all nations had to acquire more buying power. Filene wanted everyone to become "much better customers,"[84] which is precisely how the global economic world is unfolding. In the 20th century and in this century meaningful dips in consumer activity were reflexively re-stimulated in one way or another by government fiscal policy. Keynes advised "patriotic housewives" in post-depression 1930 to "sally out to-morrow early into the streets and go to the wonderful sales which are everywhere advertised." Increased shopping was believed to be "the only possible means of making the wheels of economic progress and of the production of wealth go round again."[85] Indeed, Keynes likened the sunken economy at the time to a sick "patient" who needed "exercise," not "rest."[86] Certainly exercise can be a wise prescription for medical

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81 Nordhaus and Tobin wrote, "We cannot say whether a modern society with cars, airplanes, and television sets is really happier than the nation of our great-grandparents who lived without use or knowledge of these inventions": Nordhaus and Tobin, *id*. at 25. See also Schumpeter, *id*. at 129.

82 See Galbraith, *id*. at 30. Destutt de Tracy also held this view of wages for unskilled workers.

83 Filene, *Successful Living In This Machine Age*, at 132.

84 Filene, *id*. at 142.

85 Keynes, "Economy," in *Essays in Persuasion*, at 152-153.

86 Keynes, *id*. at 156.

depression in some cases, but not always. The economist's principled aversion to rest may be contrasted with the Toraic concept of schmita and its proscription against the agricultural use of land every seven years. Implicit in this periodic practice was a sense that individuals could readily endure a period of economic fallowness if they had conserved the fruits of a prior harvest. David Krantz wrote of this period, "as farmers [were] prohibited from working the land, the public [was] restricted to eating food from plants that [grew] wildly; food from perennial plants; and food preserved from previous seasons."[87] Such a custom is entirely consistent in broad strokes with permaculture thinking. Where agriculture is concerned, permaculturists understand that fallow periods and "minimum human intrusion" can have better regenerative effects than constant cultivation.[88] Yet, the prevailing political-economic prescription is vigorous exercise in the form of stimulated consumption. Once the patient begins to satisfy 'artificial' wants, capitalists can restore their machines to optimal capacity and help entrepreneurs make even better machines. In turn, more individuals will be employed and, as Malthus put it, "the same retrograde and progressive movements with respect to happiness [will be] repeated."[89]

As mass production techniques became normalized into the 20th century, the prevailing growth paradigm required that durable consumer goods become increasingly non-durable. Hard-earned furniture would not have to be broken, just to create a new need, if it was of poor quality or designed for mid-term use. Arendt and Marshall McLuhan understood this. Arendt explained that "the endlessness of production can only be assured if … the rate of use [of products] is so tremendously accelerated that the objective difference between use and consumption, between the relative durability of use objectives and the swift coming and going of consumer goods, dwindles to insignificance."[90] Similarly, McLuhan wrote that "[a]ccelerated change and planned obsolescence constitute the basic principle of an industrial-power economy built on applied science …. Whether it's new books or light bulbs, they must not clutter up the scene for too long."[91] McLuhan and Arendt understood that capitalism had come to thrive on the continuous production and consumption of increasingly disposable forms of otherwise durable goods, the disposable razor being a perfect symbol of the system.[92] The global economic tendency continues in this direction.

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87 Krantz, "Schmita Revolution: The Reclamation and Reinvention of the Sabbatical Year," at 4 of 31.

88 See Akhtar et al. "Incorporating permaculture and strategic management for sustainable ecological resource management," at 32.

89 Malthus, *id*. at 9.

90 Arendt, *id*. at 125.

91 McLuhan, *Mechanical Bride*, at 128.

92 Arendt called it a "waste economy": Arendt, *id*. at 134.

The growth-oriented economies of North America and many other countries operate systemically as vicious circles. Destutt de Tracy's perpetual motion of "riches" was simply a wish. Many Americans who got rich on paper from Wall Street investments before October of 1929 found themselves destitute shortly thereafter. Many Americans who got rich on paper from multiple or large real estate holdings before October of 2007 subsequently found themselves in dire straits. Yet Robert Reich, an eminent economist, believes that the perpetual wheel of production and consumption contemplated by Destutt de Tracy is a "virtuous cycle."[93] In his film, *Inequality for All*, he presented a clockwise movement in which "Wages Increase" rotates to "Workers Buy More," which rotates to "Companies Hire More," which rotates to "Tax Revenues Increase," which rotates to "Government Invests More," which rotates to "Workers are Better Educated," which rotates to "Economy Expands," which rotates to "Productivity Grows," at which point the cycle repeats itself, presumably without depressions or recessions, and presumably in perpetuity.[94]

Each complete cycle of Reich's 'virtuous' cycle involves "More" than the previous go-round so the model's general progression should be much like the upward and outward growth of a tree, but with one critical difference: a tree's rings are concentric. They are not part of an unbroken spiral, which is how Reich's economy would grow—ever upward and outward in an unbroken spiral, like an inverted cone getting taller and broader at the top. This top-heavy model of growth is destined to collapse, which it invariably does because its roots are not hardy enough to support it.[95] In nature an expanding tree trunk is supported by ever-deepening or expanding roots, but these do not necessarily grow *constantly*. They grow sporadically, depending upon the environmental conditions in which they are situated, a fact that permaculturists take for granted and are reluctant to alter, at least without careful planning. For Reich, however, periodic inactivity or dormancy at any of the points along his growth cycle is a cause for concern. It can turn the virtuous cycle into a vicious cycle, but Reich's cycle is only *artificially* virtuous in the first place.

V. Growth as a Mythic Antidote to Unemployment

Unemployment and underemployment have been abiding concerns of governments for centuries. Saint-Simon regarded many human beings as naturally lazy and saw government as having an obligation to create employment for these people.[96] Idle citizens are not simply their parents' problem. They can become

93 See Reich, *Inequality for All*.

94 Reich, *Inequality for All*.

95 The deep extent to which North America's economy at all levels is supported by credit—by international borrowing, domestic borrowing, professional credit, and personal credit—is beyond the scope of this article.

96 See MacIver, *id*. at 240, quoting from Saint-Simon's *Du système industriel* (1821).

the state's and society's problem, so governments have a deep interest in creating employment opportunities for them. Schumpeter observed, "whether lasting or temporary, getting worse or not, unemployment undoubtedly is and always has been a scourge."[97] Galbraith wrote, "the need to provide jobs requires us to face the unhappy choice either of having the economy constantly under inflationary strain or consigning some part of the working force to joblessness and inferior income. Obviously we shall not reap the rewards of affluence until we solve this problem."[98] Recently, William H. Davidow and Michael S. Malone proposed that "the greatest challenge facing free market economies" in the 21st century will be the economic uselessness of millions of citizens, owing to a proliferation of capable robots.[99]

Historically Western governments have relied upon the private sector to generate employment. In Malthus' and Destutt de Tracy's day labourers toiled for private land owners. In the 19th century individuals apprenticed for master craft persons. Today non-skilled, semi-skilled, and highly skilled workers seek employment with large corporations, chains, franchises, firms, and small businesses. This general employment trajectory is driven by Western governments' dogmatic belief that private enterprise is the best source of employment for growing populations, just as it is tied directly to an expectation by private enterprise and governments that economic productivity will continually increase.

In 1949 US President Harry Truman told Americans, "Government and business must work together constantly to achieve more and more jobs and more and more production … which will mean more and more prosperity for all the people."[100] Later that year his Council of Economic Advisors [CEAs] wrote, "our business system and with it our whole economy can and should continue to grow."[101] Robert Herren observed, "Each Council of Economic Advisers has stressed the importance of adopting policies to ensure a high rate of economic growth. CEAs have been advocates within administrations for emphasizing economic growth as a national priority."[102] Many Western governments encourage domestic population growth for various reasons, in some case for scriptural reasons, in others because they believe that larger populations undergird stronger economies and stronger national security. However, when populations expand but employment lags, governments are faced with the real prospect of social insecurity and unrest.

Galbraith was concerned that, once employment *per se* became an overarching economic objective of government, the nature of employment

97 Schumpeter, *id*. at 70.

98 Galbraith, *id*. at 291.

99 Davidow and Malone, "What Happens to Society When Robots Replace Workers?"

100 Collins, *More: The Politics of Economic Growth in Postwar America*, at 22.

101 Collins, *id*. at 20.

102 Herren, "Council of Economic Advisers."

became secondary. Such a prospect is "disturbing" to the conventional wisdom, he contended, because it brings "economic society to the dubious world of make-work and boondoggling."[103] This is precisely where the global marketplace is today. It is a utilitarian world in which the murderous city of Cuidad Juarez can appear favourably as "hardworking" with "very little unemployment" to a visitor in Roberto Bolaño's *2666*.[104] Indeed, the low-paying maquiladoras that line northwestern Mexico are politically praised as international free trade successes. The surrounding and astounding murder rate is secondary.

For Galbraith, the type of economic growth cycle drawn by Reich and others was just a "squirrel wheel" and "[a]mong the many models of the good society, no one has urged the squirrel wheel."[105] Aristotle and Plato did not perceive the good life as one spent relentlessly on a productive treadmill,[106] but many post-Industrial Western governments put a premium on economic productivity over the examined life. Since the Industrial Revolution, the "good society" has been one that economically grows by unceasing squirrel wheels. Neither Galbraith nor Arendt suggested that all or many Americans could hope to avoid Sisyphus' daily regime, but for this very reason they implicitly questioned what meaningful socio-economic progress had been made, for example, since Malthus' day. Wasn't economic growth supposed to lift the masses from a life of distasteful daily drudgery? What was the point of becoming so affluent by mid-20th century if so many Americans still had to keep a treadmill spinning from Monday to Friday, or even throughout the weekend? As a great many individuals face the prospect of having "zero economic value" this century, just because their utility will be substituted by robots, Davidow and Malone acknowledged that "we need a new, individualized, *cultural*, approach to the meaning of work and purpose of life."[107] Their emphasis on culture is precisely in line with permaculturist thinking.

VI: Growing Unwellness

By the mid-20th century a qualitative change to the economic mind-body equilibrium in America was self-evident. Rousseau had contemplated that the human inclination to "indulge" in "comforts" could have real degenerative effects and he was not entirely off the mark.[108] Human life spans have increased with time, partly because of medical advances and lighter workloads, but many indulgent 20th century Americans and others struggle with heart and respiratory

103 Galbraith, *id*. at 198.
104 See Bolaño, *2666*, at 376.
105 Galbraith, *id*. at 159.
106 See Arendt, *id*. at 36-37.
107 Davidow and Malone, *id*.
108 Rousseau, *id*. at 184-185.

diseases, addictions, and other serious physical ailments of their own making. The time and effort they put into the squirrel wheel in the name of growth and prosperity has not made them physically or mentally healthy. Mr. Propter remarked in Aldous Huxley's 1939 novel, *After Many a Summer Dies the Swan*, "we've made for ourselves … a world of sick bodies."[109] Indeed, only two years after President Dwight D. Eisenhower established a Council on Youth Fitness for the children of a swelling middle-class, Galbraith observed, "More die in the United States of too much food than of too little."[110] Five years later President John F. Kennedy reinvigorated Eisenhower's fitness council and expanded its mandate. As a federal government website explains:

> After World War II, many Americans worried that US citizens, especially the young, were growing overweight and out of shape. The nation's economy had changed dramatically, and with it the nature of work and recreation changed. Mechanization had taken many farmers out of the fields and much of the physical labor out of farm work. Fewer factory jobs demanded heavy labor. Television required watching rather than doing. Americans were beginning to confront a new image of themselves and their country, and they did not always like what they saw.[111]

So Galbraith wryly imagined a typical post-WWII American family driving to a countryside replete with "commercial art" to picnic on "exquisitely packaged food" near a "polluted stream" and to camp overnight "amid a stench of decaying refuse." He further imagined the campers reflecting "vaguely on the curious unevenness of their blessings" before going to sleep and he asked his readers, "Is this, indeed, the American genius?"[112]

The tendentious policy solution to this unflattering reflection of human success, *perfectibilité* or genius has never been to make daily employment more anaerobic and less materially productive. It is to deviate increasingly from the ambulatory and sensory challenges of hunting and gathering toward routine sedentariness or stillness, coupled with isolated, mechanistic efforts of mind and body. In 2011 Daniele Vitorino and Dennys Cintra discussed the "obesity pandemic" emerging in Western societies and noted that economic "forces" have been at least partly responsible for it.[113] The number of individuals whose employment involves at least some physical activity or exertion (for example, in some manufacturing and services sectors) is expected to shrink substantially. Millions of robots are expected to replace workers in a "Second Economy"

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109 Huxley, *After Many a Summer Dies the Swan*, at 166.

110 Galbraith, *id*. at 123.

111 John F. Kennedy Presidential Library and Museum.

112 Galbraith, *id*. at 253.

113 Vitorino and Cintra, "Consequences of Modern Lifestyle to Health: How to Prevent it? A Review," at 98.

(wherein computers do business only with computers), which is predicted to begin in 2025.[114] About 40 million Americans of a 146 million person labour force are expected to be made redundant. These citizens will have "no economic value," as Davidow and Malone put it.[115]

The socio-economic effects of 20th century technological innovation have been much different than the basic change that 18th and 19th century social reformers had hoped technological advancement would bring, being an uplift from the dire living conditions of society's poorest and hardest-working members. Technological development continues apace as a matter of psychological unrest and unease, without any coherent guiding vision or obvious improvement *in the balance of things*. In 1895 Wells' Time Traveller correctly observed that humankind, guided by "ideals" that are "vague and tentative," gradually improves upon its "favourite plants and animals." It produces a "new and better peach" here and a "convenient breed of cattle" there. Yet the Time Traveller surmised further, "Some day this will all be better organized, and still better. That is the drift of the current in spite of the eddies."[116] Wells was parodying the restlessness of the 19th century scientist who believed in human perfectibility. Undoubtedly permaculturists use technology to "better" organize growth, but not "still better." They do not engineer genetic modification and the *durability* of natural interrelationships is their goal,[117] not perpetual change for no apparent reason.

The ever-increasing rate at which robots will replace human workers this century threatens to alter the historic tendency of technological innovation to create "new opportunities for human employment." Davidow and Malone explained, "This time, things may be very different—especially as the Internet of Things takes the human factor out of so many transactions and decisions."[118] Indeed, the touted social benefit of some technological novelties is genuinely suspect, as is the popular claim that new technology generates employment,[119] so governments tend to rationalize their endorsements of such innovations as enhancing public and personal safety (e.g., roadside cell phone use) or as democratizing access to important social resources and services. Today reasonable people debate whether access to the Internet should be an international human right, akin to food and water.

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114 Davidow and Malone, *id*. Davidow and Malone attribute the expression "Second Economy" to Brian Arthur.

115 Davidow and Malone, *id*.

116 Wells, *The Time Machine*, at 43.

117 See Akhtar et al., *id*. at 32.

118 Davidow and Malone, *id*.

119 In Robert Reich's film, *Inequality for All*, Nick Hanauer, a self-described plutocrat, was unequivocal that "mom and pop" retailers employ significantly more people than large-scale distributors of goods such as Amazon, just because "their business models are so much less efficient." See Reich, *id*.

VII. The Growth Paradigm Encounters Permaculture

In the 1980s the American farming economy was in serious decline. Farm indebtedness had reached $215 billion by 1984[120] and two years later the Minnesota Agriculture Department calculated that three "non-farm jobs" were lost with every single farm collapse.[121] In this Mid-West Farm Crisis some farmers recognized that technologically based overproduction was the problem. Jon Ikerd explained,

> Our new technologies and management techniques were expanding the ability of farmers to produce far faster than consumer demand was expanding for the things that farmers produced. Thus, farm profit margins grew narrower with each new round of technology and each farmer had to increase their size of operation just to survive—to spread their management across more land, using more capital, more hired labor. As the farms grew larger, they were forced to grow fewer in number. Some had to fail so that others might "succeed." And, with each new round of technology, fewer farmers survived. There was no logical end to this process. This type of farming was not sustainable—at least not for farmers.[122]

Ikerd described how the economic equivalent of an invasive species (the intrusion of larger farms) tends to disrupt the ability of other contributors to an inter-connected system to thrive. Thus, he encouraged "sustainable farm economics" in which self-interest is "enlightened" and "economic objectives" of farm management are "balanced with social and ecological objectives."[123] In effect, he advocated a permaculture model of economic productivity, one which is sustainable in the long run only if the surrounding eco-system in which it is ensconced thrives.

The expression "permaculture" was coined by Bill Mollison and David Holmgren in the 1970s to describe a food cultivation approach that enabled surrounding vegetation, soil, and water eco-systems to thrive as much as possible according to their own natural rhythms.[124] Permaculturists and other environmentalists were responding to various troublesome socio-economic, political, and environmental developments of the time, such as "the oil shocks of 1973 and 1975" and "public awareness of the greenhouse effect."[125] The "perma" of permaculture reflects the aim of longevity for all ecological contributors to the

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120 Manning, "The Midwest Farm Crisis of the 1980s."

121 Manning, *id*., citing Paul Kabat, "The Farmer in the Cell," in Vol. 49 *The Progressive* (November 1985), at 50.

122 Ikerd, "Economics of Sustainable Farming.

123 Ikerd, *id*.

124 See Holmgren, *Permaculture: Principles & Pathways Beyond Sustainability*, at xix.

125 See Holmgren, *id*. at xvii.

broader surroundings, not just the durability of the human agricultural achievement. The sustainability of agriculture and culture itself are objectives.[126] From the outset, permaculture adherents desired to minimize the extent to which non-renewable energy, "high technology," and "repetitive manual labour" (i.e., assembly lines) were involved in the production of food and provision of other goods and services.[127] Ethically, permaculturists are guided by a belief that no particular generation should be so careless in its use of land or so intensely consumptive that it *needlessly* diminishes the earth's capacity to provide sustenance for future generations.[128] If, however, resource and energy availability for humankind in the 21st century is already declining because of generations of heavy industrial usage and an expanded global population, permaculture practice endeavours to slow down the rate of this declining energy availability.[129] Ideally, permaculturists picture future generations creatively using far less non-renewable energy to produce and consume than their forebearers did.

Permaculture thinking fundamentally accepts natural *limits*, meaning the "impossibility of continuous growth in anything" and the "ecological realities of decline, which are as natural and creative as those of growth."[130] In other words, permaculture accepts the undulating rhythms of growth and decay whereas "our prior culture of growth" has made it difficult to visualize decline "as positive," as Holmgren puts it.[131] Certainly economists' fundamental preoccupation with maintaining constant rates of financial growth for nations have contributed significantly to the prevailing culture of growth.

The working premise of the practice of permaculture is that systems of food production (and the provision of other goods and services) can involve less technological destruction of the natural world if designed thoughtfully. The design need not be complicated. Arguably a clothesline (that dries clothes with wind and solar power) involves a better design than an electrically powered tumble dryer and the process of hanging clothes on a line involves far less human intervention in the natural world than the manufacture of electric dryers.[132] Many natural growth processes appear to the human eye to be well designed in the sense that they appear to be *self*-generative and *self*-sustaining. The Invisible Hand of Smith's capitalist economy should come to mind, but it is speculative. The micro-biological processes that perennially re-generate plant and animal life *in fact* need no human intervention, so permaculturists strive to create productive systems that functionally mimic these natural processes. These systems

126 Holmgren, *id*. at xix.

127 Holmgren, *id*. at 13.

128 Holmgren, *id*. at 10, 83, and 93.

129 Holmgren, *id*. at xxviii and xxix.

130 Holmgren, *id*. at xxix and 8.

131 Holmgren, *id*.

132 See Holmgren, *id*. at 93.

should be able to operate well with relatively little human interference in the surrounding environment.[133] James Veteto and Joshua Lockyer wrote,

> Permaculture models its designs for agroecosystems, buildings, and communities on patterns observed in nature, but perhaps more importantly, permaculture views humans and their creations and activities as part of the natural world. Rather than focusing on human creations—agroecosystems, buildings, and communities—permaculture emphasizes the interconnections among these creations, humans, and the natural world. Permaculturists believe that this focus on interconnections is the best way to create systems that function in a sustainable manner.[134]

Permaculture does not attempt to 'correct' or smooth over natural dormancy or idleness, which is nature's equivalent of an economic recession. The biologically effective use of stored or preserved energy is what ensures the return of another healthy season for any particular type of species. Again, as Franklin stated, "In any given environment, the growing organism develops at its own rate."[135] No reasonable person would ever attempt to wake up a hibernating grizzly bear prematurely, yet mainstream economic growth policy habitually interferes with rest periods in order to spur immediate productivity. It cannot abide rest. But if bears and plants can awaken after a winter's sleep, so too can human beings and an economy, figuratively speaking. Where there is winter in one part of the world, there is summer elsewhere. Economic growth policy needs to embrace this lateral, undulating type of growth, because it is self-sustaining. It must learn to consume its seasonal harvests wisely before attempting to yield more.

VIII. Governments Portray Corporate Interest in Growth as a Matter of Public Interest

Galbraith wrote that "questions of social balance" (between private and public goods) are "subordinate to those of production" for liberals and conservatives alike because the conventional wisdom stresses "the paramount urgency of increased production of goods."[136] Western governments and influential politicians seldom condemn the naked or veiled self-interest of the private-sector that employs their citizens. Ever-pragmatic, they are disinclined to bite that hand that feeds them. There are always exceptions that prove the rule. For example, during his 1991 presidential electoral campaign, Bill Clinton promised

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133 Holmgren, *id*. at 17.

134 Veteto and Lockyer, "Environmental Anthropology Engaging Permaculture: Moving Theory and Practice Toward Sustainability, at 49. See also Akhtar et al., *id*. at 32.

135 Franklin, *id*. at 27.

136 Galbraith, *id*. at 262 and 277.

to "promote economic growth and the free market" without weakening the economy, but he stressed that he would hold the business class "responsible for being good corporate citizens too."[137]

The enduring depth of the political-economic belief that social security depends upon the success of private, corporate enterprise is reflected historically in the dogmatic commitment of many Western, Northern, Asian, and to a lesser extent Southern governments to the development and exploitation of natural resources. Political contenders get elected on promises to bring employment to resource 'sectors' such as forestry, mining, and fishing, so they encourage corporate enterprise to develop these sectors. Canada's Prime Minister, Justin Trudeau, was recently confronted with the prospect that a controversial pipeline project (Keystone XL) would be revived by US President Donald Trump. Trudeau unwaveringly emphasized that he had been on the record "for many years supporting [the pipeline] because it means economic growth and good jobs for Albertans."[138] The pipeline project was "paramount" to Trudeau, to use Galbraith's term, because it promised to rouse Alberta's economy from its troublesome hibernation. When President Trump decided to repeal environmental regulations in place to protect American streams from coal mining debris, the US Senate Majority Leader Mitch McConnell emphasized that the de-regulation would "bring relief to coal miners and their families."[139]

Such is the pro-development and growth policy of many Western politicians, always rooted in a reflexive, paternalistic mantra of needing to provide their citizens with 'good' jobs, a euphemism for well-paying jobs. Governments intensify or relax their regulatory control, oversight, or management of resource exploitation according to the level of threat that such exploitation is perceived to present to their societies, directly or indirectly. The danger level is assessed by scientific measures, calculations, and forecasts. The significant environmental regulatory surge in Western countries since the 1970s has been a self-preservationist response to perceived threats of man-made dangers like acid-rain and defective motor vehicles. Canada imposed a moratorium on cod fishing off the Atlantic coast, for example, not for the inherently ethical reason of avoiding man-made species extinction, but in the desperate hope that significantly dwindled stocks might regenerate themselves and eventually restore the fishery, meaning human employment in the fishing industry.[140]

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137 See C-Span, "Road to the White House."

138 Hamilton Spectator, "Trump's approval of Keystone XL means economic growth, jobs for Canada: Trudeau."

139 Freking and Daly, "Congress scraps Obama rules on coal mining, guns."

140 See Smellie, "What if the cod came back? The push to reinvent Newfoundland and Labrador's fishery."

In 1972 Nordhaus and Tobin addressed the contention that mainstream economics is preoccupied with economic growth at the expense of environmental sustainability. They replied that history had given "little reason to worry about the exhaustion of resources which the market already treats as economic goods." Apart from being tautologous (economic "goods"), their imputation is that a self-correcting market will maintain, in the sense of *leave alone*, a valuable natural resource. As this proposition is unrealistic, Nordhaus and Tobin conceded that "both the market and public agencies might be too complacent about the prospects for new and safe substitutes for fossil fuels."[141] But to acknowledge corporate and government complacency about resource overexploitation is simply to acknowledge that production has been primary.

Many governments *are* becoming concerned about species depletion, at least publicly so, but mainly because they are developing a better understanding of the extent to which their own societies depend upon wider bio*diversity*. Permaculturists recognize axiomatically that ecological variety is critical to the sustainability of any particular species, including humankind. Faiza Akhtar and colleagues noted simply, "without a healthy earth, human beings cannot flourish."[142] Yet, within the survivalist milieu of the 21st century, the economic priority of governments remains that of maximizing production. Their challenge becomes how to do this in a way that preserves bio-diversity, for pragmatic reasons—because now they realize that Frankenstein's monster is still roaming the earth and becoming increasingly dangerous *to them*. Beginning with the Industrial Revolution, the economically Virtuous Cycle has become environmentally Vicious.

Nordhaus and Tobin contended that "pervasive technological change" would prevent natural resources from becoming an "increasing drag on economic growth," thereby confirming that economic growth remained a policy priority. They simply disagreed with environmentally mindful critics who claimed that continual economic growth was not sustainable for environmental reasons. On the basis of "simulations," Nordhaus and Tobin concluded that economic growth "will accelerate rather than slow down even as natural resources become more scarce in the future."[143] To some extent this proposition has been borne out, *so far*, but it implicitly accepts that economic growth damages the environment and is the top priority of mainstream economics.

IX. Is Growth Destined for Dystopia?

At this century's dawn, Storm Cunningham proposed that the American economy was reaching a "tipping point,"[144] but he was not concerned. Top-heavy economic

141 Nordhaus and Tobin, *id*. at 15-16.

142 Akhtar et al., *id*. at 32.

143 Nordhaus and Tobin, id. at 63 and 68.

144 Cunningham, *The Restoration Economy: The Greatest New Growth Frontier*, at 6.

growth of the kind that has been outlined in this article was finally toppling, in his view, and naturally so, straight into a restoration-based economy. In his words, a "full-blown Restoration Economy" was on the verge of usurping centuries of "frenetic new development" and "one-way development."[145] This was apparently the case even though Cunningham conceded that the scale of "[a]nthropogenic ecological collapses" was unprecedented and that American citizens continued to increase their "ecological footprints" and their demands for real estate.[146]

The real estate bubble in America expanded so much after Cunningham's *The Restoration Economy* was published that it exploded. In 2008 the dead of another economic winter set in, taking its usual social form: massive unemployment. Naturally the governing US administration enacted stimulus legislation to expedite the arrival of spring. The Economic Stimulus Act of 2008, which by one estimate added just under $400 billion to Americans' collective income by the third quarter of 2008, was meant to "stimulate spending and end or at least mitigate the severity of a US economic slowdown."[147]

However, spring was not timely, so many unemployed and underemployed Americans got back on the squirrel wheel and started to rent out their real estate and durable goods at an unprecedented level. By subscribing to apps or by creating accounts on propriety software, they were able to rent out their homes and vehicles to a wide range of individuals seeking affordable inns and transportation. To use Arendt's words, the "rate of use" of these durable goods became "so tremendously accelerated" that the difference between their "use and consumption" became insignificant.[148] The motto 'waste not, want not,' acquired an economically novel importance. Private property became more or less valuable for its "idling capacity," being a measure of its inherent capacity for repeated use by strangers.[149]

This expanding rental economy quickly became dubbed the 'sharing' economy, to suggest that it was ideologically different from the prevalent proprietary economy. It is not. Arun Sundararajan might beg to differ but he acknowledged that the meaning of a good verb is in jeopardy. One label given to the sharing economy—the "on-demand" economy[150]—accurately reflects the fact that the innovation of apps has simply expedited an already impatient service economy. This increasing speed and capacity at which the economy is expected to operate

145 Cunningham, *id*. at 6-7 and 33.

146 Cunningham, *id*. at 24 and 39.

147 Broda and Parker, "The impact of the 2008 rebates." See also Shapiro and Slemrod, "Did the 2008 Tax Rebates Stimulate Spending?"

148 Arendt, *id*. at 125.

149 Sundararajan, *The Sharing Economy*, at 77-84.

150 See Sundararajan, *id*. at 27-28 and 161.

broadly reflects what Arendt observed to be the "irreversibility" of productive processes that human beings have set into motion.[151]

The sharing economy is an early 21st century attempt to fill sinkholes caused by the prevailing growth paradigm. Reich refers to it as a "share-the-scraps economy" because the capitalists who fund the entrepreneurial creation of the economy's apps reap the lion's share of the profits.[152] Sundararajan calls Reich's perspective "dystopian" but Sundararajan fails to see the dystopia in the very economic future about which he is so excited.[153] He enthusiastically contemplates, for example, that containers for perishable goods such as milk will soon contain "some kind of transducer" that could let a fridge know the milk's expiry date. Then the fridge will add milk to a "grocery list at an online delivery service." The emerging "Internet of Things" will make such a possibility feasible.[154] Recall, however, that this wonderful Internet of Things could well end employment and employability for tens of millions of people within a couple of generations, and permanently so.[155] Its expansion is not guided by any coherent or long-term social vision.

Arendt recognized that automation naturally presented new socio-economic and cultural challenges, but intercommunicating durable goods was still science fiction in 1958. Fifty years later, however, the Disney and Pixar corporations presented a view of the human condition that is entirely consistent with the world of online delivery, drone delivery, and other forms of robotic services that are rapidly emerging. In the animated film, *Wall-E*,[156] physically bloated humans living on a spaceship called Axiom glide about on reclining lounge chairs while computerized service-bots clean their toilets, do their dishes and laundry, and serve their drinks. The planet Earth has become despoiled or too unattractive for them to remain on it so they have become literally extra-terrestrial. They have no agriculture. Thus, they exemplify a darkly hyperbolized nadir of what Galbraith called the American "genius." They have discovered a way to thrive *without needing Nature*, which might well be "a perfect conquest of Nature," as Wells' Time Traveller put it.[157] Arendt contemplated that the pace of socio-technological change might increase to the point where human beings could no longer become *accustomed* to their world, such that they might no longer find themselves "at home in the midst of things" they have produced, which is the hallmark of their humanity.[158] The well-contented human beings

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151 Arendt, *id*. at 236-243.

152 Reich, "The Share-the-Scraps Economy." See also Sundararajan, *id*. at 161.

153 Sundararajan, *id*. at 161.

154 Sundararajan, *id*. at 56.

155 Davidow and Malone, *id*.

156 Morris, *Wall-E*.

157 Wells, *The Time Machine*, at 39 and 43-44.

158 Arendt, *id*. at 135.

on *Wall-E*'s Axiom ship would suggest, however, that Fyodor Dostoyevsky got closer to the truth when he wrote, "Man gets used to everything—the beast!"[159]

Conclusion

If man can get used to everything, then man can get used to balance. This article began with Edwin Markham's recollection of long days spent hoeing and weeding California farmland, a wearying experience still lived by seasonal labourers. But Markham did not regret doing manual labour. He wrote, "I am not sorry that I learned to work in my youth …. [I]t seems to me that in a well-ordered world, everyone would be expected to spend a part of his time in bread-labor, and this would make that labor light for all who are engaged in it."[160] Prevailing economic thinking eschews this type of balance. It is drawn singularly to high-tech innovation that always promises to lighten the burdens of manual labour (for some workers), but the larger and more pressing problem of unemployment is typically left for discussion at a later day. Governments dogmatically assume that private corporate enterprise will forever resolve unemployment problems if national economies continue to grow, even though modern history shows that governments have routinely felt the dire need to intervene in otherwise 'free' markets to stimulate depressed economies.

Rather than striving for ever-greater economic growth, which is inherently unsustainable, as the Great Recession, the Great Depression, and many lesser recessions in between have shown, politicians and their economic advisors are well advised to abandon the conventional wisdom and embrace a permaculturist's approach to growth. The latter is not anti-growth. It applauds production and bounty, but only so much as enables the broader support system to keep running smoothly without the need for unexpected crisis management. Neither national nor personal wealth needs to increase indefinitely for any ulterior social goal. The prevailing capitalistic pro-growth paradigm of the Industrial Revolution has guided human perfectibility to an indefensibly precarious summit. So, rather than ascending higher yet and perhaps even flying away, as Icarus (and the Axiom inhabitants) did, permaculture adherents offer politicians and economists creative ways to "make a graceful and ethical descent."[161]

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159 Dostoyevsky, *Crime and Punishment*, at 44.

160 Markham, *id*.

161 Holmgren, *id*. at xxix.

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