5. Economy

‘tis the times’ plague, when madmen lead the blind.
Shakespeare, *King Lear*

The cost of a thing is the amount of what I will call life which is required to be exchanged for it, immediately or in the long run.
Henry David Thoreau, *Walden*

It feeds, clothes, houses, entertains, transports, employs, invests, disinvests, and showers all manner of things on those with money. It also poisons and pollutes while making some rich and many others poor and some fat while others starve. It flattens mountains, destroys ecologies, acidifies oceans, destabilizes the climate, creates continental-sized gyres of trash in the oceans, and corrupts democracy. It is creating amazing new ways to displace humans in favor of robots and render our carbon based minds obsolete in favor of those made of silicon.¹ It provides a multitude of ways to communicate 24/7 while making it less likely that we can talk sensibly with our neighbors. It entertains and infantilizes perhaps while “consuming itself.”² Both bane and blessing, it is the global, capitalist economy. Three centuries in the making, it has grown into a world-straddling colossus that levels cultural differences from Shanghai to Madrid. It dominates our politics and news. A slight blip up or down in the market can cause mass euphoria or gloom. It is said to have begun in the ancient urge to “truck and barter” and in the turbulent winds of greed, envy, and fear. Sometimes, however, it unleashes more benign forces of creativity, innovation, and philanthropy. It is a vast

¹ Ray Kurzweil, *op.cit.*  
and incomprehensible machinery of banks, financiers, investors, entrepreneurs, corporations, tax-dodgers, foundations, workers, child laborers, capital flows, government agencies, legislative committees, lobbyists, business schools, professional economists, TV savants, peddling advertisers, compulsive consumers, hidden networks of influence, black marketers, organized crime, cyber-thieves, drug lords, and trillions of dollars of investment capital washing around the world every day in search of a tenth of a percent higher rate of return. Those left behind are a growing and ominous reservoir of discontent. Anyone who purports to understand it, at best, does so only in part and mostly in hindsight. Their various opinions and theories seldom penetrate below the surface of things. Deeper explanations must reckon with the ecosphere of which the economy is a subsystem, with the structure of class and privilege, and the roots of human behavior past our “animal spirits” all the way down to the ancient reptilian brain stem where goblins and ghouls lurk in the shadows. The result is a jerry-built system that lurches from boom to bust exhibiting the extraordinary madness of crowds that seizes on tulips in one time and smart phone apps in another.

The theoretical foundations of modern economics were first described by Adam Smith in *The Wealth of Nations* (1776). But Smith had previously written a major work about the bonds of sympathy that hold societies together (*The Theory of Moral Sentiments*, 1759) and was working on a new edition of it when he died. In one he is said to have argued the importance of self-interest; in the other the importance of empathy and sympathy. Whatever one’s opinion about what Smith really thought, subsequent generations of economists built the shambling edifice of economic theory on the foundations of self-interest not sympathy, individual not public interest, private
wealth not commonwealth, the present not the future, and assumptions of insatiable
wants, endless growth, infinite substitution for resource scarcity, know-how over know
why, and the chimerical creature called "economic man" who maximizes the foggliest of
foggy concepts called "utility," a particle in the social/psychological universe that has
never been seen nor its tracks ever detected. One’s utility is, therefore, whatever one
believes it to be (including, I suppose, having utility in banishing the concept of utility
forever). The mainstream neo-classical version of economic theory ignores the laws of
thermodynamics, presumes away limits imposed by ecology, devalues nature as mere
resources, assumes a model of human nature that would not pass muster among
mentally healthy psychologists, advocates behavior repugnant to any ethical ethicist,
defies the requirements for adequate safety margins that elsewhere inform good
engineering, mixes its description of economic behavior with its prescription for proper
behavior, and confuses rationality with our bottomless capacity to rationalize almost
anything including the most abhorrent, depraved, ridiculous, idiotic, improbable, and
hair-brained things in the catalog of human behavior. With some notable exceptions
such as Arthur Pigou, John Kenneth Galbraith, Kenneth Boulding, Robert Heilbroner,
and Herman Daly, economic theory from Smith to the present works best if the
questions are small, the accounting narrow, time horizons short, and its practitioners,
true believers. Yet it towers virtually unassailable against legions of critics, including

some of its own most distinguished economists. Its mathematical models, comprehensible only to the suitably inducted, are otherwise virtually bullet proof against logic, data, bio/physical reality, actual experience, and the consequences flowing from the profession’s own modest predictive performance which, some believe to be on a par with readers of chicken entrails, palm readers, and TV weatherpersons. Yet more than any other body of thought economics has come to define us as self-maximizing economic automatons independent of society, not as thoughtful, attentive citizens, or as dutiful community members, caring parents, spiritual creatures, or as the beneficiary of the labors of earlier generations and ancestors of those yet to be born. It has taken shallow to a whole new depth. By the circular logic of self-interest it purports to explain the saintly behavior of Mother Teresa and the bizarre megalomania of, say, Donald Trump. It is said to explain everything. Nobel prize winning economist Gary Becker, for example, once announced that:

the economic approach is a comprehensive one that is applicable to all human behavior, be it behavior involving money prices or imputed shadow prices, repeated or infrequent decisions, large or minor decision, emotional or mechanical ends, rich or poor persons, men or women, adults or children, brilliant or stupid persons, patients or therapists, businessmen or politicians, teachers, or students.

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4 In Robert Skidelsky and Edward Skidelsky’s words Economics is not just any academic discipline. It is the theology of our age, the language that all interests high and low, must speak if they are to win a respectful hearing in the courts of power.” They attribute this to “failure of other disciplines to impress their stamp on political debate.” New York: Other Press, 2012, p. 92

5 Naomi Klein writes that the belief “that we are nothing but selfish, greedy, self-gratification machines . . . is neoliberalism’s single most damaging legacy.” Klein, This Changes Everything. New York: Simon & Schuster, 2014, p.62;

Professor Becker’s revelation comes as a considerable relief to those still vainly laboring in now obsolete fields such as history, philosophy, psychology, politics, sociology, linguistics, theology, and literature. They may now stand down, thereby saving financially stressed institutions large amounts of money and thousands of students the aggravation of becoming “well rounded” when flatness is more efficient for career success. Perhaps the newly unemployed professors will have time to go bowling together. But I digress.

It comes, then, as no surprise that all problems are presumed to be economic and so can be solved only by economic solutions that mostly have to do with selling more of something unneeded to people who can’t afford it in order to increase the wealth of those already over-burdened with too much and further accelerate the speed of the treadmill. This is called “neo-liberalism” which is merely turbocharged capitalism. It is not an innocent theory. As David Harvey writes:

Neoliberalism has, in short become hegemonic as a mode of discourse. It has pervasive effects on ways of thought to the point where it has become incorporated into the common-sense way many of us interpret, live in, and understand the world.”

Its main accomplishment has been “to redistribute, rather than to generate, wealth and income.”7 This, one might suspect, was the intention all along. As Maggie Thatcher once said “Economics is the method, the object is to change the heart and soul.”8 And in contrast to all who believed that the study of economics was merely to elucidate a

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8 Quoted in Naomi Klein, This Changes Everything. New York: Simon & Schuster, 2014, p. 60
complicated field of human behavior, it did change hearts, minds, and souls creating a sizeable cadre for whom the abstraction of the market has become scriptural.

More progressive economists admit many of the flaws of economics in theory and practice but believe nonetheless that the Capitalist economy can be remodeled as “green” Capitalism but without the exertion of examining and re-forming its foundational assumptions. A smarter, circular, solar-powered economy would offset the negative aspects of institutionalized greed, perpetual growth, and consumerism. A few smart adjustments at the margin, a policy shift here, better technology plus a change in taxation and viola’... sustainability! Most of the proposed changes would be an improvement, of the necessary but insufficient sort; perhaps the economic version of what theologian Dietrich Bonhoeffer once called “cheap grace.” Alas, a sterner and less forgiving reality is rapidly forcing us to rethink the basic premises of economics and change the economy to accord more closely with: (1) the way the world works as a physical system, (2) the basic rights of present and future generations, and (3) the obligations that go with being a “plain member and citizen” of the community of life, and do so in large measure for reasons of our own self-preservation if we can find no other. The considerable power of greed without guardrails can drive GDP into the stratosphere and generate technological miracles for a time, but it can also drive civilization predicated on our worst traits over a cliff. The economy organized to promote the seven

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9The sensible commentators include Hunter Lovins and Boyd Cohen, *Climate Capitalism*. New York: Hill and Wang, 2011; Marjorie Kelly, *Owning our Future*. San Francisco: Berrett-Koehler, 2012; Naomi Klein, op. cit.; Better methods of accounting would certainly help as Jane Gleeson-White writes in *Six Capitals*. Sidney: Allen & Unwin, 2014, but there is she writes “a logical inconsistency at the heart of the six capitals model which will prevent it alone from saving the planet: it seeks to account for non-financial value but can see it only in terms of financial value. This is because the entity it seeks to govern, the corporation as we know it, is legally bound to make decisions in favour of financial capital.” p. 282; Robert Reich, finds little evidence that corporations will be “socially responsible, at least not to any significant extent.” Further, what often passes for social responsible actions, according to Robert Reich, are nothing more than gussied up efforts to reduce costs. Robert Reich, *Supercapitalism*. New York: Knopf, 2007, pp 170-171.
deadly sins, mass consumption, novelty, and expansion without end is autistic to human needs as distinguished from manufactured wants. It knows nothing of the possibility, however slight, of moral improvement, conviviality without consumption, basic fairness within and between generations, and limits whether rooted in the conception of “the good life,” or in biophysical reality. On the contrary, economic doctrine, In Robert and Edward Skidelskys’ words, “has allowed the profession to maintain an attitude of cheerful indifference to the facts of human psychology.”\(^{10}\)

Economic theory, however, did not develop in a vacuum. Rather it co-evolved with business practice and particularly in interaction with increasingly powerful concentrations of capital called corporations. Both theory and practice were thereby shaped by political and judicial decisions that placed the corporation at the center of our burgeoning economic life. From the fossil record we can trace its origins back to the Dutch East India Company and its British cousin, the East India Company. Both existed as licensed monopolies acting in lieu of the State. Subsequent opinions vary widely on the evolution of this hybrid but now dominant creature. On the one hand corporations “allowed society to use markets much more effectively,” while on the other they “locked in a societal focus on the market providing material, not social goods.”\(^{11}\) They can be credited greatly for the material abundance Americans enjoy and equally blamed, among other things, for overflowing landfills. They can be credited for our mobility and thermal comfort and blamed for climate change. They are a source of mixed blessings.

But even in its early stages unrestrained corporate power aroused considerable fears. Thomas Jefferson, for one, had premonitions of what lay ahead saying in a letter


written in 1816: “I hope we shall crush in its birth the aristocracy of our monied corporations which dare already to challenge our government to a trial of strength and bid defiance to the laws of our country.” In 1864, Abraham Lincoln similarly wrote to his friend William Elkins saying that “corporations have been enthroned and an era of corruption in high places will follow, and the money power of the country will endeavor to prolong its reign by working upon the prejudices of the people until all wealth is aggregated in a few hands and the republic is destroyed.”

Premonitions and fears, however, did not matter much against the gathering forces of economic evolution. By the middle of the nineteenth century, in legal scholar Morton Horwitz’ words:

the legal system had been reshaped to the advantage of men of commerce and industry and the expense of farmers, workers, consumers and other less powerful groups with the society. Not only had the law come to establish legal doctrines that maintained the new distribution of economic and political power, but, wherever it could it actively promoted a legal redistribution of wealth against the weakest groups in the society.”

The political and legal foundations for the industrial-extractive economy were in place. What remained was to position the abstraction of the corporate form as a legal entity on a par with or superior to actual flesh and blood people who bleed, curse, cry, sing, suffer, live, and die. In one of the oddest legal developments in the history of U.S. jurisprudence, the United States Supreme Court, in Santa Clara County v. Southern Pacific Railroad (1886), is said to have decided that the abstraction of the corporation

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12 Quoted in Ted Nace, Gangs of America. San Francisco: Barrett-Koehler, 2003, p. 15
13 Ibid.
was, indeed, a legal person under the terms of the 14th amendment. The actual history, however, is less straightforward. The purported decision, incidental to the case itself, was not in fact rendered by the Court, but written in the headnotes to the text of the decision by the clerk to the Court who, as fate would have it, also had close ties to several railroad companies.15 “There was no history, logic, or reason given to support that view” in the words of Supreme Court William O. Douglas.16 Mr. J. C. Bancroft Davis, the Clerk to the Court, however, had his own reasons and logic and so took it upon himself to bestow a handsome windfall on his erstwhile benefactors in the railroad business by announcing in the headnotes that the Court presumed that corporations were included under the due process provisions of the Fourteenth Amendment otherwise intended to address the urgent and more obvious needs of “persons of previous servitude” whose personhood was rather more palpable. With a pliability exhibited only by circus contortionists and lawyers, the protections of due process for former slaves became applicable to an abstraction. Transmogrified into persons, corporations were invested with the protections of free speech and the right to lobby and contribute to political campaigns. Testifying to the enduring power human credulity as Phineas T. Barnum once observed, we have come to accept the grotesque “personhood” of the entities that provision us as normal and beneficial, believing that they are dedicated to our benefit and enjoyment. In time that personhood would be greatly amplified by other and even more mischievous decisions similarly perched on Mr. Bancroft’s precarious legal wizardry. The beneficence would someday spread

further permitting corporations to patent life, to propagandize as a tax deductible form of free speech, lie with exuberant impunity, and more recently in *Citizens United*, purchase the institutions and paraphernalia of democracy itself. The resulting co-habitation of corporations with democracy qualifies neither as a marriage nor perhaps quite yet as abduction, but the dinner conversations are strained.

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In the wake of the economic collapse of 2008, the inestimable Alan Greenspan, Chairman of the Federal Reserve, famously found a flaw in his economic thinking.\(^{17}\) He suffered “shocked disbelief” and was “very distressed” to discover that hungry foxes make indifferent guardians of financial chicken coops.\(^{18}\) Greenspan’s aha moment was rather like a commercial pilot flying at 35,000 feet suddenly discovering something interesting about the Law of Gravity that he’d previously overlooked. Neither the passengers nor the chickens would be greatly amused. For Greenspan a stroll through the streets of Detroit or Youngstown a few years earlier might have illuminated theoretical flaws not otherwise visible from the commanding heights atop the Federal Reserve. Of economic theory generally, economist Paul Krugman says that the previous three decades of macroeconomics was “spectacularly useless at best, and positively harmful at worst.”\(^{19}\) Even so it is easy to lose sight of how strange and recent the market fetish is in fact. In the late Tony Judt’s words:

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18 Alan Greenspan, “Never Saw it Coming,” *Foreign Affairs* (vol. 92, no. 6), November/December, 2013, pp. 88-96. Greenspan claims that no one saw the 2008 crisis coming and otherwise blames it on “animal spirits” i.e. irrationality of everyone else.
much of what appears ‘natural’ today dates from the 1980s: the obsession with
wealth creation, the cult of privatization and the private sector, the growing
disparities of rich and poor. And above all, the rhetoric which accompanies these:
uncritical admiration for unfettered markets, disdain for the public sector, the
delusion of endless growth.\textsuperscript{20}

It being assumed that this is just the way things are in the best of all possible
economies, many became oblivious to the increasingly threadbare public estate\textsuperscript{21} and
their increasingly precarious private circumstances and in that state of mind happily
embarked on the political equivalent of a lengthy Australian walkabout. In the meantime
others busied themselves over “the last three decades methodically unravelling and
destabilizing [public institutions]. . . the dikes laboriously set in place by our
predecessors . . . are we so sure [Judt asks] that there are no floods to come?\textsuperscript{22} The
obvious answer is that floods will come, and we have good reasons to believe that they
will be larger than those before, but the public capacity to foresee, forestall, or at least to
repair the damage may be only a distant memory of a competent civic culture that once
existed. How did this happen?

One answer has to do with the diminished expectations and performance of
those who profess to lead. On the ramparts of the economy one may still behold the
captains of finance and business strangely oblivious, in this age of information and
science, to the basic truths about how the earth works as a physical system, why such
knowledge, whether deployed or not, bears importantly on their management of the

\textsuperscript{21} That includes bridges, roads, water systems, schools that educate our children, public transportation, and might
have also included clean, efficient, high-speed rail systems found to be efficacious for many of the countries that
we whipped up on (a useful phrase from Muhammed Ali) in bygone wars.
\textsuperscript{22} Judt, \textit{op.cit.}, p. 224.
commerce of the nation, and why the quaint notion of civic obligation should still rouse their curiosity about possible connections between the two. In the academy, where they were once diligent and perhaps idealistic young scholars, we witness a Byzantine system of training and certification that could only anesthetize and deaden their otherwise burgeoning idealism.\textsuperscript{23} That instructional mechanism is further embedded in a vast system of ‘knowledge production’ that may indeed range between useless and harmful. Perhaps it is a small consolation to laborers in the vineyard of economics that the medical profession itself may not have crossed the breakeven point where by one estimate it made a positive contribution to the health of those it purported to serve until sometime early in the 20\textsuperscript{th} century.\textsuperscript{24} Before that time a visit to the Doctor actually lowered one’s chances of survival. The word is “iatrogenic,” meaning physician induced illness. To its legions of critics, it is not clear whether economics has graduated from of its iatrogenic phase or not. Leaving that question aside, however, it is a good time to examine the fundamentals of the discipline and what the great economist Joseph Schumpeter once called its “pre-analytic assumptions,” or what is now more casually called the unseen “elephant in the room,” a creature so taken for granted as to remain unnoticed, unremarked, and therefore unstudied, and unaccounted for.

Actually, there is a herd of elephants in the seminar room. Many of the factors that gave rise to the industrial economy, as noted, have changed or no longer exist. Things once presumed true are known to be less true than once believed or altogether false. Most important of these is the belief that fossil fuels are either inexhaustible or

\textsuperscript{23} The underwhelming pedagogical accomplishments of economists has been noted by their students who have organized under the banner “the International Student Initiative for Pluralist Economics” to assist their professors in forming a discipline better suited to the classroom and to the exigencies of the 21\textsuperscript{st} century. Phillip Inman, “Economics students call for a shakeup of the way their subject is taught.” The Guardian, May 4, 2014.

can be replaced by something even better. Imaginatively deployed faith, stubborn naiveté, and garden variety corruption have caused those in power to sit on their hands. Consequently, in the half century after the first Oil embargo we still do not have a coherent energy policy which means at this late hour we still have no *de jure* climate policy. So, the question of what will safely power the next economy remains unanswered. Whatever the source(s) they will not likely have the same return on investment or energy density that we got with oil early in the 20th century. They will also come with costs and consequences yet to be revealed. Other issues of policy have also been deferred, including how we remove from the ledger books—assuming that we do—the portion of fossil fuels that we cannot burn without laying waste to the human prospect on one hand or causing undue hardship on the other.25

Our energy choices will affect others, including the food system. Americans, for not altogether good reasons, pay comparatively less for food than everyone else on earth. But the true cost is hidden beneath multiple subsidies for energy, land, and capital that keep the costs of food artificially low. As a consequence one calorie of food on the plate requires between 11 and 70 calories of fossil energy to grow, transport, process, refrigerate, and cook.26 Further, climate instability will cause increasing havoc on farms from drought, heat, flooding, and novel ecological conditions. In Ohio, for example, we should not presume a perpetual flow of foods from distant farms at prices we can afford and at a volume that we need. Neither should anyone else. Similarly, the reality of growing water scarcity looms darkly over the future of the Southwest and in the

Mid-west, where agribusiness is earnestly draining the last half of the Ogallala aquifer.\textsuperscript{27} But the prospects are even more dismal in many parts of the Middle East, Africa, and South Asia affected by both permanent desiccation and rising sea levels.\textsuperscript{28}

Other, more technical, arcana in the arsenal of economics must also be recalibrated to different and more constraining realities. When the future was confidently thought to be provisioned by an unfailing cornucopia of plenty, investors could discount the likelihood of catastrophes thought to have more or less the same probability as an asteroid falling on Wall Street during its few hours of work. In less beneficent and less predictable times, however, the rate at which such events are “discounted” back to “net present value” requires much rethinking.\textsuperscript{29} Economists will long debate how the prospect of ill-tidings should be considered in making long-term financial decisions. Truth be told, no amount of academic quibbling over the appropriate discount rate relative to scarcely imaginable events at some time in the indistinct future can change the reality that the economic implications of climate destabilization are beyond mere human reckoning.\textsuperscript{30} But they are not less real or less consequential for being difficult to fathom with tolerable precision in advance of their occurrence. We are entering a period of extreme climate uncertainty that will stress economic theories and business practices fashioned for less demanding times.


In short, Adam Smith and those dutifully following in his tracks innocently presumed broad and continuing progress, measured by material conditions in tons, acre feet, cubic feet, square footage, sales, and above all, profits. They could confidently expect that such progress would continue far into the future sustained by presumably inexhaustible supplies of fuels, minerals, timber, soils, and bounty from the oceans. They could also expect stable ecosystems and a full range of natural services including climate stability. These conditions were simply taken for granted as well they should have been given the state of knowledge in their time and the much smaller scale of the population and the economy.\(^{31}\) Similarly, they were predisposed to assume the superiority of British and Western culture over all others. The proof was said to be in the pudding. They were empiricists, who having tasted the pudding, became optimists of the imperialismizing sort. Their ideas, culture, technologies, and economy were considered to be timeless, at least for a while.

Economic theory followed in due course. Virtually every assumption of classical and neo-classical economics, pre-analytic or otherwise, is an outgrowth of conditions existing at the dawn of the industrial world. Theory followed facts presumed to be immutable. Alas, reality has a persistent habit of making fools of those who presume too much.

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A great deal has changed. Against what appears to be an increasingly bleak horizon questions arise. We might pause to ask, for example, what useful economic theory might better fit our different circumstances and offer useful guidance for the

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31 David Ricardo for example once described “the original and indestructible powers of the land alongside other gifts of nature which exist in boundless quantity.” Quoted in Gilbert Rist, The Delusions of Economics. London: ZED books, 2011, p. 171.
perplexed? The issue, of course, is not whether we have an economy or not or even economic theory and a discipline called “economics,” but rather what kind of economy, operating by what rules, and who qualifies by virtue of what training and experience as a helpful guide on matters pertaining to the economy and its appropriate niche in the wider field of human ecology. It is worth noting as well that somehow previous societies somehow got along tolerably well without a specialized caste of economists. And some that we would deem primitive in all respects provided decent lives for its members entirely without a priesthood of economists and much that would be recognized as economic theory in any respectable economics department. In our far more complex world, however, economists can play a useful, if perhaps more muted, role than they presently do with, as John Maynard Keynes once proposed, the social standing roughly equivalent to that of dentists.

It would be presumptuous, however, to say what exactly what flag economists should rally around or the level of status they should rightly aspire to. Accordingly, I will eschew overreach and confine myself to what I think is obvious and noncontroversial and so risk violating the other pole of possible critical outrage, that of being tedious and boring. But in truth, the facts, ecological and economic, are well known making it all the more odd that they have not been applied with dispatch as remedies toward making a better and more durable economy. With those misgivings, I suggest an economics and resulting business practices oriented around four well-known principles.

1. The economy is a subsystem of the ecosphere and is thereby bound by its limits and is subordinate to the bio-geo-chemical cycles, energy flows, and ecological functions that govern the earth and the health of its constituent parts. But the relationship is entirely asymmetrical. The ecosphere has no need or affection for an unruly and ungrateful tenant and could proceed quite well through the subsequent billion years or so without the spindly-legged, big-brained, narcissistic, and perpetually delinquent upstart, that proudly calls itself *Homo sapiens*. The economy, in other words, must conform to the rules set by the larger system in which it is embedded or sooner or later cause its own destruction. The demands of the economy for resources and energy and for absorbing its waste products, including the ~100,000+ chemicals and all of their various combinations, must not exceed what the larger system or its component ecosystems can provide in perpetuity. Further, the larger system is known to be “non-linear,” unpredictable, and prone to sudden changes. To the alert and prudent, the possibility of nasty surprises would suggest the kind of precaution that keeps wide margins. For an accident-prone, juvenile species it would further suggest sobriety in our interventions in natural systems that we understand only imperfectly. Yet we seem to live in the faith, as biologist Robert Sinsheimer once put it, that nature lays no booby traps for unwary species.

The point is that no subsystem can grow indefinitely within its larger system without destroying itself and its host. “Perpetual growth,” someone once said, “is the

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34 Herman Daly, *op. cit.* is the most authoritative and accessible economist on the subject.
36 Since we are more ignorant than smart and probably always will be, the subject of ignorance should be studied closely by the learned. Other than, say, the book of Ecclesiastes the best book on the subject is that by Bill Vitek and Wes Jackson (eds), *The Virtues of Ignorance*. Lexington: University of Kentucky Press, 2008.
ideology of the cancer cell.” Nonetheless, the faith in endless economic growth and the continual material expansion on a finite and “full” planet, persists as the keystone myth of our time. The slightest mention of a “steady-state” economy, proposed by John Stuart Mill in 1848, typically triggers an avalanche of ridicule and the superior disdain of the pedigreed.\(^38\) The Limits to Growth published in 1972 is still widely dismissed as irretrievably errant which it is not.\(^39\) Beneath the surface of credentialed incredulity I suspect that there is something more at work that critics are loath to confess. As long as economies expand we can defer difficult and contentious issues such as the fair distribution of wealth, the effects of employment, and the effects of the things we make and sell to each other. When growth, measured as increasing quantity, ends—either because it collides with the finiteness of the earth or because we can no longer manage the rising complexity resulting from the massive scale of the growth economy—we will have to reckon with the many problems associated with the highly skewed distribution of wealth and its relation to domestic tranquility.\(^40\)

We will also have to reckon with the fact that we are not nearly as rich as we presume ourselves to be. The prices we have been paying seldom reflect the full costs of things purchased. Instead we have been offloading “external” costs onto others in some other place or at some other time.\(^41\) In Juliet Schor’s words: “When we finally and fully tally up the costs of fishery collapse, soil erosion, desertification, wildfires, loss of


\(^{40}\) Joseph Tainter, op.cit., and Homer-Dixon, op.cit.

tropical forests, toxic releases, and a mass extinction of species, the price tag will loom large. "42 Some costs such as climate destabilization, soil erosion, biological extinctions, and human exploitation beyond some point are simply beyond reckoning. Had we been on a pay as you go plan would we have industrialized differently? Or not at all? Or might we have "developed" in more modest ways? Such is the value of hindsight.

In the meantime all of the economic gauges, dials, and indicators record indiscriminate expansion as if it could go on forever. But it won’t and the reasons are well known. The four cubic miles/year of primeval goo dug up and burned each year to miraculously power the industrial economy is also its Achilles’ heel. In contrast to all previous civilizations ours is powered by the exploitation of a one-time endowment of fossil fuels—ancient sunlight heated, compressed, and rendered dense and portable by millions of years of geology. The vast scaffolding of the modern growth economy was erected, accordingly, on the flimsy faith that the endowment from the carboniferous age was inexhaustible and further that it could be burned with impunity, that is to say without cost to the health of people, land, wildlife, and waters. Americans accordingly increased their energy consumption 150-fold between 1850 and 1970.43 Virtually everything we make, use, eat, wear, build, refrigerate, light, and transport depends on burning fossil fuels. But fossil fuels did much more; they also changed our experience of the world. Night became day. Distance shrunk. Time was compressed. Fossil fuels are lodged in our muscle memory and psyche as the thrill of power and in our sense of space and time as the exhilaration of speed. Combustion changed how we think and what we think about. In some ways it made us a dumber people unable to think clearly about limits

and the work of repair, among other things. As historian Bob Johnson writes: “Having inadvertently skipped around the energetic limits to the solar economy, Americans became subsequently vaccinated against talk of ecological constraints.”

It was, however, a Faustian bargain and the devil will have his due. The carbon moved from where geology had safely stored it to the atmosphere where it will cause global havoc for a long time to come. But the deal was coming undone for other reasons as well. Energy analyst Richard Heinberg, for example, has tracked the energy it takes to find, extract, process, and transport energy otherwise called the energy return on investment (EROI). The evidence roughly parallels the declining rate of fossil fuel reserves revealing a marked decline in the energy return on the energy invested. A century ago a hundred units of energy could be extracted for the expenditure of one unit for exploration, drilling, mining, refining, and transport. The EROI for conventional oil is now ~25:1 and falling. It will continue to fall as energy deposits are discovered farther out, deeper down, and often in places where people don’t much like us. Without an outbreak of intelligence we will be stuck to a tarbaby of unsolvable, expensive, and interminable conflicts for decades to come. In other words, we blew through the easy stuff and now must spend more and more to reach, process, and fight for our access to what's left. Will we run out of oil, gas, and coal? Not likely, but we have already exhausted the cheap and easily accessible reserves and what remains will be bitterly

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44 Ibid., p. 12.
47 With people who refuse to fight by the Marquis of Queensbury’s rules of fair play.
fought over.\textsuperscript{48} As historian Bob Johnson writes: “In coming into our energy inheritance, we behaved badly . . . the modern self is in crisis, and so getting sober and waking up to where we have been during that spree might not be the worst place to start.”\textsuperscript{49}

Could we power our present civilization by hyper-efficiency and sunlight in its various forms? Optimists like Amory Lovins believe it is possible if we are smart enough to operate, as we could, with consistently flawless competence with better technology.\textsuperscript{50} I want very much to believe this to be true. Ozzie Zehner, on the contrary, writes: “little convincing evidence supports the fantasy that alternative-energy technologies could equitably fulfill our current energy consumption, let alone an even larger human population living at higher standards of living.”\textsuperscript{51} But even if we could, why would we want to? Why would we choose to maintain a standard of living based on waste, overconsumption, ecological ruin, fantasy, multiple addictions, exploitation of the powerless, growing inequality, and most assuredly, perpetual conflicts in distant places? In other words, why would we choose to do efficiently and with renewable energy many things that should not be done in the first place?\textsuperscript{52} But it may be possible for renewable energy to power a less frenetic society rebuilt around efficiency, social justice, frugality, and the long-term, one as Gandhi once said that met everyone’s needs but not their

\textsuperscript{49} Johnson, op. cit., 173-174.
\textsuperscript{50} Lovins et.al., \textit{Reinventing Fire}. Snowmass: Rocky Mountain Institute,
\textsuperscript{51} Ozzie Zehner, \textit{Green Illusions}. Lincoln: University of Nebraska Press, 2012, p. 169; In either case, “getting off fossil fuels . . . will be one of the most difficult challenges modern civilization has ever faced, and it will require the most sustained, well-managed, globally cooperative effort the human species has ever mounted.” Gernot Wagner and Martin Weitzman, \textit{Climate Schock: The Economic Consequences of a Hotter Planet}. Princeton: Princeton University Press, 2015, p. ix.
\textsuperscript{52} Wendell Berry writes “We must understand that fossil fuel energy must be replaced not just by ‘clean’ energy, but also by less energy. The unlimited use of \textit{any} energy would be as destructive as unlimited economic growth.” In \textit{Our Only World}. Berkeley: Counterpoint, 2015, p. 71.
greeds which are mostly generated by fears of one kind or another.\textsuperscript{53} Whether that society would be capitalist or something else altogether remains to be seen.

2. \textbf{A means, not an end}. The purpose of a good economy is to provide and fairly distribute sustenance for living such as food, water, shelter, and healthcare. It would also provide for basic services including education and infrastructure for transportation and communication. It would create the means by which everyone could reliably earn a decent livelihood by doing good and necessary work and thereby increase the competence and capabilities of people. Beyond basic needs, it would further encourage the arts, beauty, kindness, solace, and conviviality for everyone, not just the well-off. And in a decent economy prices would tell the truth by including all costs and externalities. But a good economy would not grow merely for its own sake. Nor would it be driven by the creation of artificial needs by advertising that preys on children and ruthlessly exploits our needs for status, affection, and connection.\textsuperscript{54} Robert Kennedy famously made the same point saying that:

\begin{quote}
Gross National Product counts air pollution and cigarette advertising, and ambulances to clear our highways of carnage. It counts special locks for our doors and the jails for the people who break them. It counts the destruction of the redwood and the loss of our natural wonder in chaotic sprawl. It counts napalm and counts nuclear warheads and armored cars for the police to fight the riots in our cities. It counts Whitman’s rifle and Speck’s knife, and the television programs which glorify violence in order to sell toys to our children. Yet the gross national product does not allow for the health of our children, the quality of their
\end{quote}


education or the joy of their play. It does not include the beauty of our poetry or
the strength of our marriages, the intelligence of our public debate or the integrity
of our public officials. It measures neither our wit nor our courage, neither our
wisdom nor our learning, neither our compassion nor our devotion to our country,
it measures everything in short, except that which makes life worthwhile.\textsuperscript{55}

Simon Kuznets the author of our present system of national accounts by which
we measure economic performance, less poetically noted that “the welfare of a nation
can, therefore, scarcely be inferred from a measure of national income.”\textsuperscript{56} Others, of
course, reply that growth directly or indirectly improves the lives of people and up to a
point and in some ways it does. But economic growth conceals all manner of
contradictory things as well as a large number of goods and services that are
deleterious to human well-being and to the larger human prospect. Capitalists, it is said,
will sell anything for a profit, but some things such as climate stability, human health and
dignity, sacred groves, children, and grandmothers should not be for sale at any price.\textsuperscript{57}

A good economy would also facilitate that vague but important indicator of social
health called happiness which is notoriously difficult to define and measure. But the U.S.
economy, on the contrary, generates high rates of depression, autism, loneliness,
violece, and addictions of various kinds which are easier to quantify. By reputable
measures happiness in America peaked in the 1950s when people had less stuff and
there was far less of it to buy.\textsuperscript{58} The rising gap between things possessed and flat-lined

\textsuperscript{55} Speech at the Kansas University, March 18, 1968.
\textsuperscript{58} Architect Lance Hosey reports that in 1994 “there were half a million different consumer goods for sale in the
happiness is an otherwise inexplicable embarrassment to those who believe that these
march in lock step. If that were true, along about 9 am on August 11th 1992 when the
Mall of America first opened its doors we would have crossed over into the state of
perpetual Nirvanic bliss. But we didn’t and that widening gap says a great deal about
the chasm between the needs of the economy and those of flesh and blood human
beings.

3. Nonviolence. If the economy is to exist harmoniously within the ecosphere, it
cannot do violence to the larger host system without fatal consequences to itself.
Neither can a durable and decent economy work by violence in its various forms without
harming the people it purports to serve and to the social and ecological conditions that
underwrite their well-being. A bit of perspective may help. Our economic ideas
originated in a culture with a long history of violence from religious crusades,
inquisitions, imperialism, militarization, the making and permanent threat to use nuclear
weapons, and continual wars over one thing or another. As a nation we grew rich from
the proceeds of violence done to people brought here as slaves and to displaced Native
Americans. Some benefited by doing great violence to landscapes, soils, forests, and
wetlands. Violence was implicit in the extractive economy that prospered by wrenching
wealth from earth and people alike. Violence was also present at the founding of
science. Frances Bacon, the founder of the Royal Academy of Sciences in London,
once described the method of science as putting “nature on the rack and torturing her
secrets out of her.” Ever since our motto has been, as William McDonough puts it, “if
brute force doesn’t work you’re not using enough of it.” The modern economy, in
particular, depends a great deal on the research, manufacture, and selling of more
efficient ways to kill. The defense budget including the cost of wars, “security,” surveillance, and 800 or more military bases worldwide exceeds a trillion dollars. Much of the economy depends on that constant, unquestioned, and well-distributed flow of largesse to defense contractors. We glorify violence in our movies, advertisements, politics, and sports, and all too easily overlook the violence happening in our name in places like Guantanamo, Abu Ghraib, and “black ops” sites where unnamed and unrepresented detainees are tortured for reasons that torture morality, logic, law, reason, bodies, and souls alike. That we have become a violent, gun-toting society, however, is no new insight. But violence also permeates the larger culture in less obvious ways. Our meat is mostly raised in animal gulags made efficient and profitable in direct proportion to the suffering inflicted on the confined animals. The application of machine intensive, industrial methods to agriculture lands has cost us upwards of half of our topsoil in the United States. Farms, forests, and private lawns are managed mechanically and chemically which is to say, violently. Modern medicine applies industrial methods to the human body. After a century of promiscuous chemistry every baby born in the U.S. arrives “pre-polluted” with several hundred chemicals delivered through the mother’s umbilical cord.\(^59\) We have indeed as Bacon advised in \textit{The Great Instauration} constrained and vexed nature . . . “forced [her] out of her natural state, and squeezed and moulded [her] . . . to the effecting all things possible.”\(^60\)

All the while other possibilities both economic and scientific existed. British economist, E. F. Schumacher writes: “Wisdom demands a new orientation of science and technology towards the organic, the gentle, the non-violent, the elegant and


beautiful." His proposal for “Buddhist economics” is premised on “simplicity and non-violence.” Non-violent methods of natural systems farming and forestry are well-known and known to be both practical and profitable. Similarly, biomimicry, the study of how nature makes virtually everything without combustion, toxic chemicals, pollution, and ecological ruin can transform methods of manufacturing. Some of the most promising methods of avoiding disease and healing represent a merger of Eastern and Western practice and philosophy.

4. Primacy of politics. The scale, purposes, and content of the economy are not first and foremost economic but political issues about “who gets what, when, and how.” The “economy,” accordingly, reflects the laws, regulations, tax policy, government budgets, and political customs by which wealth is created and distributed. Karl Marx thought otherwise arguing at considerable length and density that the political system is an outgrowth of the economy. With no small irony, many, if not most, neo-classical economists would agree that economics is more fundamental than politics and mostly determines political reality.

The relationship between the economic and political realms is certainly intimate and reciprocal, but if democracy really matters there can be no useful debate about their priority. The rules that govern the economy should be made publicly by properly elected representatives serving an informed electorate, not by an oligarchy meeting behind closed doors. The public should participate in decisions having to do with the distribution of wealth, risk, reward, and the sustainability of the entire human enterprise. They should be made aware of the connection between otherwise technical economic

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and fiscal decisions, taxation, purchasing, and investment and the social, political, and ecological consequences. To abdicate that responsibility and assign such decisions to the abstraction of the market, as economist Karl Polanyi once said “would result in the demolition of society.” 62 It is not only the decisions given over to abstract and distant powers, but a deeper crisis of people caught in an inhuman system. In Vaclav Havel’s words:

A person who has been seduced by the consumer value system, whose identity is dissolved in an amalgam of the accoutrements of mass civilization, and who has no roots in the order of being, no sense of responsibility for anything higher than his or her own personal survival, is a demoralized person. The system depends on this demoralization, deepens it, is in fact a projection of it into society. 63

The upshot is that most economic crises, recessions, depressions, and other perturbations are not accidents or anomalies, but rather the normal working out of the logic built into the rules of the economic system. Unrestrained and minimally regulated capitalism has led relentlessly to greater concentration of wealth, economic monopoly, and ever larger ecological, social, and political crises. But the system rules that inform the design, structure, and workings of the economy are seldom discussed publicly by economists in ways comprehensible to the lay public. In fact, “proficiency in obscure and difficult language,” as John Kenneth Galbraith once noted, “may even enhance a man’s professional standing.” 64 This may explain, in part, the public somnolence in the face of the widening chasm of wealth distribution and the lack of public accountability. In

the United States, by one report, the wealthiest twenty people have more wealth than the bottom half of the population which totals 152 million.\(^{65}\) Worldwide, 80 people have more net wealth than the bottom 3.6 billion.\(^{66}\)

Such facts would not have surprised Karl Marx who, with remarkable thoroughness, analyzed the dynamics of Capitalism and its tendency to concentrate wealth in fewer and fewer hands. French economist Thomas Piketty, in similarly exhausting detail, has updated the trends of income and wealth showing that “inequality reached its lowest ebb in the United States between 1950 and 1980” largely because of policies aimed to deal with the Depression and World War II. After 1980, however, inequality “exploded” mostly because of shifts in taxation and finance.\(^{67}\) Piketty is not a determinist as was Marx. Rather, he writes that “if we are to regain control of capitalism, we must bet everything on democracy.”\(^{68}\) The upshot is that inequality eats away at the social fabric of a democratic societies. As Richard Wilkinson and Kate Pickett show in *The Spirit Level*, virtually every bad social trend from crime to obesity is strongly linked to the unequal distribution of income and opportunity, risk and reward.\(^{69}\) The fact is that the global capitalist economy is trending toward greater concentration of wealth and is therefore increasingly prone to lurch from crisis to crisis compounded by growing public disaffection. It is widely believed that the collapse of the Soviet Union owed to flaws that do not afflict Capitalism. Were that reality could be so simple. In fact, Communism and


\(^{66}\) Oxfam Issue Briefing, January, 2015, p. 3.


\(^{68}\) Ibid., p. 573.

Capitalism share many similarities including their dependence on economic growth and an industrial paradigm rooted in a rationalistic philosophy that regarded the world as so much dead material waiting to be transformed to human use and then discarded without consequence. Both ideologies worship at the same alter, while in dispute about who owns the church. In the larger sweep of history this is a Lilliputian-scale dispute. Certainly different in important respects, but the flaws in both systems bear a family resemblance, causing thinkers as different as Vaclav Havel and Jane Jacobs to conjecture that the collapse of Capitalism cannot be far behind that of the Soviet Union.\textsuperscript{70}

Others are not so sure. David Harvey, for one, writes that “Capitalism will never fall on its own. It will have to be pushed. The accumulation of capital will never cease. It will have to be stopped. The capitalist class will never willingly surrender its power. It will have to be dispossessed.”\textsuperscript{71} Maybe so but others like ecologist, Howard Odum argue that “general systems principles of energy, matter, and information are operating to force society into a different stage in a long-range cycle.”\textsuperscript{72} Either way, the large numbers that drive historical trends—growing human discontent, declining energy return on investment, and the tyranny of unpaid full-costs—are converging toward a systems change.

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\textsuperscript{70} Jane Jacobs for example writes that “Today the Soviet Union and the United States each predicts and anticipates the economic decline of the other. Neither will be disappointed.” Cities and the Wealth of Nations. New York: Random House, 1984, p. 200.

\textsuperscript{71} David Harvey, The Enigma of Capital. New York: Oxford University Press, 2010, p. 260; Harvey, Seventeen Contradictions and the End of Capitalism. New York: Oxford University Press, 2014 in which he writes the “The only hope is that the mass of humanity will see the danger before the rot goes too far . . . .”, p. 293.

Fifty miles south of my home in Oberlin, Ohio the large and thriving Amish community in Holmes County earns its keep mostly by farming, construction, and craft work. They travel in horse drawn buggies with an effective range of eight miles and a hauling capacity of no more than several hundred pounds with a top downhill speed of 20 mph. They farm with horses, pay in cash, do not accept Social Security, insure themselves, care for their elders, preserve their community against long odds, and do well in good years and bad. They do not attend school beyond the eighth grade, but they are known to be lifelong readers and are the largest users of the Holmes County Library. As farmers, they are in Gene Logsdon’s words, a “great embarrassment to American agribusiness” that presumes farms must be large, capital intensive, specialized, subsidized, dependent on petrochemical “inputs,” and forgiven their sins against soils, waters, ecologies, groundwater, wildlife, public health, and posterity.73

For the Amish, farming is a family affair at the scale that a man can walk over in several hours situated in a supporting community for whom the word “neighbor” is a verb. The glue that holds the Amish community together originated with the Anabaptists four centuries ago and is a faith practiced daily and honed every Sunday in small congregations meeting in the homes of members. It is a tough love community that upholds its own but also shuns those judged to be wayward. It permits its adolescents time to experience the temptations of the outer world, but gathers most of the temporarily wayward back into the fold. Amish culture, in Gene Logsdon’s words:

resists financial chaos . . . fortifies individuals against their own frailty. The culture sanctifies the rural virtues that make good farming, or good work of any kind,

possible: a prudent practice of ecology, moderation in financial and material ambition, frugality, attention to detail, good work habits, interdependence (neighborliness), and common sense."  

They dress alike, simply and without show. They drive the same model buggy that, with proper repair, can last a lifetime. They follow neither fashion nor the latest trends. They mull over technological changes, like cell phones, for a long time before deciding whether to adopt or not. They are not good consumers and what they do purchase is mostly hardware and very practical. In other words, they control for the sin of pride and avoid the presumptions of large scale. They are pacifists and know how to forgive those who trespass.

They are also shrewd businessmen who do not put all of their eggs in one basket. A typical Amish farm will sell a dozen or more products throughout the year and will consistently make money when the conventional overcapitalized and less diversified ("English") farmers go broke. They make their own horse-drawn equipment in small shops employing a dozen or two and export to other farmers across North America. Like all farmers a century ago before the tidal wave of mechanization and specialization, Amish farmers know how to do a great many things. They are decent mechanics, builders, plowmen, veterinarians, and helpful neighbors. A few like David Kline in Holmes County, Ohio are also good writers.

The Amish are not a perfect community. They are patriarchal, conservative, and measured against the frenetic lives of the rest of America, their existence is

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74 Logsdon, *op cit*, pp. 132-133.
75 In *Amish Grace* the authors tell the moving story of Amish forgiving the killer and upholding his family following the massacre of ten Amish school girls at Nickel Mines, Pennsylvania in 2006. The story stands in bold relief against the present tsunami of religious hatreds and violence and counter hatred and violence. Donald Kraybill et.al., *Amish Grace*. New York: John Wiley & Sons, 2007.
inexpressibly dull. They don’t travel far or often. They refuse to watch television, or
tweet, google, and email. They do not exhibit themselves on Facebook. They do not
build vast cities or make F-16s, or fly off into space. Neither do they make nuclear
weapons, wage wars, acidify oceans, change the climate, and shortchange their
progeny. They make their presence on Earth with modesty, grace, and neighborliness.
The horse sets the speed limits of their society rather like the governor on a machine
and their common culture, grounded in applied Christianity, fences in their personal and
collective ambitions. They are an island in the vast sea of the modern world, much given
to novelty and stuck anxiously on an accelerating treadmill of change.

The Amish are also dismissed by the mainstream society as cute, quaint, and
rustic, fit mostly to be set pieces in a charming landscape to entertain the hordes of
restless tourists in their SUVs on a fall afternoon drive through “Amish country.” But we
might also find them to be instructive on matters that perplex the non-Amish. In
particular, they have, in their own way, solved problems that befuddle mainstream,
Nobel Memorial Prize-winning, neo-classical economists. For example, the Amish
economy is not particularly vulnerable to the booms and busts of the dominant global
economy. Second, they keep the accounting wide to include collateral and otherwise
non-monetized costs. They refuse the seductions labeled “economies of scale” and
thereby do not suffer the inefficiencies of efficiency—surely the most misleading word in
the English language. They do not inflict their “externalities” on others downstream or
downwind. Further, they have organized their society to maintain its small scale. When
any community grows too large, a part moves out and forms another community
elsewhere. No Amish community or church grows beyond the limits of people to know
each other as neighbors. There are no mega-Amish Churches and so little self-righteousness and commercialized proselytizing. Accordingly, they do not suffer much from the loneliness and isolation characteristic of the wider culture. Third, the Amish have avoided the pitfalls of consumer addiction. Unlike the mainstream American culture, the Amish see little television and so are not so exposed to the reported 5,000 daily commercial seductions and advertisements that keep others agitated and wanting. They are not good prey for those who would take them.

Further, they have a close and competent relationship with land, animals, and tools. They spend much of their time outdoors and so do not suffer from what Richard Louv calls “nature deficit disorder” and the boredom that thrives in a mostly indoor culture marinating in the ephemeral and virtual.76 Their sanity, in other words, is grounded in a particular place and in the practical necessities of living, not so much in getting and spending. Psychologists, therapists, personal trainers, and the tribe of improvers who thrive in New York or Santa Monica do not prosper in Amish country.

Finally, the Amish have controlled a problem largely ignored in the wider culture of sheer velocity and its corollary, carelessness. They are not addicted to speed and constant movement and so are mostly immune to the great American motion sickness. They provide, accordingly, little incentive to the sellers of fossil energy, or the highway sprawlers and uglifiers. It is worth noting that no car or pickup truck has ever been mauled by a horse-drawn Amish buggy, but sadly, the opposite is a common

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occurrence where truck, cars, and buggies share the same roads.\textsuperscript{77} Between living extensively, expensively, and fast or intensively, affordably, and deliberately the Amish long ago chose the latter. The result is a people rooted in place, who are neighborly, mutually supportive, and who know how to make do with what is at hand.

The Amish, imperfect as they are in some respects, are the best example we have of a sustainable and resilient economy and culture in the United States. But it is only one of many examples of cultural arrangements that have produced durable and prosperous economies in the absence of elaborate and ever-expanding and self-justifying theoretical paraphernalia of the dog-chasing-its-tail kind. There are many others. In his classic book \textit{The Wheelwright’s Shop}, George Sturt describes one of the last of the small firms that made wagons in rural Britain. His was a provincial business, catering to local farmers and so, he writes, “we got curiously intimate with the peculiar needs of the neighborhood . . . the dimensions we chose, the curves we followed were imposed upon us by the nature of the soil in this or that farm, the gradient of this or that hill, the temper of this or that customer or his choice perhaps in horseflesh.”\textsuperscript{78} Without a supportive community, Sturt admits that he would have “soon been bankrupt . . . if the public temper then had been like it is now—grasping, hustling, competitive.” But his clientele were reluctant “to take advantage of my ignorance” and he refused to lower the quality of the wagons he made.\textsuperscript{79} Sturt was part of a culture participating in “the age-long effort of Englishmen to fit themselves close and ever closer into England.”\textsuperscript{80}

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\textsuperscript{77} Mark C. Taylor, \textit{Speed Limits}. New Haven: Yale University Press, 2014; See also Peter Toohey, \textit{Bordom}. New Haven: Yale University Press, 2011 in an interesting insight into boredom in our time argues that “provide[s] an early warning signal that certain situations may be dangerous to our well-being.” p. 174.

\textsuperscript{78} George Sturt, \textit{The Wheelwright’s Shop}. Cambridge: Cambridge University Press, 1923/1984, p. 18.

\textsuperscript{79} Ibid., p. 53.

\textsuperscript{80} Ibid., p. 66.
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culture that retained long memories, celebrated its place, and created “special products and skills, its peculiarities of cultivation, its delicacies and local dishes.”\textsuperscript{81} Archeologist, Jacquetta Hawkes writes, “I cannot resist the conclusion that the relationship [between people and land] reached its greatest intimacy, its most sensitive pitch about two hundred years ago. By the middle of the eighteenth century men had triumphed, the land was theirs, but had not yet been subjected and outraged.” The common reaction is to dismiss such accounts as sentimental blindness, but as Hawkes writes, “it would be sentimental blindness of another kind to ignore the significance of its achievement—the unfaltering fitness and beauty of everything men made from the land they had inherited.”\textsuperscript{82}

I neither expect nor recommend that anyone having read the preceding paragraphs will rush out and join an Amish community or open a wagon-making business. I intend only to make the point once made by that great economist Kenneth Boulding, that “whatever is, is possible.”\textsuperscript{83} Amish economies and many others similar to that described by Sturt exist or once did not so long ago. They exist, therefore, as possible examples of community-scale frugality, resilience, stability, velocity, and practical competence—all accomplished within a coherent culture and without much help from professional economists, experts, and counselors. In each case and in varying ways competent people earned their livelihood at a human scale where commerce can be shaped and comprehended as a harmonious part of the larger whole.

\textsuperscript{81} Jacquetta Hawkes, \textit{A Land}. New York: Random House, 1951, p. 143.
\textsuperscript{82} \textit{Ibid.}, 144; Matthew B. Crawford, \textit{The World Beyond Your Head}. New York: Farrar, Straus and Giroux, 2015, pp. 209-246 describes a craft organ-maker along similar lines.
\textsuperscript{83} Attributed to the great economist, Kenneth Boulding.
The problem posed to us by the Amish and similar examples is not that we do not know about better alternatives, but that we don’t yet feel them as real possibilities, and we don’t feel them as anything more than idle curiosities because we still live in thrall to speed, accumulation, and convenience and believe that with still more clever technology we can get away with it—even as the biophysical and moral underpinnings of the old economy are disintegrating before our eyes. Nonetheless, it is still easier, as someone recently remarked, for us to envision the end of the world than the end of capitalism. The making of a better economy, capitalist or otherwise, hinges not only on our imagination to see what is untried yet possible but more important, our ability to recollect older and sometimes saner ways of doing things that were not so much improved upon as they were elbowed out of existence. But the tried and true is often discounted to yard sale prices and talk of anything before, say, 1995 or any form of communications that works slightly slower than the speed of light is to risk being thought irretrievably daffy. It is, in such times, clarifying to note, as the Welsh anthropologist Alwyn Rees once observed, “when you have reached the edge of an abyss, the only thing that makes sense is to step back.”

At this late hour standing on the edge of an abyss, is it possible to step back and still build a resilient, fair, prosperous and durable economy? The only useful answer is a contingent ‘yes.’ Contingent because the laws, regulations, tax system, politics, media, advertisers, habits of the herd, presumptions of doctrine, failures of imagination, and the sheer power of money madness stand athwart better possibilities and urgent matters of human survival. Contingent, also, because we Americans, believing ourselves to be

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84 The history is long and sad. The instances include the Highland clearances in Scotland, the Soviet and Chinese collectivization of peasant farmers.
God’s anointed, have not yet finally decided whether we wish one day to be known as history’s most zealous and prodigious consumers and the earth’s most earnest and ingenious wreckers or whether we wish to be celebrated for our art, literature, music, compassion, good humor, good schools, fairness, wise governance, great cities, the loveliness of our countryside, the health of our children, resilient prosperity, foresight, the life in our means of livelihood, and our fidelity to the cause of human dignity? Whichever we choose our economy, for better or for worse, will be the clearest portrait of who we are as a people and what we might—for better or worse—become. On such matters we remain divided.

Our cultural default is to be “optimistic” and fervently believe that “the future is better than you think.” Presumably it will be better partly because it requires no change in our aspirations and behavior, which is to say no deep improvement in us. The party, in other words, goes on, but with our sins absolved by “breakthrough” technologies. Such is the optimism on the edge or maybe just another form of whistling while passing the graveyard at midnight. Pure optimists as distinguished from the merely hopeful, have not a quiver of doubt about our capacity to get out of self-induced, technologically amplified, and increasingly complicated messes. They are happily situated in a wonderland of gee-whiz gadgery that purifies, generates, grows, and makes, and makes money which is, one may presume, the driver in the process. So, “considering the gravity” of our plight, they are loath to “reign in our imaginations,”

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86 As the great economist Nicholas Georgescu-Roegen once put it “man’s nature being what it is, the destiny of the human species is to choose a truly great but brief, not a long and dull, career.” Nicholas Georgescu-Roegen, The Entropy Law and the Economic Process. Cambridge: Harvard University Press, 1974, p. 304.
which mostly excludes political, ethical, moral, or even economic imagination. They are prone to celebrate, for example, the ingenuity of Coca-Cola’s recent breakthroughs in water conservation even as the Company prospers by depleting groundwater worldwide in order to sell more caffeinated sugared water in aluminum cans or plastic bottles to people who need fewer junk calories, much less sugar, but more hydration, nutrition, and local, not corporate, control of their lands, water, and lives. True to form, such optimists categorically dismiss dissenters as “luddites” who might cause us to backtrack to the Amish level and thereby miss the “vast” benefits “afforded by all this technology.”

One suspects, the actual history of the Luddite movement remains unread along with the companion volumes on Fukushima, Bhopal, endocrine disrupters, nuclear weapons, Gulags, and Auschwitz, as well as those yet to be written about the cozy and sinister relationship between the National Security Agency and its kin, the CIA, and the giant information technology companies. They long for “breakthroughs,” and with what must be either feigned innocence or world class naiveté, assume that if and when these occur they will have no hidden costs or impose no unforeseen collateral damages. They are technological fundamentalists whose manner of thinking, like that of other fundamentalists, is to offer one solution—more of the same—to all problems including those that are first and foremost deeply human, moral, and political. They do not deal in dilemmas which are not solvable.

Sobriety on such portentous issues is more difficult where things are new and still shiny, and there are few physical ruins and festering psychological wounds that remind the observant of human fallibility, stupidity, and, yes, evil. White America is still too young and too self-assured in the manner of adolescence to have been sufficiently

88 Ibid., 302-303.
tempered by the memory of screw-ups, malice, and the thousands of ways things fall apart or that counter-intuitive outcomes ruin the best laid plans.

If real improvements economic and other—do come, and I think they will, they must begin without the hallucinations and magical thinking that wishes away our history and overlooks the limits by carrying capacity, complexity, and our own ignorance. If and when improvements happen they will, I think, start at the periphery of power and wealth, in the places and situations that are too small to be noticed or too insignificant to attract organized enmity, rather like the mouse-scale mammals that once scurried between the feet of dinosaurs. In fact, the transition began decades ago in such places: neighborhoods and communities both rural and urban, here and elsewhere. It continues to gather force. But there is no overall strategy across a spectrum that includes people engaged in sustainable agriculture, slow foods, slow money, urban farmers, green builders, wind farmers, solar installers, bikers, inner-city businesses, environmental educators, pioneers and bioneers of all kinds, public servants, communicators, organizers, and those trying to level the economic playing field. In due course, this congregation from the periphery might transform the larger culture and someday, perhaps, they might cause tectonic political change as well.

I leave it to others better equipped and wiser than I to describe the critical macro changes that must eventually be made at the state and national level in such things as ownership, taxation, investment, finance, and public policy. But amidst promising

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shoots and hints of change we will need a compass to clarify our central convictions and serve as a reminder of what really matters. I know of none better than that once proposed by John Ruskin: “the great, palpable, inevitable fact—the rule and root of all economy—that what one person has, another cannot have; and that every atom of substance, of whatever kind, used or consumed, is so much human life spent . . . for every piece of wise work done, so much life is granted; for every piece of foolish work, nothing; for every piece of wicked work, so much death”\textsuperscript{92} Accordingly a good economy would:

- exist within the limits of human scale;\textsuperscript{93}
- give priority to sufficiency over efficiency;\textsuperscript{94}
- designate times when nothing is bought or sold except to save lives;
- help people grow, not them render hooked, dependent, and gullible;
- include debt forgiveness, the 50 year Jubilee, as a regular practice;
- provide good work that ennobles and dignifies;\textsuperscript{95}
- tax advertisements and ban those aimed to exploit children;\textsuperscript{96}
- prohibit all profits from the making and selling of weapons;
- distribute costs, risks, benefits fairly;


\textsuperscript{93} Kirkpatrick Sale, Human Scale. New York: Coward, McCann, & Geoghegan, 1980.
\textsuperscript{96} Robert and Edward Skidelsky define advertising as “the organized creation of dissatisfaction.” op.cit., p. 40; Clive Hamilton proposes to “ban advertising and sponsorship from all public spaces and restricting advertising time on television and radio.” And further change the tax laws that make it a deductible business expense. Clive Hamilton, Growth Fetish. London: Pluto Press, 2004, p. 219. Professor Hamilton is exceedingly polite. Dante would have consigned the makers, purveyors, and enablers to one of the lower tiers of Hell.
require that prices include the full life-cycle costs;

- help us transition from a having culture to a being culture\textsuperscript{97}

- protect common heritage of oceans, climate, wildlife, lands, waters.\textsuperscript{98}

These changes, however, will not and cannot begin in the market place alone or in debates about how best to further self-interest at any scale. They, by which I mean the conditions necessary to the survival of civilization, will require a larger scaffolding of laws, regulations, and understandings that mesh biophysical realities, inter-generational and inter-species morality, cultures, histories, and public engagement—something Herman Daly once described as macro control with micro variability. It is essential to the ordering principles necessary “in order to make [human] madness as little harmful as possible.”\textsuperscript{99}

\textsuperscript{97} Erich Fromm, To Have or to Be. New York: Bantam Books, 1976.


\textsuperscript{99} The words are from Blaise Pascal, Pensees.