FEAR OF FALLOWING
The specter of a no-growth world

By Steven Stoll

Discussed in this essay:
The Moral Consequences of Economic Growth, by Benjamin M. Friedman. Vintage. 570 pages. $16.95 (paper).

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stco shoppers navigate with carts broad enough to seat two children side by side. The carts had better be big. They need to haul gallon jars of mayonnaise, 117-ounce cans of baked beans, 340-ounce jugs of liquid detergent, and 70-ounce boxes of breakfast cereal. The coolers advertised for summer picnics hold 266 cans. Giant warehouse stores, shelved to the ceiling with goods from all the waters and forests of the world, make no excuses for consumption. But although Costco sells its goods in large packages, there is no item here that cannot be found at a corner grocery. So why don’t I lighten up and buy a pallet of mango salsa? Because thundering all around me is the scope and scale of American economic growth. Here it is possible to see the enormous throughput of the economy—its capacity to mobilize resources and energy and turn out waste. One store manager, on the floor for fourteen years, tells me he has seen eight pallets of paper towels move out the...
door in a single day. At forty packages to a pallet, twelve rolls to a package, this means nearly 4,000 rolls. I can hear the sound of chain saws laying off as falling trees cut the air somewhere high in the Cascades. The question that comes to my mind whenever I catch a glimpse of aggregate consumption is always the same: How can it last?

The question is a discomforting one. Consumption is the essence of economic growth, the sustained expansion in goods and services as measured by the gross domestic product. Economists credit growth for declining rates of child mortality, widening opportunities for education, and the continuing flow of new technology that in turn powers our ever greater productivity. Many trace the beginnings of growth to the seventeenth and eighteenth centuries, when war and revolution dismantled feudal states, opening up new social spheres in which individuals were free to pursue their private interests. Since then, growth has become intrinsic to how we understand progress. By the nineteenth century, machines that captured heat from burning coal radically magnified the scale of human labor, shattering a ceiling to accumulation that had defined agrarian societies since the domestication of wheat. In that hot glow, it became clear that increasing knowledge about the world would translate into increasing control over it. All those who felt their teeth rattle in their head as hundreds of looms shook the beams and floors of a water-powered factory, watching bolts of cloth roll out like eggs from a giant hen, walked away thinking that the human economy no longer possessed definite limits.

The earliest advocates of economic growth celebrated it as a physics of society, in which amplified production resulted in more robust consumption, causing an outward shift in wealth, investment, employment, and production—a positive feedback loop promising that most fundamental of human desires: a more durable existence. Political economists spoke an almost mystical language, claiming, in the words of Francis Amasa Walker in 1892, that “there never comes a time when more laborers will not produce larger harvests. There never comes a time when additional capital introduced into agriculture cannot secure for itself some return. Such is the condition under which the earth is cultivated by human labor, for the supply of human wants.” That wishful thought served as the blueprint of modernity, and no shortage or other crisis succeeded in rending it. For the past 250 years, the industrialized world has expanded and thrived on an escalating volume of material transferred from environments into commerce, manufacturing, construction, and agriculture. The raw stuff of the planet made growth possible, and growth, in turn, reshaped the way people thought about themselves, their communities, and the human condition itself.

Two important works of social history argue that the economic growth of the past century has created a distinctive political culture, particularly in the United States. The more recent is The Age of Abundance, in which Brink Lindsey, a vice president of the Cato Institute, the libertarian think
tank, peers at the past fifty years of American history through the prism of economic growth, reading its influence into housing, popular literature, religious ritual, and reality TV. Most of all, Lindsey sees abundance as having created a new cultural consensus based on a post-scarcity vision of the world. For generations, observers of society in the United States have wondered what unites us. Lindsey’s answer is boldly materialistic: we are united, he writes, by our affluence. “Across classes and religions and ethnic backgrounds, ‘enough’ proved an ever-receding horizon, and the common commitment to chase that horizon became the glue that held an increasingly pluralistic society together.” Lindsey argues that plenty has produced a new politics too, a shared libertarianism that remains unacknowledged by the major parties. To be American today, in Lindsey’s view, is to favor the widest possible margins for “economic and cultural competition.”

What about the environmentalists? Lindsey lumped them, along with most other anti-establishment critics, into what he labels the “Aquarian awakening,” a movement that has attacked mass affluence, failing to appreciate it as “a cultural achievement of the highest order.” Lindsey sympathizes with the Aquarians’ frustration, and even lauds the tolerance they introduced, but he finally interprets their rebellion as a predictable response to abundance itself and thus part of the overall narrative of its triumph. By arguing that environmentalism “came along like clockwork,” he ignores Ohio’s burning rivers, California’s oil spill, and London’s lethal smog, events that brought 20 million people (10 percent of the United States in 1970) to participate in the first Earth Day. Lindsey yields nothing to Rachel Carson, the marine biologist whose 1962 Silent Spring made. Some of his claims on this subject seem thin. A number of theills he cites (private militias, say, or anti-immigrant sentiment) appeared or worsened during Ronald Reagan’s presidency, when GDP increased by a remarkable 3.8 percent a year. Or take murder: when the economy surged after the end of World War II, murder surged with it, climbing from 4.6 per 100,000 people in 1950 to 10.2 in 1980, and, after showing no clear trend during the booming 1980s, it declined to levels not seen since the 1960s. The economy cannot explain both the rise and the fall.

Friedman makes a great deal of the correlation between the economy and crime, seeing an upsurge in hostility and anger among Americans—including anti-immigrant rhetoric, private militias, domestic terrorism, and waning sympathy for the poor—whenever incomes and GDP flatten out.*

On environmentalism, Friedman’s view is more nuanced than Lindsey’s. He takes seriously the need for environmental policy, and he has absorbed some of the thinking prevalent among industrial ecologists—that greater efficiency in resource use can prolong the supply of non-renewable metals and oil, holding out the possibility that substitutes will be found. Industrial ecology also aims to reduce or eliminate pollution. Friedman rightly associates higher national living standards with lower levels of air and water pollution, but here his political economy runs into difficulty. One reason that American cities are cleaner than they used to be is that heavy manufacturing is now concentrated in countries where corporations are bound by fewer environmental restrictions. We have externalized the externalities of our consumption, calling that an improvement in our quality of life. Friedman holds, along with Lindsey, that a basic materialism underlies tolerance and political civility, but he sees these social bonds as frighteningly tenuous. “I believe,” he writes, that the rising intolerance and incivility and the eroding generosity and openness that have marked important aspects of American society in the recent past have been, in significant part, a consequence of the stagnation of American middle-class living standards during much of the last quarter of the twentieth century.

Friedman makes a great deal of the environmental implications of either. But whereas economies might expand, ecosystems do not. They change—pine gives way to oak, coyotes arrive in New England—and they reproduce themselves, but they do not increase in extent or abundance year after year. Most economists think of scarcity as a labor problem, imagining that only energy and technology place limits on production. To harvest more wood, build a better chain saw; to pump more oil, drill more wells; to get more food, invent pest-resistant plants.

That logic thrived on new frontiers and more intensive production, and it held off the prophets of scarcity—from Thomas Robert Malthus to Paul Ehrlich—whose predictions of famine and shortage have not come to pass. The Agricultural Revolution that began in seventeenth-century England radically increased the amount of food that could be grown on an acre of land.
and the same happened in the 1960s and 1970s, when fertilizer and hybridized seeds arrived in India and Mexico. But the picture looks entirely different when we change the scale. Industrial society is roughly 250 years old: make the last ten thousand years equal to twenty-four hours, and we have been producing consumer goods and CO₂ for only the last thirty-six minutes. Do the same for the past 1 million years of human evolution, and everything from the steam engine to the search engine fits into the past twenty-one seconds. If we are not careful, hunting and gathering will look like a far more successful strategy for survival than economic growth. The latter has changed so much about the earth and human societies in so little time that it makes more sense to be cautious than triumphant.

Although food scarcity, when it occurs, is a localized problem, other kinds of scarcity are already here. Groundwater is alarmingly low in regions all over the world, but the most immediate threat to growth is surely petroleum. The world consumption of oil is 84 million barrels a day. American cars alone consume 21 million. Yet even though worldwide production has peaked and prices now hover around $100 per barrel, there is no substitute for oil—nothing stands ready to replace even 10 percent of present consumption. Fossil fuels underwrite our material lives. Long before we deplete all known deposits, their escalating cost could make our highly dispersed, energy-intensive economic geography unworkable. Oil is not simply implicated in everything we call growth. There has never been growth without it.

Consider, too, the world’s fisheries. The planetary marine catch increased from 19 million tons a year in 1950 to 80 million tons by 1990. Seventy percent of the world’s top saltwater fish species are now considered overexploited or fully exploited. The harvest of Atlantic cod, in particular, peaked and began to decline in 1970. In 1991 the cod fishery collapsed; fleets went out to the Georges Bank off the coast of Newfoundland to find nothing. The government of Newfoundland has been intermittently closing its two largest fisheries since the early 1990s to build up the spawning biomass to its long-term average. The catch is kept at a level below the average rate of reproduction. It will never again exceed it. Fishermen now catch fewer fish than they did in 1950, when the expansion began. The limiting factor, in other words, is no longer tools but natural capital. The cod themselves now determine the size of the industry. In an economic sense, the cod fishery is now in stasis.

Newfoundland and its fishing communities represent a shift in the direction and purpose of investment, one that might soon spread to the entire economy. Since the 1770s capitalists have learned to invest in the limiting factor of production in order to maximize productivity. In the past that always meant improving the tools of the take, but it now means something different—enhancing natural capital, the new limiting factor. Herman Daly, an economist at the University of Maryland, finds a precedent in “fallowing,” or the practice of letting land regenerate after a period of cultivation. Fallowing is investment in short-term non-production in order to maintain long-term yields. Daly applies the same idea to every renewable resource: “Leave it alone. Let it grow in order to slow or reduce the exploitation. This conforms perfectly to the economic definition of investment—a reduction in present consumption in order to increase a future capacity to consume.” Of course, this is not the way that economists—let alone bankers or bond traders—think of investment. Fallowing is investment without growth, and in our current economic mindset, lack of growth is tantamount to the end of progress.

What would it mean to live in a no-growth economy? How might that change the culture of abundance? In Deep Economy, Bill McKibben—an essayist and frequent contributor to many publications, including this one—argues against the troubled union between more and better. For the poor everywhere, for economic refugees from the blighted Chinese countryside who now assemble DVD players in Guangdong, more is certainly required. But the requirement is surprisingly modest. Once people...
have the security of enough food, adequate shelter, access to education, and consumer goods sufficient to allow them to be comfortable and productive, more ceases to be better; it ceases to increase happiness, as McKibben goes to lengths to argue. Surveys over the past six decades have found that Americans’ happiness peaked in the 1950s. It fell five percentage points between 1970 and 1994, even amid the flush times of the Clinton boom. Americans report every imaginable familial and occupational misery regardless of their burgeoning possessions. In the United Kingdom and Japan, economies that expanded powerfully after World War II, satisfaction has remained flat in spite of all the consumer electronics, cable TV stations, first-rate food, and designer clothing now available. The point is not that growth has caused depression and anxiety, writes McKibben, “only that it didn’t alleviate them.” Growth should meet basic needs because these really do create happiness, but beyond that, it fails to deliver.

The liquidation of natural capital for export profits will not last. China is spending spectacular sums to clean up its air and water, yet McKibben quotes the deputy environment minister admitting that the great economic miracle “will end soon because the environment can no longer keep pace.” Growth at such an expense is not economic, as Daly puts it, but uneconomic—greater in its negative externalities than in its positive returns. Our failure to grasp this distinction is embedded in our measure of GDP. An automobile accident, a sudden rise in cancer cases, a toxic-waste spill—all of these require services to be rendered, wages to be paid, and materials to be acquired, so they all contribute to GDP, whereas the steady erosion of a country’s resources, its species, and its open spaces—all crucial assets—do not detract from it. As McKibben writes, “Growth is no longer making people wealthier, but instead generating inequality and insecurity.”

_Deepeconomy_ is about solutions, and its most pointed solution is community autonomy. By separating production from consumption on such a scale, globalization since the eighteenth century has allowed people to live off the fruits of faraway places without having to absorb the societal costs, like buying groceries with someone else’s credit card. Community thinking, by contrast, stresses the internalizing of resources and consequences. Rather than depend on the deforestation of some other place for food, to what extent can a town dedicate its own land for its own needs? What would we do if energy came from our own solar budget, our own forests, our own thermal sinks in our own back yards—not from Nigeria or West Virginia? In a world reeling from the effects of export capitalism, nothing could be more stable than people taking responsibility for their own demands on the biosphere. An economist might counter that no town or county can fulfill all its own needs. True, but each reduction in the number of imported goods—and the distance they travel—makes a community both more autonomous and more accountable.

McKibben believes that we can thrive, not just survive, without growth. The view may not be popular, but it is gaining. Robert Solow, who won the Nobel Prize in economics in 1987 for innovations in growth theory, now calls himself “agnostic” as to whether growth can continue, and is cheerfully willing to contemplate a zero-growth economy. As Solow said to me, “There is no reason at all why capitalism could not survive without slow or even no growth. I think it’s perfectly possible that economic growth cannot go on at its current rate forever.” This does not mean that productivity will cease to increase our quality of life; it means that people might find it increasingly costly to turn productivity into the kinds of things they are now accustomed to buying with their earnings. “It is possible,” says Solow, “that the United States and Europe will find that, as the decades go by, either continued growth will be too destructive to the environment and they are too dependent on scarce natural resources, or that they would rather use increasing productivity in the form of leisure... There is nothing intrinsic in the system that says it cannot exist happily in a stationary state.”

A stationary state. The term comes from John Stuart Mill, who argued, in 1848, that “the increase of wealth is not boundless.” Economists should know, said Mill, that “at the end of what they term the progressive state lies the stationary state, that all progress in wealth is but a postponement of this.” A steady-state economy no longer increases its physical stock of wealth. We could take 1 or 2 percent of a forest or fishery a year without cutting into its reproductive capacity, a rate that would “bring finance into balance with the real underpinnings of finance,” according to Herman Daly. He comes up with the same rate for future productivity as a result of technological progress: it is also on the order of 1 or 2 percent a year, though it could go higher. The big lesson is that technological civilizations have arcs of expansion, and although for the past 250 years they have created an enormously more complex material world than that of hunter-gatherers, in the end both reach their stationary states—the point at which they cannot expand without grinding down natural capital.

We will likely look back at the period between 1600 and 2050 as the Era of Expansion. The first date marks the beginning of surplus agriculture in England, when its population began to climb out of famine, when agrarian people all over the world entered a phase of wildfire frontier settlement, and when capitalism appeared. The second date marks the year when present trends in consumption will reach a level equal to double the earth’s capacity, requiring a second planet. The U.N. projects that the number of humans will increase by 36 percent between now and 2050, to around 9 billion. Rising population will offset any savings from improved efficiency and any reduction in per-capita consumption. As the advocacy group World Watch has pointed out, even if Americans were to eat a fifth

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less meat per capita by 2050, total U.S. meat consumption would be 5 million tons greater in 2050 simply because there will be more people. Economists have long insisted that wealth is not zero-sum, that it can be created. Yet if the biophysical capacity of the earth comes under strain, the wealth of one nation might grow only at the expense of others. China and India now demand an increasing share of the energy and resources that the United States and Europe once claimed for themselves, triggering unprecedented oil prices that reverberate throughout the global economy.

Lindsey and Friedman both fasten our freedom and equality to our abundance, but the conditions that made possible the twentieth-century formula are quickly vanishing. If ecological economists are right, we simply have no choice but to think about how to maintain social tolerance without continued physical expansion. There is no guarantee that an economic transition won’t bring resentment and hatred to the surface, as during the Great Depression, when totalitarianism from the right and left attracted vocal advocates. But we can take solace in the simple truth that societies change, and that they cannot choose the circumstances or the conditions that force change. It may seem unrealistic to imagine our culture adopting a new energy regime, or large-scale resource recycling; but both are less far-fetched than the notion that we can maintain the status quo into the distant future.

At Costco, when I ask a manager to point out items that come from recycled material or that save energy—items, in other words, that represent fewer inputs from the environment and higher efficiency—he looks deep into the cavern before answering, as though he is divining something in the shelves. “We have over 3,000 items here,” he says finally. He directs me to look at individual packages. I notice a number of “Energy Star” appliances, a selection of compact fluorescent lightbulbs, and salmon farmed in Canada. But not one of the paper products indicates post-consumer content, and just about everything else is made from (or powered by) petroleum. The twenty or so items that represent “less” and not “more” offset about as much as a kitchen sponge tossed into the Atlantic. And yet Costco is not an offender so much as a bellwether, indicating that Americans are heading in two directions at once. They have accepted efficiency as the soul of what it means to be green, but they have not yet recognized a biophysical limit on the scale of their consumption. The end of growth will not mean the end of progress, to the extent that we can redefine progress as consisting of something other than accumulation. Instead, we can accept our limitations, view progress as the creation of efficiency rather than wealth, and work for just institutions even when lean times come.

March Index Sources
1 U.S. Bureau of Economic Analysis; 2 United Nations Statistics Division (N.Y.C.); 3 4 The Economist (London); 5, 6 Economic Research Service, U.S. Department of Agriculture; 7 International Council of Shopping Centers, Inc. (N.Y.C.); 8 Global Insight, Inc. (Lexington, Mass.); 9 Turner Enterprises, Inc. (Atlanta); 10 Frank De Blase, Rochester City Newspaper (Rochester, N.Y.); 11 TASER International (Scottsdale, Ariz.); 12 U.S. Federal Bureau of Investigation; 13, 14 Prince & Associates (Redding, Conn.); 15 BMIR Sports (London); 16 George J. Mitchell (N.Y.C.); 17 Jack Darles, University of South Florida (Tampa); 18 Barbara Prudhomme White, University of New Hampshire (Durham); 19, 20 Kforce Government Solutions, Inc. (Fairfax, Va.); 21, 22 The Chronicle of Higher Education (Washington)/Harper’s research; 23 Tiger Athletic Foundation, Louisiana State University (Baton Rouge); 24, 25 U.S. Army Corps of Engineers (New Orleans); 26, 27 The Gallup Poll (Washington); 28, 29 U.S. Social Security Administration; 30, 31 Eric G. Campbell, Massachusetts General Hospital (Boston); 32 U.S. Office of Management and Budget; 33Attrition.org (Denver); 34 Unggi Yoon, Suwon District Court (Suwon, South Korea); 35, 36 Korea Service Driver Society (Seoul); 37 McKay & Sisters (Milan); 38 U.S. Defense Intelligence Agency; 39, 40 Google Inc. (Mountain View, Calif.).

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