

# Fear of Falling: The Specter of a No-Growth World

By

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Our trouble lies in a simple confusion, one to which economists have been prone since the beginnings of the Industrial Revolution. Growth and ecology operate by different rules. Economists tend to assume that every problem of scarcity can be solved by substitution, by replacing tuna with tilapia, without factoring in the long-term environmental implications of either. But whereas economies 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.

The 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 17<sup>th</sup> 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 24 hours, and we have been producing consumer goods and CO<sub>2</sub> for only the last 36 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 last 21 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 of 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% 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 % 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 maximise the productivity. In the past that always meant improving the tools of the trade, but it now means something different—enhancing natural capital, the new limiting factor. Herman Daly, an economist at the U. 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 last six decades have found that Americans’ happiness peaked in the 1950s. It fell 5% 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 need because these really 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.”

Deep Economy is about solutions, and its most pointed solution is community autonomy. By separating production from consumption on such a scale, globalization since the 18<sup>th</sup> century has allowed people to live off the fruits of far-away 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 forest 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 country can fulfil 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 not reason at all why capitalism could not survive without slow or even no growth. I think it is 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 run productivity into the kinds of things they are now accustomed to buying with their earnings. “It is possible,” says Solow, “that the US 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, “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 % 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 % 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 UN projects that the number of humans will increase by 36% 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 less meat per capita by 2050, total

US 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 US 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 20<sup>th</sup> 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 light bulbs, 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 20 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 limitation 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.

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