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The Bridge at the Edge of the World

James Gustave Speth

Capitalism, the Environment, and Crossing from Crisis to Sustainability

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2 Modern Capitalism: Out of Control

Is anything in our society more faithfully followed than economic growth? Its movements are constantly watched, measured to the decimal place, deplored or praised, diagnosed as weak or judged healthy and vigorous. Newspapers, magazines, and cable channels report endlessly on it. It is examined at all levels—global, national, and corporate. In just a tiny sample of business news stories appearing in the summer of 2006, the *Financial Times* reported, "The world is set to enjoy a fifth record year of high growth next year"; *Business Week* noted, "If oil keeps flowing, [U.S.] growth will, too"; and the *Wall Street Journal* headlined, "Google sees content deal as key to long-term growth."[1] And, indeed, the world in the middle of the first decade of the twenty-first century has been growing—the global economy at about 5 percent a year, the United States at about 3.5 percent, the OECD as a whole at about 3 percent. At 5 percent a year, the world economy would double in size in fourteen years.

The Growth Imperative

Promoting growth—achieving ever-greater economic wealth and prosperity—may be the most widely shared and robust cause in the world today. Economic growth has been called "the secular religion of the advancing industrial societies."[2] Leading macroeconomists declare it the summum bonum of their craft.

Consumption spurs growth, and to keep consumers motivated, advertising expenditures globally have expanded even faster than the world economy. The *Economist* editorialized in 2006 "in praise of America's fearless consumers of new ideas and products."[3] And when Americans' zeal to consume slackens, U.S. consumers are implored to go shopping, even by the president, as George W. Bush did after 9/11 and again just before Christmas in 2006. Looking ahead to 2007, *Business Week* assured its readers that they could "count on [American] consumers to keep spending."[4] That proved a good prediction. By June 2007, the *Financial Times* could write that a "sharp rise in consumer spending heralds [a] strong rebound in U.S. growth."[5]

When one wants to kill a proposal for government action, the most effective argument is that it will hurt the economy, exactly what President Bush said when he rejected the international climate treaty's Kyoto Protocol early in his administration.

It is not enough just to grow. Economies are judged by how rapidly they grow. To read the harsh criticism in the business press, one would think that Japan had recently experienced a prolonged depression or at least recession. In fact, between 1990 and 2005 Japan grew at 1.3 percent a year—not the 2.5 percent to 3.5 percent expected in the United States and Europe, but still not a downturn. Japan is, in fact, an interesting case of prolonged slow growth, suggesting that such a thing is possible.[6]

Understanding growth and how to keep it up is what modern-day macroeconomics is all about. Paul Samuelson and William Nordhaus are explicit about this in their justly famous text *Macroeconomics.*

"Above all," they write, "macroeconomics is concerned with economic growth. . . . The major macroeconomic goals are a high level and rapid growth of output, low unemployment, and stable prices. . . . Two issues have dominated macroeconomics since its birth: the need to reduce the instability of the market economy . . . and the desire to increase a nation's rate of growth of output and consumption."[7]

In a remarkable passage of his environmental history of the twentieth century, *Something New under the Sun*, historian J. R. McNeill writes that the "growth fetish" solidified its hold on imaginations and institutions in the twentieth century: "Communism aspired to become the universal creed of the twentieth century, but a more flexible and seductive religion succeeded where communism failed: the quest for economic growth. Capitalists, nationalists—indeed almost everyone, communists included—worshiped at this same altar because economic growth disguised a multitude of sins. Indonesians and Japanese tolerated endless corruption as long as economic growth lasted. Russians and eastern Europeans put up with clumsy surveillance states. Americans and Brazilians accepted vast social inequalities. Social, moral, and ecological ills were sustained in the interest of economic growth; indeed, adherents to the faith proposed that only more growth could resolve such ills. Economic growth became the indispensable ideology of the state nearly everywhere.

"The growth fetish, while on balance quite useful in a world with empty land, shoals of undisturbed fish, vast forests, and a robust ozone shield, helped create a more crowded and stressed one. Despite the disappearance of ecological buffers and mounting real costs, ideological lock-in reigned in both capitalist and communist circles. . . . *The overarching priority of economic growth was easily the most important idea of the twentieth century.*"[8]

There is more debate over the relative priority of economic growth in Europe than in the United States. Frequent targets of Europe's pro-growth economic reformers are the Continent's shorter workweeks, its longer vacations, and the job security and social welfare policies of European governments. The "reform" battle presses on in France and elsewhere; the *New York Times* reports that there are "large European populations ready to explode in furious opposition when changes [in these policies] are presented to them."[9]

In the United States, it is growth at any cost. "Ours is the Ruthless Economy," Samuelson and Nordhaus write in *Macroeconomics*. "People are increasingly judged on their current productivities rather than past contributions. Old-fashioned loyalty to firm or community counts for little. Suppose a firm finds it profitable to lay off 1000 workers, or moves from New England to the Sunbelt, or moves from the Sunbelt to Mexico. It is likely to move in the relentless pursuit of profits . . . and as a protection against another firm gaining a competitive advantage. Market-oriented economists will tell you that inequality is the price we pay for invention—that you can't make an omelet without breaking eggs. This hardheaded focus on efficiency pays no mind to the incomes of laid-off workers, of bankrupt firms, of crumbling cities, or of nations or regions which lose their comparative advantage.

"A closer look finds a silver lining behind this ruthlessness of the marketplace. With increased foreign competition, deregulation of many industries, and labor unions at their weakest since the Great Depression, labor and product markets have nowadays become increasingly competitive. With more vigorous competition, America's macroeconomic performance has perceptibly improved."[10]

One final point on growth is its geography. Although it is certainly true that the highest growth rates and much of the recent expansion of the world economy has been in Asia, the advanced OECD economies still loom large in the picture. Between 1980 and 2005, 70 percent of the growth in the world economy occurred in the nations of the OECD.

Growth versus Environment

The relation between economic gains and environmental losses is close, as McNeill notes. The economy consumes natural resources

(both renewable and nonrenewable resources), occupies the land, and releases pollutants. As the economy has grown, so have resource use and pollutants of great variety. As Paul Ekins says in *Economic Growth and Environmental Sustainability*, "the sacrifice of the environment to economic growth . . . has unquestionably been a feature of economic development at least since the birth of industrialism."[11] We saw in detail in Chapter 1 that this sacrifice has been and remains enormous.

Growth is traditionally measured as an increase in Gross Domestic Product, and GDP growth is what is meant here by growth. It has given much of the world remarkable material progress—progress in the things that economies can produce and money can buy—but this prosperity has been and is being purchased at a huge environmental cost. McNeill reports the following increases over the century from the 1890s to the 1990s:[12]

World economy	up	14 fold
World population	up	4 fold
Water use	up	9 fold
Sulfur dioxide emissions	up	13 fold
Energy use	up	16 fold
Carbon dioxide emissions	up	17 fold
Marine fish catch	up	35 fold

Such trends continue into the present. Over the past quarter century—a period during which major environmental programs were in place and operational in many countries—the following increases occurred globally on average each decade from 1980 to 2005:[13]

Gross world product	46 percent
Paper and paper products	41 percent
Fish harvest	41 percent
Meat consumption	37 percent
Passenger cars	30 percent
Energy use	23 percent
Fossil fuel use	20 percent
World population	18 percent
Grain harvest	18 percent
Nitrogen oxide emissions	18 percent
Water withdrawals	16 percent
Carbon dioxide emissions	16 percent
Fertilizer use	10 percent
Sulfur dioxide emissions	9 percent

Each of these indicators measures environmental impact in some way, and each shows that impacts are increasing, not declining. It is significant that these growth rates of resource consumption and pollution are lower than the growth of the world economy. The eco-efficiency of the economy is improving through "dematerialization," the increased productivity of resource inputs, and the reduction of wastes discharged per unit of output. However, eco-efficiency is not improving fast enough to prevent impacts from rising. Donella Meadows summed it up nicely: things are getting worse at a slower rate.[14]

What the environment cares about, moreover, is not the rate of growth but the total loading. These loadings—for example, the amount of fish harvested—were already huge in 1980, so that even modest growth per decade produces large increases in environmental impacts—impacts that were already too large. By 2004, the world was consuming annually 369 million tons of paper products, 275 million tons of meat, and 9 trillion tons of fossil fuels (in oil equivalent). Freshwater for human use was being withdrawn from natural supplies at a rate of about a thousand cubic miles a year.

Behind these numbers is the phenomenon of exponential expansion. A dominant feature of modern economic activity is its exponential growth. A thing grows linearly when it increases by the same quantity over a given time. If college tuition goes up three thousand dollars a year, the increase is linear. A thing grows exponentially when it increases in proportion to what is already there. If college tuition goes

up 5 percent a year, the increase is exponential. The modern economy tends to grow exponentially because a portion of each year's output is invested to produce even more output. The amount invested is related to the amount of the economic activity. Food production, resource consumption, and waste generation also increase because they are linked to population and output growth.

Or so it has been thus far. But what of the future? The world economy is poised for explosive exponential economic growth. It could double in size in a mere fifteen to twenty years. So the potential is certainly present for large and perhaps catastrophic increases in environmental impacts in a period when they should be decreasing rapidly.

There are many good reasons for concern that future growth could easily continue its environmentally destructive ways. First, economic activity and its enormous forward momentum can be accurately characterized as "out of control" environmentally, and this is true in even the advanced industrial economies that have modern environmental programs in place. Basically, the economic system does not work when it comes to protecting environmental resources, and the political system does not work when it comes to correcting the economic system.

Economist Wallace Oates has provided a clear description of "market failure," one reason the market does not work for the environment: "Markets generate and make use of a set of prices that serve as signals to indicate the value (or cost) of resources to potential users. Any activity that imposes a cost on society by using up some of its scarce resources must come with a price, where that price equals the social cost. For most goods and services ('private goods' as economists call them), the market forces of supply and demand generate a market price that directs the use of resources into their most highly valued employment.

"There are, however, circumstances where a market price may not emerge to guide individual decisions. This is often the case for various forms of environmentally damaging activities. . . . The basic idea is straightforward and compelling: the absence of an appropriate price for certain scarce resources (such as clean air and water) leads to their excessive use and results in what is called 'market failure.'

"The source of this failure is what economists term an externality. A good example is the classic case of the producer whose factory spreads smoke over an adjacent neighborhood. The producer imposes a real cost in the form of dirty air, but this cost is 'external' to the firm. The producer does not bear the cost of the pollution it creates as it does for the labor, capital, and raw materials that it employs. The price of labor and such materials induces the firm to economize on their use, but there is no such incentive to control smoke emissions and thereby conserve clean air. The point is simply that whenever a scarce resource comes free of charge (as is typically the case with our limited stocks of clean air and water), it is virtually certain to be used to excess.

"Many of our environmental resources are unprotected by the appropriate prices that would constrain their use. From this perspective, it is hardly surprising to find that the environment is overused and abused. A market system simply doesn't allocate the use of these resources properly."[15]

Political failure perpetuates, indeed magnifies, this market failure. Government policies could be implemented to correct market failure and make the market work for the environment rather than against it. But powerful economic and political interests typically stand to gain by not making those corrections, so they are not made or the correction is only partial. Water could be conserved and used more efficiently if it were sold at its full cost, including the estimated cost of the environmental damage of overusing it, but both politicians and farmers have a stake in keeping water prices low. Polluters could be made to pay the full costs of their actions, in terms of both damages and cleanup, but typically they do not. Natural ecosystems give societies economic services of tremendous value. A developer's actions can reduce these services to society, but rarely does the developer pay fully for those lost services.

Governments not only tend to shy away from correcting market

failure but exacerbate the problem by creating subsidies and other practices that make a bad situation worse. In *Perverse Subsidies,* Norman Myers and Jennifer Kent estimate that governments worldwide have established environmentally damaging subsidies that amount to about $850 billion annually. They conclude that the impact of these subsidies on the environment is "widespread and profound." They note: "Subsidies for agriculture can foster overloading of croplands, leading to erosion and compaction of topsoil, pollution from synthetic fertilizers and pesticides, denitrification of soils, and release of greenhouse gases, among other adverse effects. Subsidies for fossil fuels aggravate pollution effects such as acid rain, urban smog, and global warming, while subsidies for nuclear energy generate exceptionally toxic waste with an exceptionally long half-life. Subsidies for road transportation lead to overloading of road networks, a problem that is aggravated as much as relieved by the building of new roads when further subsidies promote overuse of cars; the sector also generates severe pollution of several sorts. Subsidies for water encourage misuse and overuse of water supplies that are increasingly scarce. Subsidies for fisheries foster overharvesting of already depleted fish stocks. Subsidies for forestry encourage overexploitation at a time when many forests have been reduced by excessive logging, acid rain, and agricultural encroachment."[16]

We live in a market economy where prices are a principal signal for guiding economic activity. When prices reflect environmental values as poorly as today's prices do, the system is running without essential controls. And there are other problems too, discussed shortly. Today's market is a strange place indeed. At the core of the economy is a mechanism that does not recognize the most fundamental thing of all, the living, evolving, sustaining natural world in which the economy is operating. Unaided, the market lacks the sensory organs that would allow it to understand and adjust to this natural world. It's flying blind.

This problem of political failure is exacerbated in our era of globalization and international competition. One of globalization's foremost analysts, Thomas Friedman, has described what he calls "the golden straitjacket." "When your country . . . recognizes the rules of the free market in today's global economy, and decides to abide by them, it puts on what I call 'the Golden Straitjacket.' . . . As your country puts on the Golden Straitjacket, two things tend to happen: your economy grows and your politics shrinks. That is, on the economic front the Golden Straitjacket usually fosters more growth and higher average incomes—through more trade, foreign investment, privatization and more efficient use of resources under the pressure of global competition. But on the political front, the Golden Straitjacket narrows the political and economic policy choices of those in power to relatively tight parameters."[17] *Business Week* struck a similar theme in a cover story in 2006, "Can Anyone Steer This Economy?" Its conclusion? "Global forces have taken control of the economy. And government, regardless of party, will have less influence than ever. . . . Globalization has overwhelmed Washington's ability to control the economy."[18] If Washington has trouble controlling the economy for economic ends like job creation and wage growth, imagine the difficulty of controlling it to benefit the environment.

An Automatic Correction?

Another reason for concern about the growth coming our way is the absence of adequate natural self-correcting forces within the economy. One area of hope in this regard has been the natural evolution of technology. The economy of the future will not be identical to that of the past because technology is changing. It is creating opportunities to reduce materials consumed and wastes produced per unit of output; it is opening up new areas and new products that are lighter, smaller, more efficient. Clearly these things are happening. Resource productivity is increasing.

There is a large literature on these trends. The principal finding is reflected in the conclusion of a 2000 report of five major European

and U.S. research centers: "Industrial economies are becoming more efficient in their use of materials, but waste generation continues to increase. . . . Even as decoupling between economic growth and resource throughput occurred on a per capita and per unit GDP basis, overall resource use and waste flows into the environment continued to grow. We found no evidence of an absolute reduction in resource throughput. One half to three quarters of annual resource inputs to industrial economies are returned to the environment as wastes within a year."[19]

Tellingly, one review of a large number of countries found that "with the exception of one specific case, no absolute decline of direct material input of industrial economics took place as those economies grew. . . . [T]he trend of material use in industrial countries is relatively steady." It also found that, as economies grow, pressures on domestic resources are reduced by shifting the burden abroad to developing economies.[20] More resource-intensive goods are imported.

Another major review of studies of "dematerialization" found that "there is no compelling macroeconomic evidence that the U.S. economy is 'decoupled' from material inputs, and we know even less about the net environmental effects of many changes in materials use. We caution against gross generalizations about materials use, particularly the 'gut' feeling that technical change, substitution, and a shift to the information age inexorably lead to decreased materials intensity and reduced environmental impact."[21]

Technology expert Arnulf Grubler has noted, "At best, dematerialization has led to a stabilization of absolute material use at high levels. . . . Improved materials and increased environmental productivity have substantially lessened the environmental impacts of output growth, even if, to date, output growth has generally outstripped improvements."[22]

A related area of inquiry has been the so-called environmental Kuznets curve—the hypothesis that environmental pollution initially increases with development and growth but then declines at higher per capita incomes. This argument has been offered repeatedly by growth advocates, and it does seem intuitively plausible. Public demand for environmental amenities does increase with rising incomes.

The view that economic growth is a panacea for improving environmental quality got a boost from studies showing that some local air pollutants do seem to follow the Kuznets curve pattern, the inverted "U." But it is problematic to make too much of these data. We know, for example, that it is usually much cheaper to prevent environmental decline than to cure it. And some environmental and human losses can never be repaired, even with money. The Kuznets pattern has now been found in only a few cases. In some instances pollutants first rise, then decline, then rise again. Other pollutants, like carbon dioxide, just keep rising. Indeed, many negative environmental trends remain positively correlated with increasing incomes even at high levels. One thorough review of the Kuznets curve hypothesis found that the hypothesis is "not unequivocally supported for *any* environmental indicator and is rejected by . . . studies of environmental quality as a whole. . . . Overall impact . . . rises throughout the relevant income range."[23]

The Root Causes

To sum up, we live in a world where economic growth is generally seen as both beneficent and necessary—the more, the better; where past growth has brought us to a perilous state environmentally; where we are poised for unprecedented increments in growth; where this growth is proceeding with wildly wrong market signals, including prices that do not incorporate environmental costs or reflect the needs of future generations; where a failed politics has not meaningfully corrected the market's obliviousness to environmental needs; where economies are routinely deploying technology that was created in an environmentally unaware era; where there is no hidden hand or inherent mechanism adequate to correct the destructive tendencies. So, right now, one can only conclude that growth is the enemy of environment. Economy and environment remain in collision.

Under these circumstances, it is imperative that we dig deeper to understand better the underlying forces driving these results. Only if we understand the driving forces will we be able to correct the situation.

What, then, is the operating system at work here? It is a complex of political, economic, and social arrangements that can be accurately described as features of modern-day capitalism. Immediately one says: but communism was worse for the environment, and that's true. Its authoritarian political system and highly centralized economic planning produced one environmental disaster after another. But this argument is largely irrelevant since communism is largely irrelevant. We live in a world dominated by a variety of capitalisms. In the end, no form of economy does well on the environment unless forced to by vigorously enforced rules and powerful incentives and penalties created by government and consumers.

What are the elements of this operating system? Several are captured in the definition of capitalism as an *economic* system. In *Understanding Capitalism,* Samuel Bowles and his colleagues define capitalism as an "economic system in which employers hire workers to produce goods and services that will be marketed with the intention of making a profit."[24] The employers own the capital goods used by the employees, and they own the goods and services, the commodities, that are produced and marketed. The markets are more or less free and competitive, and the goods and services are typically sold at market-determined prices. The markets also include labor markets, where wages and salaries of employees are determined.

The key to Bowles's analysis is a concept that goes back to Adam Smith, surplus product. Surplus product is that part of economic output that exceeds what is needed to pay for labor, materials, and other inputs used in production. In capitalism, the surplus product takes the form of profits. Profit provides the basis of the capitalist's income, whether interest, dividends, rent, or capital gains. When profits are spent on buying new machinery for a factory or on other goods and services intended to raise productivity in the future, the spending is investment.

Bowles and his colleagues point out, "Competition for profits arises because the only way a firm can stay in business is to make profits. Each business owner has no choice but to engage in a never-ending race to avoid falling behind. The surest way to stay ahead is to produce better goods or services at lower cost. To keep up each firm must not only replace the capital goods and materials that are used up in the production process, it must also expand and improve its own product line, break into new markets, introduce new technology, and find lower-cost ways of getting the necessary work done.

"Competition thus compels the owners of each business to *invest* (rather than consume) most of the profits they make. . . . The process of investment as part of competition for profits is called *accumulation.* . . .

"Thus, if a firm is not making a profit, it cannot grow: zero profit means zero growth. And if a firm does not grow, others that do grow will soon outpace it. In a capitalist economy, survival requires growth, and growth requires profits. This is capitalism's law of the survival of the fittest, analogous to Charles Darwin's notion of the evolution of species through natural selection. In the capitalist version, Darwin's idea of fitness—success in producing offspring—becomes success in making profits.

"Capitalism is differentiated from other economic systems by its drive to accumulate, its predisposition toward change, and its built-in tendency to expand."[25]

Bowles's analysis makes it easy to see why economy and environment are constantly colliding. First, the capitalist economy, to the degree that it is successful, is inherently an exponential growth economy. A leading economist, William Baumol, summed up the relationship nicely: "Under capitalism, innovative activity—which in other types of economy is fortuitous and optional—becomes mandatory, a life-and-death matter for the firm. And the spread of new technology, which in other economies has proceeded at a stately pace, often requiring

decades or even centuries, under capitalism is speeded up remarkably because, quite simply, time is money. That, in short, is the . . . explanation of the incredible growth of the free-market economies. The capitalist economy can usefully be viewed as a machine whose primary product is economic growth. Indeed, its effectiveness in this role is unparalleled."[26]

Second, the profit motive powerfully affects the capitalist's behavior. Surplus product—profit—can be increased by preserving and perpetuating the market failures Oates described. Surplus product can also be increased through environmentally perverse subsidies and other advantages. Today's corporations have been called "externalizing machines," so committed are they to keeping the real costs of their activities external to (that is, off) their books. They might also be called "rent-seeking" machines, so committed are they to finding subsidies, tax breaks, and regulatory loopholes from government. The environment, of course, suffers as a result.

Third, as Karl Polanyi described long ago in *The Great Transformation,* the spread of the market into new areas, with its emphasis on efficiency and ever-expanding commodification, can be very costly environmentally and socially. It is a pleasure to read Polanyi. He saw so clearly in 1944 the costs of unbridled capitalism, yet he believed this "19th century system," as he called it, was collapsing. He saw the self-adjusting market as a "stark utopia." "Such an institution could not exist for any length of time without annihilating the human and natural substance of society; it would have physically destroyed man and transformed his surroundings into a wilderness. . . .

"To allow the market mechanism to be sole director of the fate of human beings and their natural environment, indeed, even of the amount and use of purchasing power, would result in the demolition of society. . . . Nature would be reduced to its elements, neighborhoods and landscapes defiled, rivers polluted, military safety jeopardized, the power to produce food and raw materials destroyed. . . .

"[T]he commodity fiction disregarded the fact that leaving the fate of soil and people to the market would be tantamount to annihilating them."[27]

Of course, the ever-expanding, self-adjusting market that Polanyi feared did not collapse. It took off again after World War II, became more fearsome and expansive, and the consequences that Polanyi warned against came to pass. Landscapes are defiled, rivers polluted. Polanyi would, I suspect, be both surprised and appalled by the ascendancy of the ruthless capitalism of the Anglo-American variety and by the erosion of social democracy of the European variety.

The dynamics of today's financial marketplace enhance the pressure on corporate managers to achieve high profit growth. The prime measure of corporate success to investors is growth in market capitalization and stock price. Market value responds to a number of factors, but one of the most influential is the expected rate of profit growth. When earnings growth fails to meet expectations, even for one quarter, stock prices can plummet. Differences of pennies per share can drive financial analysts' recommendations to buy or sell. The message to managers is clear: expand markets, contain costs, and increase profitability. Grow.

Last, there are fundamental biases in capitalism that favor the present over the future and the private over the public. Future generations cannot participate in capitalism's markets. From an environmental perspective, that is a huge flaw because the essence of sustainable development is equity toward future generations. Regarding the bias toward the private over the public (private spending versus public spending, private property versus public property, and so on), economists have even had to invent theories of government spending and public goods to justify the public sector's existence. Greater emphasis on the public side would serve our environment better. In America, for example, large public investments are overdue in land conservation; in environmental education, research, and development; and in incentives to spur new ecologically sophisticated technologies.

But the system that drives today's unsustainable growth includes

other powerful elements beyond these. First, there is what the modern corporation has become. The corporation, the most important institution and agent of modern capitalism, has become both huge and hugely powerful. There are today more than sixty-three thousand multinational corporations. As recently as 1990, there were fewer than half that. Of the one hundred largest economies in the world, fifty-three are corporations. Exxon Mobil is larger than 180 nations.[28] Corporations are required by law and driven by self-interest to increase their monetary value for the benefit of their owners, the shareholders, and pressures to show quick results in this regard have grown steadily. The corporate sector wields great political and economic power and has routinely used that power to restrain ameliorative governmental action.[29] And it has driven the rise of transnational capital as the basis for economic globalization. The international system of investing, buying, and selling is becoming a single global economy. Unfortunately, what we have today is the globalization of market failure.

Second, there is what society has become. Values today are strongly materialistic, anthropocentric, and contempocentric. Today's consumerism places high priority on meeting human needs through ever-increasing purchase of material goods and services. We may say "the best things in life are free," but not many of us act that way. The anthropocentric view that nature belongs to us rather than we to nature eases the exploitation of the natural world. The habit of focusing on the present and discounting the future leads away from a thoughtful appraisal of long-term consequences and the world we are making.[30]

And third, there is what government and politics have become. Growth serves the interests of governments by boosting approval ratings, keeping difficult social justice and other issues on the back burner, and generating larger revenues without raising tax rates. Capitalist governments do not own the economy, even if some own a sizable state sector. So they must feed their growth habit by providing what corporations need to keep growing. In the United States today, the government in Washington is hobbled, corrupted by money, and typically at the service of economic interests, focused on the short-time horizons of election cycles, and poorly guided by an anemic environmental politics, a poorly informed public, and a pathetic level of public discourse on the environment. Finally, today's nation-states are motivated to varying degrees by an economic nationalism. The state seeks to enhance and project its power, both hard and soft, in part through economic strength and growth.[31]

These features, presented starkly without caveats and qualifications that could be added, aptly characterize key dimensions of today's world operating system. They are all features of contemporary capitalism. They are linked, mutually supportive, indeed mutually reinforcing. Taken together, they have given rise to an economic reality that is both enormously large and, from an environment perspective, largely out of control and therefore very destructive. Capitalism as we know it today is incapable of sustaining the environment.

There are some who have faced this complex of powerful institutions and ideas, and what it is doing to us and to the planet, and asked fundamental questions. Globalization scholar Jan Scholte has put it this way: "This is the crucial question facing contemporary globalization studies: technical tinkering or radical overhaul? Opting for the former is intellectually less taxing and painful, but the promises of reformist liberalism have been heard before. Students of globalization must surely take seriously the possibility that underlying structures of the modern (now globalized) world order—capitalism, the state, industrialism, nationality, rationalism—as well as the orthodox discourses that sustain them, may be in important respects irreparably destructive."[32]

Political scientist John Dryzek is even more pointed: "Here I will focus on currently dominant arrangements in the Western world and on what might replace them. These arrangements can be characterized in terms of a nexus of capitalism, liberal democracy, and the administrative state. The initial question is: To what extent can these

institutions—in isolation or in combination—cope with the ecological challenge?" Dryzek goes on to indicate that by "liberal democracy" he means representational, interest group politics dominated by financial interests and addicted to economic growth. He concludes that these three institutions "are each thoroughly inept when it comes to ecology, that any combination of them can only compound error, and also that any redeeming features are to be found only in the possibilities that they open up for their own transformation."[33]

Political philosopher Richard Falk in his *Explorations at the Edge of Time* distinguishes between today's "modernist" politics and a postmodern politics that reflects "the human capacity to transcend the violence, poverty, ecological decay, oppression, injustice, and secularism of the modern world." He believes that the transition to a postmodern politics requires, above all, confidence in the future. "Such confidence involves both a vision of something desirable and a willingness to risk a great deal to attain it. Without sacrifice, commitment, and risk, it is impossible to confront successfully a well-entrenched system of beliefs, institutions, and practices. In this regard, it is important to appreciate the resilience and continuing success of the state as a focus for political loyalty, of nationalism as a mobilizing ideology, of the market as a basis for allocating resources, [and] of war potential as the fulcrum of international stability. . . . We cannot achieve a postmodern reality without transforming the essential nature of these main pillars of modernism."[34]

Falk characterizes today's preliminary challenges to modernism as "mainly an expression of oppositional imagery active only at the margins of modernism, a kind of critical reflection, little more than a snapping at the heels of modernism: initiatives contra violence, bureaucracy, centralizing technology, hierarchy, patriarchy, ecological carelessness. But it is also beginning to nourish some new modes of action: nonviolent practices, participatory organizations, soft energy paths and gentle technology, democratizing politics, feminizing leadership and tactics, spiritualized nature, green consciousness. The mixing of these axial elements in a variety of concrete embodiments as innovative forms of social action provides inspiration and heralds the possible approach of an axial moment."[35]

Appraisals such as these are challenging. But they open the door, inviting an exploration of what can be done. That is the search pursued in the remainder of the book. One thing that will become clear in this search is that many of the solutions will be found outside the environmental sector—in alliance with communities of concern that are not in the first instance environmental. And the question will arise: Is the operating system just described delivering the goods for these other communities? If today's growth and capitalism are delivering high levels of life satisfaction, genuine well-being, and true happiness to societies broadly, then there may be scant chance for real change. But if what we actually have is "spiritual hunger in an age of plenty," there is a large space for hope.[36] A system that cannot deliver the well-being of people and nature is in deep trouble. It invites ideas and actions that are transformative.

Whenever I think of the place of far-reaching ideas in American history, I am reminded of what Richard Hofstadter wrote in his wonderful book, *The American Political Tradition*. "Although it has been said repeatedly that we need a new conception of the world to replace the ideology of self-help, free enterprise, competition, and beneficent cupidity upon which Americans have been nourished since the foundation of the Republic, no new conceptions of comparable strength have taken root and no statesman with a great mass following has arisen to propound them. . . .

"Almost the entire span of American history under the present Constitution has coincided with the rise and spread of modern industrial capitalism. In material power and productivity the United States has been a flourishing success. Societies that are in such good working order have a kind of mute organic consistency. They do not foster ideas that are hostile to their fundamental working arrangements. Such ideas may appear, but they are slowly and persistently insulated, as an oyster

deposits nacre around an irritant. They are confined to small groups of dissenters and alienated intellectuals, and except in revolutionary times they do not circulate among practical politicians."[37]

Today, in the United States and no doubt elsewhere, material power and productivity to which Hofstadter refers are no longer sufficient for "flourishing success," and our society is not in "good working order." Proposals are needed to change the fundamental working arrangements.