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Liberty and the Environment

Ronald Bailey

Human activity is remaking the face of the Earth: transforming and polluting the landscape, warming the atmosphere and oceans, and causing species to go extinct. The orthodox view among ecologists is that human liberty—more specifically economic activity and free markets—is to blame. For example, the prominent biologist-activists Paul and Anne Ehrlich of Stanford University recently argued in a British science journal that the environmental problems we face are driven by "overpopulation, overconsumption of natural resources and the use of unnecessarily environmentally damaging technologies and socio-economic-political arrangements to service *Homo sapiens'* aggregate consumption." The Ehrlichs urge the "reduction of the worship of 'free' markets that infests the discipline" of economics.

But the notion that economic activity and free markets are antithetical to the flourishing of the natural world is complicated by the fact that the countries with the biggest environmental problems today, and the least means and apparent interest in addressing them, are not the liberalized ones with advanced capitalist economies but the ones with weak or nonexistent democracies and still-developing economies.

So is it really the case that liberty and the environment are simply opposed? Does the good of one come only at the expense of the other? Or can liberty and a flourishing natural environment reinforce one another, the good of one encouraging the good of the other? Can economic activity under a system of liberty be environmentally sustainable in the long run?

"Natural States" and the Environment

To better understand the ways in which the natural environment fares differently under social orders with more or less liberty, we will have to consider the broad sweep of time, from prehistory to the latest modern developments to projections about the future. A conceptual framework very helpful for making such generalizations can be found in *Violence and Social Orders*, a brilliant 2009 book by Nobel laureate and economist Douglass C. North, University of Maryland economist John Joseph

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Wallis, and Stanford political scientist Barry R. Weingast. The book begins by noting that violence is the central problem confronted by societies encompassing more than a few hundred people. In prehistoric times, when subsistence depended on hunting and gathering, humankind was organized in small groups based on family relations or small tribes; face-to-face interactions and personal trust were possible, and indeed necessary for keeping peace. The authors call this way of organizing society the "foraging order."

The larger a group grows, the more difficult it becomes to order a group based in personal trust. Conflict becomes more likely. What the authors call the "limited-access order" or the "natural state" emerges as a way to create institutions and practices that reduce conflict in larger societies. Historically, they argue, the first natural states arose with the development of settled agriculture, and until recent centuries, *all* societies were natural states.

Natural states are characterized by patron-client networks in which people (traders, producers, priests, educators, etc.) personally ally themselves with specific militarily potent individuals. The patrons offer protection and channel resources to clients in exchange for their loyalty and support should intra-elite violence break out. In natural states, the authors write, "personal relationships, who one is and who one knows, form the basis for social organization and constitute the arena for individual interaction, particularly personal relationships among powerful individuals." Natural states are run by elites who control access to political power and economic resources; the only politics that matter occur as members of this elite jockey for position among themselves. Individuals have only a limited ability to form organizations, and no significant organizations—religious, economic, or political—exist outside of the state.

Natural states operate by limiting access to valuable resources—for example, by creating and sharing the rewards of monopolies. Members of the dominant coalition agree to respect each other's special privileges, creating a standoff that curtails violence and enables each to earn and enjoy the monopoly benefits of the land, labor, and resources that he controls. Social peace makes the returns on the assets that each controls higher than what he might gain from fighting. However, if some members of the elite come to believe that they would win access to more resources (and power) by fighting, then they may defect from the coalition and fight.

This model is simple enough that it applies across most of human history. Bronze Age Mesopotamia, ancient Greek city-states, the Roman Empire, feudal Europe, Maya civilization, Ottoman-ruled Asia Minor, and

Qing dynasty China—all of these were natural states. Even today, many countries are still organized in this way. What looks like corruption in places like Russia or Mexico is really the more or less normal distribution of largess through patron-client networks. While civilizations organized as natural states may last for centuries, all of them through history, in both the Old and New Worlds, have ultimately proven unsustainable—arguably because the form of social organization in the natural state stifles the innovation needed to respond to change.

However, in the late eighteenth century, some societies began to transition to what the authors call "open-access orders." In such societies, a large number of individuals have the right to form organizations that can engage in a wide variety of economic, political, and social activities. Unlike in natural states, the existence of organizations in an open-access order does not depend on the individual identities and elite privileges of its members; the organizations are, in that sense, "impersonal." The authors argue that this kind of "impersonality" is the key to open-access orders. People can create organizations with impersonal legal identities and rights that have an existence that endures independently of the lives of their members. Think here of corporations and formal political parties and advocacy groups that can be created without the permission of the state. In open-access orders, the rule of law prevails, which means that all persons, institutions, and entities, including the leaders, are accountable to laws that are publicly promulgated, equally enforced, and independently adjudicated. Put simply, in the transition from the natural state to the open-access order, subjects become citizens. It remains to be seen, of course, whether open-access orders will prove sustainable in the long run.

We can now make some broad generalizations about the way the natural environment fares under each of these three orders. In prehistoric times, under the foraging order, Malthusian pressures reigned. With no restrictions on who could access and use natural resources, humankind began to remake the environment. For example, after the last Ice Age started to thaw and the glaciers retreated twenty thousand years ago, our hunter-gatherer ancestors spread across the globe, devastating animal populations already stressed by climate change. This included wiping out nearly two hundred species of large mammals. To put this destruction in perspective, if you were to weigh all of the mammals living all over the world at the time, that total figure—the planet's mammalian biomass—fell so drastically that, according to one estimate, it did not recover until just before the Industrial Revolution, when it was finally matched and then far surpassed by booming human and domesticated animal populations.

The advent of agricultural civilization, the rise of the natural state, and the development of proto-property rights (for elites) made possible much higher levels of productivity than had been available to our hunter-gatherer ancestors. But the fact that natural states limit access of resources to the elite means that material and technological progress in such societies is stymied, that the Malthusian competition for resources continues to prevail, and that most people in such societies live in poverty. Relatedly, it also means that such societies are inherently inefficient when it comes to transforming—using, consuming, destroying—the natural world. Which is not to say that such natural states are environmentally "sustainable" or have a track record of careful environmental stewardship, but just that the structure of such societies prevents them from being *efficiently* exploitative.

It was only during the eighteenth century, as some societies became open-access orders, that humanity's fortunes turned. Open-access orders have unleashed entrepreneurial forces that have produced unprecedented innovation, revving up productivity for a significant portion of humanity and rapidly improving material standards of living. According to the estimates from the Maddison Project, which updates the work of the late economist Angus Maddison, per capita global GDP barely grew from A.D. 1 to 1700, moving from $467 to $615 (in constant 1990 dollars). But it doubled from 1700 to 1900, doubled again by 1956, and then tripled in five decades, standing at $7,614 by 2008. By almost any conceivable way of measuring standards of living, from health to longevity to income to population growth to access to food, the past few centuries have clearly been, as the economist Deirdre McCloskey has dubbed them, "The Great Enrichment."

Property and Progress

In order to understand how the open-access order makes possible such material abundance, and the effects such societies might be expected to have on the natural world, it is worth taking a moment to revisit what John Locke, the seventeenth-century British philosopher whose ideas helped birth modern liberal politics, had to say about property rights and nature. In the second of his *Two Treatises of Government* (1689), Locke asserts that before the rise of civilization, land and natural resources were held in common by mankind. But, he argues, these goods can become the property of individuals who mix their labor with them. For the purposes of this discussion, we can broaden the definition of labor to include not

just the sweat of people's brows but also the application of their knowledge and intellect.

Property rights and markets create value by encouraging the division and specialization of labor. Locke outlines the remarkable variation and distribution of labor required just to make a loaf of bread: "the ploughman's pains, the reaper's and thresher's toil, and the baker's sweat," and "the labour of those who broke the oxen, who digged and wrought the iron and stones, who felled and framed the timber employed about the plough, mill, oven, or any other utensils." Without labor, Locke adds, "nature and the earth furnished only the almost worthless materials, as in themselves."

Specialization and division of labor are in turn aided by the efficient coordination of effort and knowledge supplied by markets and market pricing. This idea, described perhaps most memorably in Leonard Read's short 1958 essay "I, Pencil," was expressed three centuries earlier by Locke:

> It would be a strange *catalogue of things, that industry provided and made use of, about every loaf of bread*, before it came to our use, if we could trace them; iron, wood, leather, bark, timber, stone, bricks, coals, lime, cloth, dying drugs, pitch, tar, masts, ropes, and all the materials made use of in the ship, that brought any of the commodities made use of by any of the workmen, to any part of the work; all which it would be almost impossible, at least too long, to reckon up.

Locke goes on to explain why, as the world became more populous, people began to define and delineate property rights. As land began to be used up, "the several *communities* settled the bounds of their distinct territories, and by laws within themselves regulated the properties of the private men of their society." In Locke's telling, which is largely compatible with the account offered in *Violence and Social Orders*, the evolution of property rights over natural resources such as land, water, and animals was hastened by the development of agriculture and the creation of settled communities. And the shift to agriculture arose in part from human population growth, which increased the scarcity of and competition for wild resources.

Although the wild commons are depleted when resources become property, the creation of property rights actually ends up increasing the goods available to mankind: "he who appropriates land to himself by his labour," Locke writes, "does not lessen, but increase the common stock of mankind." An owner has a strong incentive to increase the productivity of his land. By intensively cultivating it, he produces "a greater plenty of the

conveniencies of life from ten acres, than he could have from an hundred left to nature, [and] may truly be said to give ninety acres to mankind." So, for example, cultivating crops and herding animals increased both the certainty and the supply of food. The result of appropriation from the commons—that is, of privatization—is a dramatic increase in the availability of goods.

In his 1967 article "Toward a Theory of Property Rights," economist Harold Demsetz elaborated on how the advent of property rights boosted productivity by making owners directly responsible for their property, both in its costs and gains:

> private ownership of land will internalize many of the external costs associated with communal ownership, for now an owner, by virtue of his power to exclude others, can generally count on realizing the rewards associated with husbanding the game and increasing the fertility of his land. This concentration of benefits and costs on owners creates incentives to utilize resources more efficiently.

Owners develop specific knowledge about the natural qualities of their fields, pastures, and woodlots. Where does the runoff go; how stony is the soil; is the land better for wheat or barley—all the little bits of information that help them to coax more out of the land, water, and crops. Ownership also makes it easier to hold people liable for damages or shared costs associated with their land usage, allowing them to negotiate with other owners about dam-building, escaped animals, and so forth. The direct costs and profits guide market participants in making sound choices about the best uses of their land, labor, and capital.

Moreover, property rights also reduce conflicts over who has access to and control of resources. As Locke puts it, "The great end of men's entering into society" is "the enjoyment of their properties in peace and safety." This stability makes trade between individuals more likely, further contributing to prosperity.

Environmental Harm

The process by which privatization contributes to shared prosperity is not entirely straightforward, however. Consider this example from Locke: "No body could think himself injured by the drinking of another man, though he took a good draught, who had a whole river of the same water left him to quench his thirst, and the case of land and water, where there is enough of both, is perfectly the same." But of course, today whole rivers

are diverted so that not all can get a "good draught." And in the twenty-first century, most of the really desirable land is already occupied, which means that nowadays there is not, as Locke famously puts it, "enough, and as good left in common" for new prospective settlers to homestead.

More broadly, rising material prosperity has permitted steep population growth, which, combined with the more efficient use of natural resources in liberal, open-access societies, has meant that mankind has been transforming the natural environment more rapidly than ever before. Wild, unproductive nature is being converted to owned, productive resources, which result in goods that satisfy human wants and needs: forests and earth become pastures and mines, which make possible food, clothing, shelter, and education.

This transformation of nature comes at a price. A major analysis published in 2012 in the journal *Nature* found that the scale of contemporary human activities will likely produce alterations in the biosphere equaling those that occurred during the transition out of the last Ice Age. Even restricting the question to environmental changes that affect our own species, our collective appropriation of resources from the natural commons has caused myriad problems for humankind, including high levels of air and water pollution, depletion of both non-renewable and renewable natural resources, and climate change that will likely be disruptive to human affairs. The spread of property rights and market exchange has resulted in more fields and fewer forests; more cows and fewer bison; more effluents and fewer clean streams; more cities and fewer deserted seashores. So does liberty necessarily come at the expense of the environment?

That is certainly how some environmentalists see it. For example, in a 2013 article in the journal *Science*, Paul Ehrlich and Cambridge economist Partha Dasgupta set out to "highlight the ubiquity of externalities (which are the unaccounted for consequences for others, including future people) of decisions made by each of us on reproduction, consumption, and the use of our natural environment." The "reproductive externalities" include high fertility rates in countries where poor families have many children in their quest to wrest sustenance out of low-productivity environments. "The need for many hands can lead to a destructive spiral," the authors observe. They further note that social norms that once protected locally shared common goods from overexploitation have been eroded by urbanization, civil strife, and state intervention. As an example, Ehrlich and Dasgupta point to reports that found that a number of African governments destroyed communitarian practices in the forests, turning commonly held property into resources that people had to pay to use.

The authors also describe modern consumption as being both competitive and conformist, creating a keeping-up-with-the-Joneses dynamic: "In a free market, every household tries to beat all others in their consumption of [good] X in a losing proposition, for no one is better off." The result of this "rat race" is the overconsumption of resources that produces the externality of environmental degradation. Environmental externalities, Ehrlich and Dasgupta write, "are pervasive because property rights to prominent classes of natural capital" are "challenging to define" and "difficult to enforce." The result has been an underpricing of these natural resources, which means that "innovators have little reason to economize on their use." This leads the authors to conclude that

> technological innovations since the Industrial Revolution have been rapacious in their reliance on natural capital.... Hence, our analysis points to a spiraling socio-environmental process, giving credence to the presumption that the pattern of contemporary economic growth is unsustainable.

In order to reduce the chances of a collapse, Paul and Anne Ehrlich, in their 2012 article in the *Proceedings of the Royal Society*, assert that rapid policy, institutional, and cultural reform is necessary. They talk of breaking "a cultural addiction to continued economic growth among the already well-off," and describe a need for "'foresight intelligence' to provide the long-term analysis and planning that markets cannot supply." They also outline a special responsibility for economists, who "could help set the background for avoiding collapse by designing steady-state economic systems, and along the way destroying fables such as 'growth can continue forever if it's in service industries,' or 'technological innovation will save us.'" All the same, they do not think the odds of survival are good—we have just a 10 percent chance of avoiding the collapse of civilization, according to an estimate Paul Ehrlich gave the *Guardian* in 2011.

Even some academics unconvinced by the Ehrlichs' decades of overpopulation doom-mongering agree with them in believing that free-market economics harm the environment. Devon G. Peña, a professor of anthropology at the University of Washington, writes that he has "long detested the work" of the Ehrlichs, and that the biggest threat to the environment is not overpopulation but capitalism, which

> requires an unlimited supply of "cheap" labor and this means that policies favoring high birth rates were (and still are) the norm wherever the capitalist system has taken root.... To exist, capitalism cannot

> accept limits to growth; capital must constantly expand its production and hence consumption; it must break down barriers to expand markets and access to natural resources for raw materials and exploitable sources of labor. Since capitalism is inherently expansionist it eventually and inevitably must degrade the environment.

Similarly, economist Christine Greenhalgh, writing in the *Cambridge Journal of Economics*, argues that "a free-market capitalist economy is biased against creating green technology and biased against supplying the basic needs of poor consumers.... advanced capitalist markets create and use technologies that are geared to saving worker time and to producing goods and services to save consumer time, instead of technologies and products that conserve scarce non-renewable resources."

And UCLA sociologist Michael Mann, in an essay for the journal *Análise Social*, points to growth itself as the problem: "All politicians measure national success by GDP growth and yet this increases environmental degradation." Though he acknowledges that "state socialism in its heyday was just as destructive of the environment" as capitalism, he nonetheless proposes "disciplining business through a severe regulatory 'command and control' state."

Many of these academics—though not all—acknowledge that market economies on the whole have greatly improved the lot of humanity over the past few centuries, leading to better standards of living, higher levels of education, and more civil and political rights. But they argue that the system of liberty produces accumulating externalities that will eventually drive civilization to self-destruction. Either human beings start restructuring civilization soon, the Ehrlichs warn, or "nature will restructure civilization for us."

Of Peaks and Population

The Lockean response to these academics' worries is that free-market capitalism is as much about growing inward as outward—about learning to derive progressively more value from a finite supply of natural resources, so that we need not consume ever more of those resources. On this understanding, there need be no contradiction between meeting human material needs and preserving a large portion of the natural environment.

So we have two broad views of the sustainability of the system of liberty, and they could hardly be more opposed: one of steady growth and self-reinforcing gains in the efficient use of natural resources, and one in which this growth may be maintained for a deceptively bountiful period

of human history before it collapses in on itself. As the Ehrlichs describe the latter view, "most 'educated' people are immersed in a culture that does not recognize that, in the real world, a short history (a few centuries) of exponential growth does not imply a long future of such growth." The modern escape from Malthusian pressures was just an illusion, and liberal, open-access societies are doomed to stagnate and collapse. Which of these theories is closer to how the future will play out?

The example of land use is instructive in sorting out these theories. Today, almost a third of the Earth's land area is used for the purposes of agriculture, the vast majority of that land having been converted in the last three centuries from wilderness to cropland or pasture, according to a study from the Max Planck Institute for Meteorology. That rapid expansion in agricultural land use has happened largely for the reasons described by Ehrlich and his collaborators: a booming population has meant more mouths to feed, and better standards of living have meant more food going into those mouths.

But the expansion may be coming to an end. A recent study in the journal *Population and Development Review* by Rockefeller University researcher Jesse Ausubel and his colleagues shows that globally "the number of hectares of cropland has scarcely changed since 1990," suggesting that we are already at or near a peak of usage. The researchers offer the conservative projection that by 2060, the land currently employed for crops could be reduced by an area one and a half times the size of Egypt. The slowing growth of cropland conversion—and its apparently impending peak and then reversal—is occurring chiefly for the reasons described by Locke: innovators and entrepreneurs are competing to create new high-productivity crop varieties that require less fertilizer and fuel to grow, thus enabling farmers to grow more food on less land. Moreover countries with stronger property rights and freer markets produce higher agricultural yields than natural states without them. According to data from the World Bank, the average yield for cereal grains on cropland is 6.7 metric tons per hectare in the United States, 6.8 in the United Kingdom, and 7.2 in France, compared to 2.1 in Russia, 0.9 in Haiti, and 0.7 in Zimbabwe—which had more than double that yield in 1981, before the rule of law there collapsed. (One point for optimism is that technological development in open-access societies is likely to eventually spill over into dysfunctional ones, even if slowly.) Based on their analysis, Ausubel and his colleagues reckon, "The past half-century of disciplined and dematerializing demand and more intense and efficient land use encourage a rational hope that humanity's pressure will not overwhelm Nature."

What is true for farmland also appears to be true for forestland, as the study's authors write: "Peaks of forest destruction also have passed with a transition from less to more forests in many countries and regions." A 2006 study in the *Proceedings of the National Academy of Sciences* by some of the same researchers found that by the 1980s, wooded areas in all major temperate and boreal forests were expanding. Why? Because people are managing forests in ways that have increased their productivity, treating trees more like crops to be perpetually harvested and renewed rather than extracted and depleted. The reforestation started taking place in Western Europe and the Eastern United States in the nineteenth century and is now spreading to other parts of the world. Reaching nadir forest, as it were, should give some tentative grounds for optimism about species extinction and the loss of other forms of wilderness and open land.

Forests grow back, and nature can reclaim land once put under the plow. But what about nonrenewable natural resources, such as metals and minerals—do property rights and markets inevitably lead to their depletion? Warnings of coming shortages of these resources have been sounded for decades. But these dire predictions, as a rule, have not come true. The most notorious of these predictions were laid out in the Club of Rome's 1972 report *The Limits to Growth*, which foretold depletion in the coming years of many resources, including copper, mercury, silver, zinc, petroleum, and natural gas. But, as I have reported on in detail before at *Reason* magazine, many of the deadlines associated with such predictions have already passed, and the foreseeable horizons to depletion of all of these resources actually *recede* as we seem to be marching toward them.

The reason is ultimately the same as the reason we are hitting peak farmland: human ingenuity leads to advances in science and technology that steadily improve the efficiency with which we extract these resources from the Earth and reclaim them from our waste products. Moreover, market pressures give companies an incentive to search for and discover new reserves when they are needed, and to create new methods for extracting minerals from resources that were previously known but not profitable to exploit—as the recent boom in shale oil amply demonstrates.

But what about population growth? Ehrlich and Dasgupta worry about the "reproductive externalities" of high fertility rates in poor countries, which they believe have already led to an overpopulated world in danger of collapse—but in fact, while the world's population grew rapidly during the twentieth century and continues to grow now, the rate of that growth has already peaked. U.S. Census Bureau figures show that the world was adding around 37 million people per year in the early 1950s, a figure that

plateaued at 87 million in the late 1980s and now has dropped to around 77 million. Most demographic projections show that the growth rate will fall to zero sometime by the end of the century, meaning global population will peak.

Why isn't the population explosion of the twentieth century going to continue indefinitely? As demographers have noted for decades, when nations rise out of poverty, their fertility rates plummet. As Brown University economist Oded Galor noted in a 2012 analysis, "increases in the rate of technological progress" in the late nineteenth century "induced a reduction in fertility, generating a decline in population growth and an increase in the average level of education." Families came to need fewer children to help provide their income, and the cost of raising children also increased as the demand for education increased.

But it is not economic growth alone that lowers population growth; a system of liberty does as well. This might come as a surprise to those who believe that the "freedom to breed is intolerable," as the ecologist Garrett Hardin claimed in his astonishingly confused 1968 essay "The Tragedy of the Commons." When individuals are at liberty to pursue what they consider their own best interests, Hardin believed, the net effect will be a situation harmful to their shared interests. "Freedom in a commons brings ruin to all," he wrote, and people should not be free to have as many children as they want. But a remarkable 2002 study by Wheaton College economics professor Seth W. Norton found that "Fertility rates are more than twice as high in countries with low levels of economic freedom and rule of law compared to countries with high levels of those measures." This is because these structures produce prosperity, which dramatically lowers child mortality, which in turn reduces the incentive to bear more children. Increased prosperity also tends to bring more education for women and more productive economic opportunities for them, thereby increasing the opportunity costs of staying at home to rear children. Educating children to meet the productive challenges of growing economies also becomes more expensive and time-consuming.

Liberty and Environmental Preservation

We can now begin to see the shape of an answer to our initial question of whether liberty and the natural environment must necessarily be opposed. In early stages of modern economic development, as liberty is unleashed in open-access orders, people convert relatively plentiful but unproductive nature into more productive but relatively scarcer human labor—that

is, higher population—and manufactured capital. In those early stages, liberty and the environment function as what economists call "substitute goods," with more liberty resulting in less demand for the environment in its natural state. In such societies, fertility rates remain high and environmental amenities and quality continue to deteriorate. But at later stages of economic development, human and manufactured capital become so effective, thanks especially to technological progress, that the environment can be returned to a more natural state. And since such societies are more prosperous, they can better afford the costs of environmental regulations, even inefficient ones.

The trend has been theorized in a model known as the Kuznets Curve, which, when applied to the environment, posits that conditions initially deteriorate as economic growth takes off, but later improve when citizens with rising incomes demand better-quality environmental amenities. There is still considerable debate over the empirical reality of this hypothesis, but a 2011 meta-analysis published in the *International Journal of Ecological Economics and Statistics* finds evidence for the applicability of the Kuznets Curve to numerous environmental goods, including "landscape degradation, water pollution, agricultural wastes, municipal-related wastes, and several air pollution measures."

The move toward a mutually beneficial relationship between liberty and the environment is not entirely neat, nor will it alone suffice to address all of our looming environmental challenges. For instance, even where there is evidence that the Kuznets Curve applies to certain measures of environmental quality, like sulfur dioxide emissions, the reductions in emissions were generally not the result of trading well-defined property rights in markets. Moreover, the Kuznets Curve may take too long to kick in where it matters most. The 2011 meta-analysis suggests that the turning point for carbon dioxide emissions will occur at about ten times the 2007 level of global GDP per capita, a point that probably will not be reached until the next century. The researchers conclude that economic growth alone will not reduce emissions enough to ward off potentially disruptive climate change.

These findings point not toward breaking but strengthening markets: we need to institute mechanisms that allow markets to price in global externalities, bringing to bear the forces that have worked so well for costs that are already internalized to property owners, like local land loss and pollution cleanup. How this will work in practice is a subject well worth debating. But those debates should begin with the following fundamental points of agreement, drawn from history and economics. Free

markets are the most robust mechanism ever devised by humanity for delivering rapid feedback on how decisions turn out. Profits and losses discipline people to learn quickly from and fix their mistakes. By contrast, top-down bureaucratization tends to stall innovation and to make it more difficult for people and societies to adapt rapidly to changing conditions, economic and ecological. Centrally planned economies fail; centrally planning the world's ecology will fail as well. Our aim must be to find ways for liberty and the environment to flourish together, not to sacrifice one in the vain hope of protecting the other.