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STATE OF THE WORLD
Innovations for a Sustainable Economy
The Parallel Economy of the Commons

Jonathan Rowe

It is an article of faith among economists that a resource without a private property regime is destined for overuse. Yet on Bali, an island in the Indonesian archipelago, that is not the case. For centuries rice farmers there have coordinated their use of scarce water through social networks built on the innate human capacity to manage such resources in a cooperative manner. The system is based on what anthropologists have called “water temples,” which endow the water sharing within a context of traditional Balinese religion. But actually the networks function through a form of bottom-up cooperation in which the temples provide a venue through which producers can coordinate their water use. Modern computer analysis has found that the resulting allocation is close to ideal in terms of the productivity of the farms. It depletes water naturally and uses the available water to maximum effect.

Bali’s water sharing system is a textbook example of commons management—traditional property arrangements that worked effectively for centuries in a variety of resource contexts but that now today either disintegrate or ignore. Just as was the case in Bali, when in the late 1990s the government decided to push rice farmers into the modern age. It bypassed the temples, hired hydrologists to install new water systems, and pushed Green Revolution techniques, complete with heavy pesticides, upon the farmers.

The result was a disaster. Insects developed resistance to the chemicals. Crop yields plummeted. In the end, the government had to relent, and the farmers returned to the social productivity arrangements that the experts had deemed to be an enlightened past.

Fast forward to 2001 in the United States when Jimmy Wales set out to create an encyclopedia online. He thought first of importing Britannica’s model, only to be

Jonathan Rowe is a fellow at the Tamsoa Bay Institute and is founding coeditor of West Marin County News. He established panels for peer reviews, assigned articles to recognized experts, and then waited for something to happen. Not much did. Economists might see this as a problem. But the problem they would see on Bali. Writing a property right in their output and creating a property incentive to activate dormant mental assets. Wales was familiar with that; he was a refugee from the world of online trading and understood how incentives play in business. But he went in a different direction.

He tried writing an entry himself (on an trading) and discovered it was like digging in an essay at grad school. It just isn’t fun, and the top-down corporate structure was the reason why. So Wales shifted his strategy. He abolished the expert peer-review and put informal teams of coordinators in place. More important, he dropped the requirement of assigning entries and let users choose any topics they desired. Then users would check another for quality and bias. A discussion page for each entry would provide a forum in which to discuss issues and a written record that users could retrace.

In other words, Wales created—or rather, he created the social network instead of an economic one. People were engaged not as profit seekers in economics but as social beings. The project worked out in this way. In two weeks the project had generated 25,000 articles at a speed of two years the size of the encyclopedia.

The result is Wikipedia, the free online encyclopedia that now has almost 2 million entries in 275 languages, including 340 other languages—for a total of 4.6 million articles. Natural magazine is a sample of science articles from Wikipedia with corresponding ones in Britannica.

It is as though something latent in human nature is breaking through the constraints of the corporate economy and the bureaucratic state. The result is not just effective and generative use of the asset, but also a dividend in the form of social cohesion and trust that can be
as important as the product itself. A new field called "behavioral economics" (a phrase that used to be redundant but is now revealingly not) has been rediscovering and giving empirical status to this. Researchers have demonstrated, for example, that people seek fairness in economic deals and not just their own gain. They seek stability over the long term and not just a quick buck. 10

Such insights are not new news to most people. But recognition of them by at least a part of the economics profession helps set policies that derive from them into play in the high-level debate. In particular, it gives new legitimacy to the commons—a form of property that is neither the market nor the state, public nor private, but rather that property held jointly and together rather than separately and apart. (See Box 10-1.) As more than an actual investigation of it, Hardin simply assumed that all commons are pre-failed, and he took no account of the human capacity to create rules to govern themselves. He led his readers to the "pictures" of the "hypothetical herdsmen" (his hypothetical herdsman did not know anything about the economics texts. These individuals existed outside of any social structure and tradition and had no capacity even to talk to one another. They all behaved as the texts said they would and according to what they called common sense. 11 They let their herds loose in a "single-minded effort to maximize their own gain, with no thought for the others or for anybody else. The pasture was used, and the tragedy was born.

There is a large irony here. Hardin was not warying the psychology of the large corporates and projecting it onto the commons. It is the very institution that the meek market asserts, who site Hardin as proof of the very concept that he purports to solve the problem he describes. The problem was that Hardin overlooked it that people do not necessarily behave as economists do. As historian E. F. Thompson put it, Hardin failed to grasp that "common fields of food crops, and pastures were not without consequences." 12 Thompson was referring specifically to the commons of agriculture in England. Households had their own rights, but the rights to these were a matter of custom rather than of legal title, and the common use of fields to other lands for grazing, and grazing. This meant that households pooled their investments and for joint maintenance and the like. They herded their flocks to fortify their property. The destruction that Hardin feared had to be an axiom simply did not happen. In the contrary, the system worked well for those who consumed it.

The historical and anthropological literature is full of examples of commons-based management of limited resources. Regarding water, the irrigation systems in Bali are not exceptional. Spain has had similar systems, called bomas, for almost 600 years. The farmers whose land adjoins each canal elect their own chief executive, called a nadre, who resolves disputes between them in a tribunal held twice a week. They get water from the canal on a rotating basis. During droughts, the crops with the greatest need get first priority. 13

Especially suggestive are the austere communities of the northern Philippines. Tenant farmers there join together and build irrigation systems on dry land private in exchange for use rights to that land. In effect they become joint owners through sweat equity. It is grueling work. The dams break routinely during the monsoon season and must be rebuilt sometimes three or four times in a single year. Members typically work something like 60 days a year on the dam site, and in some cases closer to double that. 14

There are more than a thousand of these in the province of Ilocos Norte, according to one estimate. They have an ingenious system for allocating water so make sure everyone gets a share. They divide the land into three or more sections and members get a plot in each section, in differing sequences along the canal. This way each member can have a plot that is close to the front of an irrigation line. Even in times of drought, everybody gets something. In addition, each member of the same get extra land at the tail end of the line. This gives them extra motivation to ensure prudent use so that at least some water makes it to the front. 15

There are many examples of common pastures working effectively well. In the alpine region of Switzerland, for example, the grazing pastures typically are commons, as are

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**Box 10-1: Property: A Social Construct**

Property is not a metaphysical abstraction. It is an instrument that socializes design to advance particular interests. There are many different kinds—corporate, marital, municipal, partnership, cooperative, and so forth—all of which are defined socially for different purposes. Today, two of the ways of property that are the public debate public and private. This follows from an ideological spectrum that offers the public and private "sectors" as the only options from which to choose.

A third form of property—common property—is rather public not private in the usual sense. Historically it has served well for organizing the use of natural resources of many kinds and for defining the rights and responsibilities of people regarding them. In England, much agricultural land was held in common until the eighteenth and nineteenth centuries. In practice this was similar to community gardens today, individuals had their own plots, but the underlying ownership was in common. The concept permitted the early thinking about property generally, including what today are called the public and private realms. In the early U.S. colonies, private woodlands typically were regarded as commons for purposes of convenience, such as hunting, fishing, and even cooking wood. The woodland commons sustained the towns during their adolescence. To reindustrialize them, after emancipation, the southern planters designated the commons and thereby shut off a key part of the economy.

Some of the earlier thinking tended to view regards to welfare and more broadly the demands of the public trust. Ancient Romans declared that some things are common by very nature—primarily air and water, and other water. Governments did not own the air, right to air, and therefore could not privatize them, even if they wanted to. Much like trustees, creditors, governments, have a legal obligation to maintain the air for the benefit of the public at large.

Today the public must guarantee governments from running over to privatize the commons and natural resources and perhaps other things as well that they have a responsibility and need to protect for future generations. Common property is needed for the long haul.

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Source: Worldwatch Institute
The tragedy of the corporate commons usually means corporatization of the commons. When a government sells resources, such as oil rights or ocean gulls, individuals rarely have the means to buy them. To free-market believers, this is a distinction without a difference. Corporations are really just economic persons, they say, only bigger. This is like saying that a federal bureaucracy is no different than a town meeting democracy, because both are "government." As Adam Smith observed often, humans are social beings. They have a capacity for empathy and a desire to be esteemed by their peers. "Nature, when she formed man for society," Smith wrote in his *Theory of Moral Sentiments*, "endowed him with an original desire to please, and an original aversion to offend his brethren." This desire actually goes deeper, Smith said, because we aspire truly to be "what ought to be approved of," right or wrong, that is an assumption on which his theory of a benign and generous market was based. The modern corporation does not fit this model. The corporation is a creature of lawyers rather than of nature. It embodies the pure financial calculus of the puritan who inhabits the economics stern. The bottom line is the bottom line. This is not because corporations are run by bad people. On the contrary, the financial calculus is built into chapters through which corporations acquire legal life—fixed in the operating system, as it were.

This institutional machinery was designed for an era in which resources seemed limitless and the consumption of them the only urgent mandate. It was set loose on this landscape and did what it was supposed to do: dig mines, drill wells, build factories, by trade, generally eat like an adolescent, and costume everything in sight. Today, however, it has become like an appetite without a shut-off switch, the adolescent who never grew up. It has no built-in capacity to say "enough." The main internal constraints are financial, in the form of quarterly earnings statement, the demands of shareholders and creditors, and the like. These push generally toward liquidating nature, nonhumanizing it. Speaking of a rival who controls his own country and so can think long term, Richard F. Ham, the CEO of Union Pacific, observed, "almost anybody else did it, they'd get killed by shareholders and Wall Street analysts."

The paradigmatic case is that of the Lumber, a California company that in 1980 owned most of the major old-growth redwood forest still in private hands. Pacific Lumber was moral. The chief executive was a lifelong timberman by the name A. S. Murphy, who believed in harvesting more than the forests could replace. "We approach," said David Harris, editor of the *Last Stand*, "was basically to treat the forest as capital and treat and live off the interest. This virtue did not go unappreciated by Pacific's self-discipline meant its forests were not as less conscientious plucking. Its balance sheet—Murphy believed in pay you go—left plenty of room for a radicale load up the company with debt. This is what happened. During the averaged buy boom of the '80s, a corporate chief by name of Charles Hurwitz teamed up with Michael Milken and Ivan Boesky, two of the most infamous financiers of the era, to over Pacific Lumber. They mortgaged company to the hilt to finance their purchase. Then Hurwitz began to liquidate forests that Murphy had conserved, in the pay off the debt. Financiers trumped..."
hunger that drives—indeed, requires—the invasion of the commons. The appetite requires more, and the commons is where that more lies. This institutional engine is programmed to take whatever in nature and society did not have a productive shell around it. There are efforts to reform the corporation from within, by revolting the charmers under which they operate. Whether that succeeds or not, there will still be a need to establish a new kind of outer boundary, so that corporations cannot claim everything.

Reclaiming Common Spaces

Enclosure is the process by which a common is taken for private use and gain. It is a long history. War and conquest excepted, the original enclosures in Anglo-American history largely were the work of the British Parliament, which parcelled out the common lands to private owners, often with inadequate compensation—for example, for the commoners whose rights and subsistence were taken in the process. The U.S. government followed the example of its British parent on many fronts. The Dawes Act in 1887 broke up the tribal commons for many Native Americans and imposed on them a private ownership regime, as did the Alaska Native Claims Settlement Act a century later. The North American Free Trade Agreement, enacted in 1994, declared the water commons a private commodity for purposes of international trade. It also helped clear the aid system of land tenure in Mexico, which was based on communal rather than market values.

The parceling out of the broadcast airwaves to private corporations was part of this same lineages. In recent decades the process has accelerated from discrete acts into a wholesale assault. From the microcosm of the gene pool to the far reaches of space, corporations have been transgressing all boundaries and laying claim to that which previously was assumed to belong to all.

Often corporations have direct help from government, such as the expansion of the intellectual property laws that made possible the patenting of seeds and genes. The Bush administration has worked to parcel out roots of ocean to corporate fish farmers. There are efforts in Congress to privatize outer space, as well, for the purpose of advertising. The momentum now is so great that corporate-owned spacecraft may soon be a common sight in the sky.

The escalating enclosures of recent decades have prompted a response that is almost like an autoimmune reaction. Spontaneously, all over the world, people are seeking to rebuild the boundaries and to reclaim territory that has been lost. The environmental movement is one example of this, as are the campaigns against corporate globalization and genetically modified (that is, corporately enclosed) foods.

This is a movement that defies standard ideological categories. Genuine conservatives oppose the desecration of traditional main streets by “big box” stores and the commodification of childhood, among other things. Those of a more leftist bent oppose as well the encroachment of university research by a corporate parent regime, the privatization of water and other resources, and a host of kinder incursions.

Boundaries are not the only issue. There also has been an insinuative creeping back to the social dynamics that animated the early commons and made resource sharing in them possible. Commons-based gardens have become increasingly popular in North America, for example. There have been no official surveys, but the American Community Gardening Association estimates there are now roughly 18,000 such gardens in the United States, with 750 in New York City alone. In Toronto, the number increased from 14 to 69 between 1987 and 1997. These operate much the way the original common field agriculture did in England. People have their own plots but often share tools and know-how, and pitch in on maintenance as well. The result is a generative sociality as well as agricultural. A study in upstate New York found that a third of the gardens gave rise to broader neighborhood improvement projects such as tree planting and community watch. “It is very peaceful now,” said a resident of Richmond, Virginia, about a community garden reclaimed from a decrepit neighborhood park. “It brings people together.” (See also Chapter 11.)

Another example is the revival of common spaces in cities across the United States, from Pioneer Square in Portland, Oregon, to Copley Square in Boston. Three decades ago Detroit tried to renew its decaying downtown with a corporate fortress called Renaissance Center. The Center became a white-collar island, the decay continued, and the renaissance never came. In the late 1990s, someone had the idea of taking the opposite approach. Instead of a private corporate space, the city would create an open common one.

The result is Campus Martius, in the heart of downtown. Symbolically enough, Detroit actually restored automobile traffic to accommodate it. (The Renaissance Center had housed the corporate offices of General Motors.) Now life is coming back downtown. There are some 200 concerts and events a year, plus ice skating in the winter. People are coming in from the suburbs. Investment is coming too: some $500 million worth. The Compuware Corporation has moved 6,000 employees into the city to be close to this new center of activity.

This actually is how markets began—in common spaces, especially the plazas around churches. Markets were social occasions before they became "economic" ones in the
From Community to Conservation

The lobster fisheries of Maine illustrate how social processes can translate into sustainability of a resource commons. These fisheries are organized informally within the state's many harbors, which are small enough to be communities. The fishers who work these waters know and watch one another. Each has a territory that has been worked out informally.

The enforcement of these informal territories, as well as of restrictions on taking undersized, overfished, or egg-bearing lobsters, is a community function more than a bureaucratic one. "As most lobstermen live in the same town, send their kids to the same school, and rely on one another in emergencies," Colin Woodard observed in his book The Lobster Coast, "social sanctions can be more effective than a dozen wardens. The wardens do exist. But the social networks that have evolved around these common make them less needful."

Maine fishers often toss back all the female lobsters in their traps, not just the egg-bearing ones, even though they don't have to. "Unlike the hypothetical heroes in Hanlin's hypothetical pasture, these actual commoners are not without common sense. It is entirely coincidental that the state's lobster fisheries are thriving, even though the number of fishers is a majority of those from lobsters more than doubled between 1973 and 1998."

The same kind of social structure that makes commons so productive in the alpine pastures of Switzerland, the rice fields of the Philippines, and many other settings is an argument for management that is local and community-based, and it raises questions about the assumptions behind corporate global economy. Such arrangements are not always possible, however, especially in a mobile market culture such as the United States. Then too, some commons are simply too large, such as watersheds, the oceans, and the atmosphere.

The challenge, then, is to devise formal arrangements that mimic the essential features of commons even if they cannot include the social dynamic of local and traditional settings. In other words, it means scaling up commons management just as the corporation scales up business management from the individual entrepreneur. One essential feature is equity and mutual benefit. Commons serve all, either equally or by a just distributional standard, subject to necessary rules for access and use. Central Park is open to all New Yorkers, whether they live in Harlem or on Central Park West, so long as they obey the rules.

The second essential feature has to do with time. Corporations are designed to seek short-term profits. Think of the same principles of quarterly earnings statements. The market theory that justifies them, moreover, has no concept of the future in regards to resources. Maximize gain today and the future will take care of itself, the theory goes. The needs of future generations are discounted, which means that market calculus always values the present generation more than it does future ones.

Commons, in contrast, turn that assumption upside down. Properly designed, they are enclosed to preserve assets for the future rather than to liquidate them for the present. They embody the way neighbors might think about a woodlot forleas as opposed to the way developers would. There are times when government management can play a role. Central Park functions admirably as a common under public ownership.

But government ownership is not always possible—or necessarily the best course. In the United States, continuing pressures on the

Arctic National Wildlife Refuge and on national forests illustrate the vulnerability of a system that is ultimately political. Even at the local level there are pressures to invade parks and other public spaces with corporate sponsorships, advertising, and so on. The national parks are treasures, but there is increasing need for an alternative to government ownership that is not tied to the corporate-government nexus.

No solution is without problems, but some are less problematic than others. At present the institution that best embodies commons functions outside the public sphere is the trust. (See Box 10-2.) Existing trusts are primarily local or regional and have discrete boundaries. The next challenge is to apply the concept to larger commons such as the atmosphere and oceans or with entire watersheds. One possibility is to scale up the trust model one step further and see that something looks like a "market mechanism" but that actually serves nonmarket ends. For example, Peter Barnes of the Tomales Bay Institute has proposed a Sky Trust, which would serve as trustee for the atmosphere much the way a bank serves as trustee for a family trust. To understand the Sky Trust model it helps to consider briefly what it is an alternative to.

The air pollution debate in recent years has focused on something called tradable pollution rights. Under this scheme corporations essentially get grandfathered rights to their past levels of dumping in the sky. If they reduce their emissions they can then sell the air space they are not using to another company—thus reaping a financial bonus for past bad behavior.

This approach is called "market-based" because it involves the buying and selling of dumping space as opposed to just regulatory limits. (Such limits still would exist, but they would cap the dumping space overall while companies worked out through trading which...
The Parallel Economy of the Commons

Trusts exist by definition to maintain an asset for their beneficiaries, future as well as present. They have at the heart of their property on the outside, but inside they can be designed for opposite ends. It is not surprising that this legal form has emerged as a way to graft commons-like management of limited resources onto an economic system that is not always the most receptive host.

An example is the Pacific Forest Trust, which helps protect private forests in the United States from both clearcutting and development. About four fifths of U.S. forestland is privately owned, and some 8,072 square kilometers of this forest disappears each year. The Pacific Forest Trust is working to halt this trend by acquiring conservation easements, which are a kind of property right in conservation use. Mineral rights give a corporation the right to extract resources; conservation easements give the trust the right to protect the land against use that would compromise its ecological functions.

The private owners keep the land and the right to harvest forestry. They donate or sell to the trust the rights to develop the land. The trust holds these rights so that no one else can use them. In this way, the public gets the benefits of living breathing forests for the long haul while owners still can harvest timber if they choose. In effect, this happens back to the time in U.S.

history when private forests were deemed common for purposes of sustenance. Back then sustenance meant cutting trees for firewood. Today it also means refrain from cutting trees to

ones used how much.) The ability to sell dump space presumably provides an "incentive" for companies to reduce their emissions continuously. But this problem is that the system rewards those who pollute the most. It also ignores the equitable owners of the sky— that is, all of us.

A commons-based approach would use a similar market dynamic, but it would start from a different premise and achieve a much broader beneficial result. The premise is that the sky belongs in some sense to everyone, which is why it is a commons. Corporations should not own it; they only can rent dump space from the owners. Under the Sky Trust, there would be annual auctions for the available dump space, within strict and diminishing limits. The proceeds would go into the trust, where it could be used for investment in clean energy, cash dividends

in the owners, or some combination of the two. The Sky Trust could help finance a long-term solution to climate change, not just reduce emissions.41

The Sky Trust would operate much like the桃花 permanent fund, which distributes revenues from that state's oil lands. But there would be one crucial difference. The Permanent Fund encourages drilling, because more drilling means more revenues for the owners. Sky Trust, in contrast, would encourage less pollution because it would reward the common owners—all of us—for reducing emission limits. When less dump space is available, the auction price will be higher, as a simple matter of supply and demand.42

This commons-based approach has been gaining ground due in part to the failure of a permissive trading scheme in the European Union. Even the Deutsche Bank and the Conservative Party in the United Kingdom now back the auction model, as do the governors of New York and Massachusetts. The concept is basically that of parking meters. When you take a scarce resource from the commons, be it parking space on the streets or dump space in the sky, then you have to pay the ultimate owners. And you can only take as much as the natural and social systems can carry.43

The approach could be applied to seabed mining, under the Law of the Sea Treaty, and in a host of other ways. It has implications also for public revenues more broadly. Starting from a commons standard, rather than a conventional economic one, would bring the ecological and the moral into economic alignment. As Winston Churchill, an advocate of this approach, once put it as a young Member of Parliament: "Formerly, the only question of the tax gatherers was, "How much have you got?" Now we also ask, "How did you get it?"44

Churchill was getting at the distinction between income earned by productive investment or roll and income that came from cashing in on something that nature or society had already created. The question is not what people make, he was saying, but rather what they take from the common pool. Specifically he was talking about land.

Land is not just a gift of nature as opposed to a product of human enterprise (with rare exceptions, such as fallows). The value of urban land arises from the investment of the entire society rather than that of a particular owner. The difference in value between a parcel in Bridgeport, Connecticut, and one of identical size on Park Avenue in Manhattan has little to do with the efforts of individual owners and much to do with the investment that has gone into on around them.

It is a social creation rather than an individual one, and therefore a form of commons. When individuals profit from increases in this location value—that is, the value of the site, as opposed to any buildings or improvements they have made on the site—they are reaping where they have not sown and are expropriating for themselves a gain that rightfully belongs to the society at large.

There is a social component in all gain, of course. But with land the case is almost pure. The consequences of permitting this expropriation from the commons are grim ecologically as well as in terms of justice. The loss of land gains feeds the speculation that drive development far into the countryside. I encourage spreading low-density development, when taxes on the site (or socially created) component of real estate are low, there is no need to use the land intensively to generate revenues to pay for the tax.

The current property tax includes the value of both land and buildings. Typically the less portion is undervalued, because commercial owners like to attributes site value to the building so they can depreciate it. Shifting th
Enacting Communities for a Sustainable World

Erik Assadourian

To the west is Vermeuse Avenue, one of the most congested traffic corridors in Los Angeles, tied with a maze of fast-food chains, malls, salons, and dollar stores, all nestled in a half-dozen strip malls. To the east lie three auto repair shops, a hotel, and a giant concrete trash bin that dominates the street. To the south, there are two more auto body shops, an overcrowded schools, and a couple of car dealerships. And to the south, just beyond the Great Western City and Youth Center, are two giant supermarkets with equally gigantic parking lots, tailored to be one-stop shopping for people commuting along the Vermeuse Avenue corridor.

In the middle of this car-centric infrastructure—what some might call "sprawl"—lies a little green oasis: the Los Angeles Ecoscape (LA EASV). This community, two small apartment buildings with about 25 residents, was started in 1992 as a demonstration project on how a community can transform its surroundings, helping to create a sustainable society.

In its 15 years, the LA Ecoscape has had many impressive victories. Within its purview, LA EASV has facilitated technology and life-changes, such as installing solar panels and composting facilities, providing rent reductions for people who live car-free, and transforming its courtyard into a 7,000-square-foot garden that produces nine types of fruits and many vegetables as well as a lush common area to sit and relax in. LA EASV has also incubated businesses like the Bicycle Co-op—a shop that repairs bikes and trains neighborhood children in bicycle maintenance skills. And perhaps most importantly, the community has influenced the local political process of Los Angeles, from land support to "green" mayoral candidates engaging in public planning processes, as the restoration of the Los Angeles River, transportation planning, and local development—all while continuing to be an affordable, accessible place to live, located with a 10-minute walk of two subway stops and bus lines.

Throughout its history, the LA Ecoscape has emphasized its relationships it generates, and the way of...