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The Commons: A Template for Transformation

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This essay argues that, in the face of the deep pathologies of neoliberal capitalism, the commons paradigm can help us imagine and implement a transition to new decentralized systems of provisioning and democratic governance. The commons consists of a wide variety of selforganized social practices that enable communities to manage resources for collective benefit in sustainable ways. A robust transnational movement of commoners now consists of such diverse commons as seed-sharing cooperatives; communities of open source software programmers; localities that use alternative currencies to invigorate their economies; subsistence commons based on forests, fisheries, arable land, and wild game; and local food initiatives such as communitysupported agriculture, Slow Food, and permaculture. As a system of provisioning and governance, commons give participating members a significant degree of sovereignty and control over important elements of their everyday lives. They also help people reconnect to nature and to each other, set limits on resource exploitation, and internalize the "negative externalities" so often associated with market behavior. These more equitable, ecologically responsible, and decentralized ways of meeting basic needs represent a promising new paradigm for escaping the pathologies of the Market/State order and constructing an ecologically sustainable alternative.

A recent cartoon by Tom Toles described the history of climate change policy by showing a dozen frames of a person saying, "There is no climate change….There is no climate change…" This is followed by a final frame in which a person shrugs, "It's… um….It's too late."[1] Even though abundant scientific and popular evidence shows that climate change poses a serious threat to human civilization, the world's primary governance institutions—nation-states, treaty organizations, corporations—have achieved very little since the problem was first confirmed in the late 1980s.

Climate change is but a synecdoche, a representative symbol, of the wider universe of economic, social, and ecological problems that continue to fester because the Market/State will sanction only a limited spectrum of politically acceptable responses. I use the term Market/State to refer to the deep interdependencies between large corporations, political leaders, and government bodies, and their shared commitment to the grand narrative of neoliberal economics and public policy. The Market/State regards individualism, private property rights, and market exchange as the indispensable drivers of economic growth and technological innovation, which lie at the heart of a mythical vision of modernity and human progress.

In the face of crises or scandals, citizens may protest and petition the State for domain-specific reforms. But ultimately, neoliberal economic principles, which entail maximal reliance on "free markets" and a disdain for government "intervention" and collective action by citizens, structurally define the field of credible options for change. Because of this structural reality of modern political culture, many citizens can more easily imagine the end of the world (consider the many apocalyptic books, films, and artworks of our time) than the end of capitalism. The 2008 financial crisis, for instance, did not result in a serious reckoning or reform, but rather further corporate consolidations and soaring stock prices and profits.

Are there, then, any credible paths forward? This essay argues that the commons paradigm can help us imagine and implement a serious alternative—a new vision of provisioning and democratic governance that can evolve within the fragile, deteriorating edifice of existing institutions. The commons—a paradigm, discourse, ethic, and set of social practices—provides several benefits to those seeking to navigate a Great Transition. It offers a coherent economic and political critique of existing Market/State institutions. Its history includes many venerable legal principles that help us both to imagine new forms of law and to develop proactive political strategies for effecting change. Finally, the commons is supported by an actual transnational movement of commoners who are co-creating innovative provisioning and governance systems *that work*.

Let me be clear: the commons is not a utopian vision or ideological agenda. Its future development is not inevitable. But the recent history of numerous commons shows that it is a useful new/old framework and vocabulary for co-constructing a new societal vision and, thus, a way of imagining fresh alternatives that go beyond the

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tacit (and not-so-tacit) boundaries set by neoliberalism. The commons is not just an intellectual construct, however, but equally a constellation of self-organized projects around the world that are meeting human needs in more equitable and ecologically responsible ways. They include such diverse endeavors as seed-sharing cooperatives in India, the "right to the city" movement throughout Europe demanding that public spaces and resources serve everyone, communities of open source software programmers producing shareable code, localities that use alternative currencies to invigorate their economies, and local food initiatives such as community-supported agriculture, Slow Food, and permaculture.

As a system of provisioning and governance, the commons lets people make their own rules for managing the resources on which they depend. It gives them a significant degree of sovereignty and control in the spheres of everyday life that matter to them. It can help them reconnect to nature and to each other, set limits on resource exploitation, and internalize the "negative externalities" so often associated with market behavior. We can also reasonably extend the canonical small-scale commons to imagine new forms of larger-scale commons institutions, such as stakeholder trusts and "state trustee commons," to govern infrastructure and larger-scale natural systems.

To be sure, the commons paradigm has limitations, as we will explore later. Instigating new collective management systems, for example, can be quite difficult, as can stabilizing the rules, practices, and culture of a given community. The state and market can be willful antagonists of commons, rather than supportive partners. Indeed, the market and state have historically colluded to enclose commons, convert shared resources into privatized commodities, and disrupt the social relationships and identities that constitute a commons.

Notwithstanding such complications, the commons provides a useful template for diverse communities to imagine alternative futures in both a political and pragmatic sense. Commons can serve as spaces in which ordinary people can deliberate with others and have their concerns heard—a capacity that is sorely missing in contemporary life.[2] This is arguably a prerequisite for achieving any real environmental or economic sustainability—the ability of people to make the governing decisions that will affect them. Furthermore, the commons honors use-value over exchange-value and seeks to assure that basic needs are met first. Because commons strive to internalize principles of ecological limits and nurture an ethic of sufficiency, they can begin to disrupt the Market/State's pathological dependence on economic growth and its inability to set limits on the overexploitation and abuse of Earth's natural systems ("the tragedy of the market").[3]

Introduction to the Commons Paradigm

There have been commons since the dawn of human existence. A growing body of

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scientific evidence suggests that social trust and cooperation may be an evolutionary reality hard-wired into the human species.[4] Reciprocal altruism and collective action certainly contributed to the development of prehistoric agriculture, indigenous peoples around the world have ingeniously blended their cultural practices with ecosystem imperatives, and now social collaboration on digital platforms is becoming an economic and social norm.[5]

In this sense, the commons is really a social paradigm, a concept that in its very essence challenges some basic premises of the economic theory developed in the eighteenth and nineteenth centuries. Human beings are *not* essentially the selfish, rational, utility-maximizing individuals that standard economics presumes they are. Human beings have many more complex propensities that are consequential to economic activity and life. While people are surely self-interested and competitive in many aspects of their lives, they also exhibit deep concern for fairness, participation, social connection, and peer approval. All of these human traits lie at the heart of the commons. Yet most economists view such traits as incidental to market transactions, the esteemed "main act" of wealth creation, because they tend not to conform to the basic logic of *Homo economicus* and market economics.

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For more than forty years, much of the educated public has considered the commons to be a failed management regime. Much of the blame can be traced to a famous essay written by biologist Garrett Hardin in 1968, "The Tragedy of the Commons," a short piece in the journal *Science* that presented a parable of a shared pasture on which no single herder has a "rational" incentive to limit his cattle's grazing.[6] The inevitable result, said Hardin, is that each farmer uses as much of the common resource as possible, inevitably resulting in its overuse and ruin—the so-called "tragedy of the commons."

Alas, Hardin was not describing a commons, but rather an open access regime or free-for-all in which everything is free for the taking without constraint. In a commons, however, there is a distinct community of users who govern the resource. The commoners negotiate their own rules of usage, assign responsibilities and entitlements, and set up monitoring systems and penalties to identify free riders, among other acts to maintain the commons. Commons scholar Lewis Hyde has puckishly called Hardin's "tragedy" thesis "The Tragedy of Unmanaged, Laissez-Faire, Common-Pool Resources with Easy Access for Non-Communicating, Self-Interested Individuals."[7]

Economists and conservative ideologues nonetheless saw the parable as a useful way to affirm the virtues of private property and limited government. Hardin's misrepresentation of the commons became a familiar catchphrase, and the "tragedy" syndrome went on to become a much-taught concept in undergraduate education. In the meantime, contemporary economic theory has ignored actual working commons. For example, two leading American introductory economics textbooks

do not explore the natural resource commons upon which an estimated two billion people rely to meet their everyday needs.[8] Subsistence provisioning for household use is not as captivating to economists as production for market exchange and capital accumulation.

Professor Elinor Ostrom, a political scientist at Indiana University, helped rescue the commons from the memory hole to which mainstream economics had consigned it. Over the course of four decades, Ostrom's extensive empirical fieldwork documented the capacity of communities to manage natural resources sustainably. The central question that Ostrom and her colleagues have tried to answer was

> how a group of principals who are in an interdependent situation can organize and govern themselves to obtain continuing joint benefits when all face temptations to free-ride, shirk or otherwise act opportunistically. Parallel questions have to do with the combinations of variables that will (1) increase the initial likelihood of self-organization, (2) enhance the capabilities of individuals to continue self-organized efforts over time, or (3) exceed the capacity of self-organization to solve CPR [Common-Pool Resource] problems without external assistance of some form.[9]

Ostrom's landmark 1990 book *Governing the Commons* identified some key "design principles" for successful commons, while her other books explored the ways to diversify and nest governance ("polyarchy") in order to empower bottom-up initiative and decision-making.[10] For this work, Ostrom won the Nobel Prize in Economics in 2009 (which she shared with Oliver Williamson), the first woman to be so honored. Coming on the immediate heels of the 2008 financial crisis, the Nobel Prize committee may have wished to showcase how ongoing social *relationships* play as significant a role in economics as impersonal market *transactions*.

Besides her copious research literature, Ostrom's greatest legacy (she died in 2012) is the large international network of scholars who continue to study the varied institutional systems for governing common-pool resources (resources over which no one has private property rights or exclusive control). Most of these consist of small-scale natural resources such as forests, fisheries, grazing lands, groundwater, and wild game, usually located in rural regions of marginalized countries. Anthropologists, sociologists, political scientists, economists, and other scholars associated with the International Association for the Study of the Commons have studied pastoralists in semi-arid regions of Africa, lobstermen in the coast coves of Maine, rubber tappers in the Amazon, and fishers in the Philippines, among hundreds of other commoners.[11]

A Brief Sampling of Commons that Manage Ecological Resources

There is no definitive taxonomy or inventory of commons. A commons arises whenever a given community decides that it wishes to manage a resource

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collectively, with an accent on fair access, use, and long-term sustainability. While choosing to categorize commons by the type of resource involved is tempting, a focus on the resource alone can be misleading. For example, a "knowledge commons" on the Internet is not simply about intangible resources such as software code or digital files; such a commons also requires physical resources to function (computers, electricity, food for human beings). By the same token, "natural resource commons" are not just about timber or fish or corn, because these resources, like all commons, can only be managed through social relationships and shared knowledge. "*All commons* are social, and *all commons* are knowledge commons," as my colleague Silke Helfrich puts it.[12]

The fact that any given commons has so many "floating variables" makes developing a standard, universal typology of commons difficult. The boundaries between commons and their contextual circumstances are blurry, creating a serious methodological challenge in identifying which dynamics of commons are defining and which are incidental. Ostrom sought to overcome this problem by developing what she called Institutional Analysis and Development, a meta-theoretical research framework for assessing variables in commons across disciplinary boundaries.[13] However, I believe that the IAD has "ontological prejudices" of its own. If commons are "seen from the inside"—i.e., through the intersubjectivity, history, and culture of their participants—a universal typology or taxonomy of commons is elusive, if not impossible.

Nonetheless, one needs to have a rough mental map of a rather sprawling universe of commons. In that spirit, to illustrate some strikingly different types of structures for managing ecological resources, here is a brief sampling of notable commons:

> **The Potato Park (Peru)** is a *sui generis* regime under international law that authorizes a number of Peruvian indigenous peoples to manage more than 900 genetically diverse potatoes as a "bio-cultural heritage" landscape. The Potato Park is a rare instance of State law recognizing collaborative stewardship of crops that would otherwise be vulnerable to enclosure (through the patenting of genetic knowledge, also known as "bio-piracy").[14]

> **Acequias** are a "bio-cultural" institution of Hispanic-Americans in New Mexico that sustainably manages irrigation water in a very arid region. In contrast to land practices in adjacent areas, acequias contribute to soil and water conservation, aquifer recharge, preservation of wildlife and plant habitats, and energy conservation. The success of acequias stems from their commons-based system of decision-making, participation, and enforcement. All community members share responsibilities for stewardship of the water (e.g., annual cleaning of water ditches) while sharing use rights to water, a system that has worked sustainably even in

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periods of drought.[15]

The System of Rice Intensification (SRI) is an agro-ecological system for improving the productivity of irrigated rice by changing the mix of plants, soil, water, and nutrients. SRI operates as a self-organized online network of farmers in several dozen countries. These collaborations in cyberspace have helped farmers boost yields by 20 to 100%, reduce the seed required by 90%, and reduce water usage by up to 50%. The project is notable for blending the use of online platforms with physical resource management—a trend exemplified by other "eco-digital commons."[16]

The stakeholder trust, inspired by the Alaska Permanent Fund, is a species of large-scale commons that distributes revenues from a shared asset (such as oil on Alaskan land) to every household in the state (roughly $1,000 to $2,000 each year). For alienable resources, this governance/management model is easily replicable. For example, stakeholder trusts have been proposed for the atmosphere ("Earth Atmospheric Trust"), oceans, and the human genome; and ecological economists in Vermont have proposed a stakeholder trust for natural resources in their state. Stakeholder trusts are a particularly useful way to recognize our collective ownership of certain natural resources and to generate non-wage income streams that can reduce inequality—a theme long championed by author Peter Barnes.[17]

Urban commons are increasingly named and defended as such, most notably in the violent protests to prevent Gezi Park in Istanbul from being converted into a shopping mall. Urban commons include community gardens, urban land trusts, collaborative consumption, and "homegrown parks." There are many new initiatives to treat "the city as commons" and to develop policies for a "shareable city."[18]

These very different types of commons all recognize the power of local and distributed engagement; moral, social, and ecological considerations; and the creativity and legitimacy that result from self-organized, bottom-up rulemaking.

The Rise of the Contemporary Commons Movement

Alongside the academic exploration of the commons, but independent of it, a global movement of commoners began to emerge in the late 1990s and early 2000s, coinciding with the growth of the World Wide Web and free/open source software. These self-identified commoners work in local, national, and transnational arenas and focus on very different concerns such as subsistence agriculture, access to water, the re-localization of food production, open access scholarly publishing, hackerspaces and Fab Labs, urban spaces and amenities, scientific data sharing, "collaborative consumption," cooperatives, and alternative currencies, among many others. Despite their manifest differences, these commoners share deep commitments to managing

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Most commoners care less about theorizing about the commons than about practically improvising the stewardship of their shared resources. That is, they mostly focus on *building* new models of commons-based provisioning outside of the control of the Market/State. The 2012 book *The Wealth of the Commons*, a collection of seventy-three essays on the commons that I co-edited with Silke Helfrich, provides a sense of the scope and diversity of this activity.[19] Besides many activist initiatives and commons-based provisioning projects, notable recent developments include a major international conference in Berlin in May 2013 and a strategic research initiative launched by Ecuador to explore how it might build its economy on the principles of commons-based peer production.

The broad appeal of the commons discourse stems in no small part from the vulnerability that so many people experience at the hands of the Market/State. Enclosures of water, customary lands, genetic resources, knowledge, the Internet, and much else are all motivated by a common denominator, the neoliberal policy agenda, which sees economic growth and the marketization of everything as self-evident imperatives. Generally speaking, however, the many victims of market enclosures have no shared discourse for expressing the value of their commons as a source of provisioning, social connection, and identity. The commons paradigm helps address this need for a shared discourse and increasingly serves as a scaffolding for developing a critique and vision. This project naturally draws upon the striking historical parallels between contemporary enclosures and the English enclosure movement, which criminalized commoning, converted shared wealth into private property, and dispossessed people of the resources and traditions needed for subsistence.[20]

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This history remains highly instructive today, especially in its legal dimensions. The civil wars that resulted in King John's signing of the Magna Carta in 1215, and the companion document the Charter of the Forest, set forth a range of legal principles recognizing the right to commoning.[21] They augmented a body of commons-based law going back to Roman law, most notably the Institutes of Justinian, the first known legal recognition of common resources, in 535 CE.[22] Other bodies of commons-based law include the public trust doctrine in environmental law, which prohibits the State from selling or giving away resources that belong to the unorganized citizenry; legal regimes to conserve land and other natural resources; and international treaties that govern the use of oceans, Antarctica, and space.

Imagining a New Architecture of Commons-Based Law and Policy

In a recent book, *Green Governance: Ecological Survival, Human Rights and the Law of the Commons*, Professor Burns H. Weston, the noted international human rights scholar, and I argue that a number of powerful trends—in economics, digital

technology, human rights law, and commons—are converging. The book emphasizes the need to develop a new architecture of commons-based law and policy, which we call "green governance."[23] This new "commons imaginary" uses the instruments of State, international, and human rights law in new ways to facilitate the formation and maintenance of ecological commons.

In the book, we seek a reconceptualization of the human right to a clean and healthy environment within the framework of international human rights law. We propose that modern law should recognize the age-old paradigm of the commons and provide affirmative recognition and support to the right to common. Our premise is that, given the demonstrable failures and limitations of the Market/State in assuring a clean and healthy environment, a new regime of commons-based "green governance" (in concert with the State) could help overcome some key structural limitations of "free markets" and conventional government.[24]

This will require that we reconceptualize law itself as something more than the enactments of legislatures and the declarations of courts. Weston and I call for recognition of what we call *Vernacular Law*—the "unofficial" social norms, procedures, and customary institutions that peer communities devise to manage their own resources. "Vernacular," as the prominent Austrian social critic Ivan Illich pointed out, "implies 'rootedness' and abode" and derives from the Latin word *Vernaculum*, which described "sustenance derived from reciprocity patterns embedded in every aspect of life, as distinguished from sustenance that comes from exchange or from vertical distribution."[25] Vernacular Law matters because commons governance depends on informal, socially negotiated rules that may not even be written down. It constitutes a form of "cultural ballast" that gives a commons stability and self-confidence even in the absence of formal law.

Some may complain that commons based on Vernacular Law are not necessarily democratic in the sense understood by modern liberal polities. There may indeed be social inequalities and hierarchies in various commons, which traditional liberals might consider alien or unacceptable. On the other hand, as Ostrom's design principles for commons confirm, successful commons tend to have modes of participation, deliberation, transparency, responsibility, and effectiveness that generally surpass anything provided in practice by the bureaucratic State or representative democracies.

In any case, one attractive option is for the State to act as a partner with the commons, setting the basic democratic parameters within which Vernacular Law must operate, without directly controlling how a given commons is organized and managed. The State already delegates considerable authority to corporations through corporate charters, ostensibly to serve public purposes. Why could it not use this same authority to charter commons for green governance? Such a policy approach could help to mobilize decentralized participation on the ground and to provide

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a meaningful role for local knowledge and bottom-up innovation. Moving in this direction—to recognize and support commons as a matter of state law and policy—would obviously require innovative legal and policy structures and procedures.[26]

The Prospects and Limitations of the Commons Paradigm

While the decentralized, bottom-up rulemaking and governance processes of commons can be a powerful engine of transformation—bypassing many of the pathologies of corporate and state power—serious challenges to enacting this scenario exist. Some challenges are intrinsic to the commons paradigm, others stem from political opposition, and still others have to do with the uncertainties of sailing into unchartered waters, particularly in terms of the governance of large-scale common-pool resources such as the atmosphere and oceans. As a form, the commons clearly works more naturally at smaller scales because personal interactions—and thus deliberation, negotiations, and monitoring—are more easily achieved. However, the "scalability quotient" of commons is changing as the Internet enables larger, more robust systems for cultivating trust, transparency, and collaboration among strangers online.[27]

Since commons are typically nested within larger systems (e.g., state and market structures at various scales), they are rarely wholly independent and autonomous. Thus, all sorts of "exogenous variables" may affect the workings of commons. This, too, poses unpredictable challenges in starting and growing new commons. For example, corporate agribusiness may be hostile to local farming coops or seed-sharing communities and may interfere with them through obstructionist laws or sheer market dominance.[28] Alternatively, the State may fail to understand or support commons, particularly since it tends to see market growth (and thus the growth of tax revenues) as central to its own success.

Inappropriate or ineffectual governance, bad leadership, and ill-advised group consensus can all damage the effective working of the commons, and commoners may have disagreements and conflicts that cannot always be bridged. It is therefore imperative that the constitutional structures, operational rules, and social norms of commons evolve to "contain" and resolve disagreements and to channel them in constructive directions. In spite of the prisoner's dilemma literature, the history of countless real-life commons suggests that a rough consensus and working governance are entirely possible.[29]

Two other salient challenges deserve mention. One is the deep philosophical tensions between the commons and the modern liberal state. The State generally gives juridical recognition to individuals only, chiefly to protect private property rights, personal liberties, and commercial interests. The idea of recognizing collective rights for a given activity may be suspect if not unconstitutional, as we can see in the State's typical aversion to recognizing the collective interests of indigenous peoples.[30] As a result, legal protection for commons in modern liberal polities often requires a "hack"

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on conventional law to enable commoning. Salient examples include the Creative Commons licenses (copyright law), the General Public License for free software (copyright law), and land trusts (property law).

The very categories of neoliberal thought are ill-equipped to comprehend the logic of commons. The commons, for example, integrates the activities now known as "production," "consumption," and "governance"—each usually assigned to separate realms—into a single, organic unit. Consider how such a division of functions would make little sense to participants of a seed-sharing collective, a Wikipedia editorial group, or the CouchSurfing hospitality commons. Potentially more perplexing still, the commons implicitly scrambles many familiar dualisms of neoliberal thought, such as "public" and "private," "collective" and "individual," and "objective" and "subjective." These antinomies are not necessarily self-evident because, in a commons, individual interests are nested within collective interests, non-rational emotions and convictions have a social standing alongside "objective, rational" beliefs, and the dominant vectors of "market" and "state" may be only marginally implicated.

Second, we must consider how to build commons-based governance structures at larger scales and how to "nest" different levels of governance to enable "scale-linking" behaviors. The strategies for managing small-scale natural resource commons obviously cannot work for regional or global ecological systems that traverse major political boundaries—e.g., the Great Lakes, coastal fisheries, biodiversity, and the atmosphere. A cross-boundary commons is clearly a frontier challenge in reimagining governance, one whose complications require creative innovation.[31] Suffice it to say that we must begin to devise distributed forms of commons governance that mimic complex adaptive systems, which over time can give rise to new properties of self-organization and administration at higher levels. The commons paradigm cannot be abruptly declared and built; new behaviors, practices, and identities must be cultivated over time. We need to enable new forms of socially embedded governance and provisioning that "grow" organically, and not presume that passing a law, winning a lawsuit, or establishing a new government agency more or less resolves a problem.

Building the commons requires that we take seriously the concept of "emergence," as described by complexity theory. The idea of evolving new forms of self-organized governance may seem absurd according to the tenets of centralized government institutions that prize maximum control, uniform rules, and formal accountability. But emergence is arguably the prevailing incubation strategy in tech-related businesses that rely upon digital networks as infrastructure.[32] We are already beginning to see the rise of scale-linking governance systems on the Internet that are resulting in new forms of "glocal" behavior (intertwined global and local cooperation). The open design and manufacturing movement, for example, has produced functional models of cars, houses, and farm equipment (Wikispeed, Wikihouse, and Open Source Ecology, respectively) that rely on global design collaboration and local fabrication.[33]

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Experiments that leverage the rich capacities of open networks and "go beyond bureaucracy" to empower commons are, thus, urgently needed.[34] Nation-states may or may not entertain new forms of transboundary governance that they do not directly administer, but the performance of existing institutions of government is not that impressive. Some conceptually innovative approaches are essential.

The Commons as a Template for Reimagining the Future

Expanding the scope of commons-based governance will require that we reconceptualize the neoliberal Market/State as a "triarchy" of the *Market/State/ Commons*, in the words of Michel Bauwens, founder of the P2P Foundation.[35] This would realign authority and provisioning responsibilities in new ways. The State would maintain its commitments to representative governance and the management of public property, and business enterprises would continue to own capital to produce saleable goods and services. But the State would shift its focus to become a "Partner State," assisting not just the market sector but also the commons sector, working to ensure its health and well-being. Given the State's current deep alliance with the Market, the State is not likely to embrace this idea with alacrity. However, given the deterioration of trust, efficacy, and legitimacy that now afflicts state and market institutions, the commons model has great potential because of its capacity to be more cost-effective, responsive, and socially equitable, and to be experienced as a more legitimate form of governance.

In the meantime, with or without government sanction, the commons can let people begin to initiate their own systems and bypass captured, dysfunctional government and predatory, expensive markets. Such commoning is likely to "compete" eventually with existing market practices and build a different "center of gravity" that makes commons alternatives more credible. GNU/Linux did this in the late 1990s and beyond, taming Microsoft at a time of its formidable market dominance. The local food movement is also doing this to the consolidated industrial food system today by demonstrating the appeal of locally-based working alternatives.

While proposing a grand end state to which we should aspire is tempting, it is important to understand the commons as a *process* for discovering and enacting a grounded alternative vision. Certain opportunities and ambitions can materialize and evolve only if one is immersed in an active community of co-venturers; there are limits to intellectual foresight, and "action causes more trouble than thought," as conceptual artist Jenny Holzer nicely puts it.[36] We have seen how new "micro" social behaviors can give rise to needed macro-institutions over time, and those, in turn, to new movements. Consider the "swarming federation" of cooperation among multiple digital commoners that has emerged over the past fifteen years. Today, the people involved in free software, Wikipedia, Creative Commons licenses, open access publishing, open courseware, open educational resources, open data, and related endeavors provide extensive mutual support to each other. Collectively, they represent a formidable constituency that is building a different future and is

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increasingly influential in public policy fora.[37]

Such examples suggest how loose federations of commoners of various stripes might open up viable pathways to a new sort of economic and social order, rooted in the values of a Great Transition. What now appears to be a "shadow sector" outside of the perimeter of the Market/State—a realm only dimly recognized by mainstream economics and policy—has the potential to pioneer working alternatives. Moving beyond the matrix of consumerism, debt, short-term market priorities, ecological harm, and economic inequality associated with the modern Market/State, the commons provides a framework for cultivating a new ethic of *buen vivir*, or "living well," a term used by many Latin Americans to describe a more humane, balanced way of life.[38]

Such an outcome is not guaranteed, of course. Any progress in this direction will entail on-the-ground commoning, technical ingenuity, legal innovation, social solidarity, and political struggle. But the commons has a special capacity to speak at once to politics, economics, culture, and the "inner dimensions" of people's lives; it is not just an abstract policy vision or white paper. Indeed, the commons movement is growing because people can access it from many directions and are advancing it through myriad projects and other movements. It can draw upon a serious legal tradition and unleash new types of political synergies. The big question is whether commoners, proto-commoners, and the commons movement itself will recognize this full potential and step up to the rich opportunities ahead.

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Endnotes

1. Tom Toles, "History of the Climate Change Debate," cartoon, *Washington Post*, December 2, 2013, http://www.washingtonpost.com/opinions/toles/?hpid=z3.

2. Ivan Illich notably developed this theme in works such as *Deschooling Society* (London: Marion Boyars, 1971); *Tools for Conviviality* (London: Marion Boyars, 1973); and *Medical Nemesis* (London: Marion Boyars, 1976).

3. These themes are explored at length in David Bollier and Silke Helfrich, eds., T*he Life of the Commons: A World Beyond Market and State* (Amherst, MA: Levellers Press, 2012).

4. Samuel Bowles and Herbert Gintis, *The Cooperative Species: Human Reciprocity and Its Evolution* (Princeton, NJ: Princeton University Press, 2011); Martin A. Nowak, *Super Cooperators: Altruism, Evolution and Why We Need Each Other to Succeed* (New York: Free Press, 2011).

5. Doulas J. Kennet and Bruce Winterhalder, eds., *Behavioral Ecology and the Transition to Agriculture* (Berkeley: University of California Press, 2006).

6. Garrett Hardin, "The Tragedy of the Commons," *Science* 162, no. 3859 (December 1968): 1243, http://www.sciencemag.org/content/162/3859/1243.full.

7. Lewis Hyde, *Common as Air: Revolution, Art and Ownership* (New York: Farrar, Straus and Giroux, 2010), 44.

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31. Ibid., 204-225.

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33. Wikispeed, at http://www.wikispeed.org; Wikihouse, at http://www.wikihouse.cc; and Open Source Ecology, at http://www.opensourceecology.org.

34. An example is the Peer to Patent network hosted by the US Patent and Trademark Office to use crowdsourcing to identify "prior art" that might disqualify pending patent applications. Another example is "participatory sensing" and "citizen science" projects that enlist thousands of ordinary people to help collect data from the field (bird counts, water quality, etc.) or use their volunteer talents (crater-classification for NASA's "Be a Martian!" website).

35. Michael Bauwens, "The New Triarchy: The Commons, Enterprise, the State," *P2P Foundation's Blog*, August 25, 2010,

http://blog.p2pfoundation.net/the-new-triarchy-the-commons-enterprise-the-state/2010/08/25.

36. Jenny Holzer, Truisms public art display, 1977-1979, which first appeared as a series of anonymous broad-sheets on buildings, walls, and fences in and around Manhattan. This phrase also appeared on a marble bench that Holzer made, located in the reception area of the American Academy in Berlin. See the following: David Bollier, "In Berlin, Exploring What Is Commonable," *Bollier.org* (Blog), December, 5, 2012, http://bollier.org/blog/berlin-exploring-what-commonable.

37. David Bollier, *Viral Spiral: How the Commoners Built a Digital Republic of Their Own* (New York: New Press, 2008). The power of digital commoners was especially striking in their successful mobilization against the Anti-Counterfeiting Trade Agreement, which had proposed draconian extensions of copyright law.

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