



BY BRIAN TOKAR

ILLUSTRATION BY MARIA ASTRUP

Movements for Climate Action:

Toward Utopia or Apocalypse?

Will the climate crisis bring on a collapse of civilization, as forecast by popular dystopian thinkers, or is there potential for a positive ecological transition as projected by social ecologists? The further development of a movement for climate justice demands a reconstructive alternative to popular apocalyptic predictions.

At least from a North American perspective, there is little doubt that we are living in apocalyptic times. From mega-selling Christian “end times” novels on the right, to the neo-primitivist nihilism that has swept so much of the anti-authoritarian left, people across the political spectrum seem to be anticipating the end of the world. Predictions of “peak oil” have inspired important efforts at community-centered renewal, but also encouraged the revival of gun-hoarding survivalism. Hollywood’s latest disaster epic elaborates the myth, falsely attributed to Mayan peoples, that the world will end in 2012.

A recent cable TV series featured detailed computer animations purporting to show exactly how the world’s most iconic structures would eventually crumble and collapse if people ceased to maintain essential infrastructure. And, of course, R.E.M.’s anthemic “It’s the End of the World as We Know It (And I Feel Fine)” continues to be featured on pop radio playlists more than 20 years after its initial release.

The prevalence of apocalyptic images is not at all limited to popular culture. Disaster scenarios stemming from the accelerating global climate crisis look more severe with every

new study of the effects of the rising levels of greenhouse gases in the earth's atmosphere. Steadily rising levels of drought, wildfires and floods have been recorded on all the earth's continents, and people in the tropics and subtropics already face difficulty growing enough food due to increasingly unstable weather patterns. Studies predict mass-scale migrations of people desperate to escape the worst consequences of widespread climate disruptions. And the likely failure of the UN climate talks in Copenhagen has raised the profile of several new studies forecasting the dire consequences of temperature increases that may exceed 10 °C in the arctic and in parts of Africa.¹

In this context, the utopian ecological visions that inspired earlier generations of social ecologists – and environmental activists more broadly – almost seem quaint and out-of-date. The images of autonomous, self-reliant, solar-powered cities and towns that illuminated the first large wave of anti-nuclear activism in the 1970s and eighties sometimes seem more distant than ever. Despite an unprecedented flowering of local food systems, natural building, permaculture design, and other important innovations that first emerged from that earlier wave of activism, today's advocates of local self reliance and ecological lifestyles rarely seem engaged in the political struggles necessary to sustain their visions for the longer-term.

For social ecologists seeking to further the forward-looking, reconstructive dimensions of an ecological worldview, this presents a serious dilemma. From the 1960s onward, Murray Bookchin, the founding theorist of social ecology, proposed that the critical, holistic outlook of ecological science was logically and historically linked to a radically transformative vision for society. A fundamental rethinking of human societies' relationship to the natural world, he proposed, is made imperative by the understandings that emerge from ecological science, and these understandings also embody the potential for a revolutionary transformation of both our philosophical assumptions and our political and social institutions. Can this approach to ecology, politics and history be renewed for our time? What kinds of movements have the potential to express these possibilities? Can we meaningfully address the simultaneous threats of climate chaos and potential social breakdown while renewing and further developing the revolutionary outlook of social ecology?

Ecology and Capitalism

From the 1960s until his passing in 2006, Murray Bookchin insisted that the ecological crisis was a fundamental threat to capitalism, due to the system's built in necessity to continuously expand its scope and its spheres of control. In a 2001 reflection on the origins of social ecology, Bookchin wrote:

I was trying to provide a viable substitute for Marx's defunct economic imperative, namely an *ecological imperative* that,

if thought out ... would show that *capitalism stood in an irreconcilable contradiction with the natural world...* In short, precisely because capitalism was, *by definition*, a competitive and commodity-based economy, it would be compelled to turn the complex into the simple and give rise to a planet that was incompatible environmentally with advanced life forms. The growth of capitalism was incompatible with the evolution of biotic complexity *as such* – and certainly, with the development of human life and the evolution of human society.²

For a couple of decades, however, it appeared to many that capitalism had found a way to accommodate non-human nature and perhaps to “green” itself. This notion can be traced to the period leading up to the 20th anniversary of the first Earth Day. By the spring of 1990, many of the largest, most notoriously polluting corporations had begun to incorporate environmental messages into their advertising. By reducing waste, partially restoring damaged ecosystems, investing in renewable energy, and generally promoting an environmental ethic, the oil, chemical, and other highly polluting industries would become “stewards” of the environment. The 1990s, we were told, would usher in a “sustainable,” even a “natural” capitalism, whereby production and consumption would continue to grow, and companies like Exxon and Monsanto would join with a new generation of “green” entrepreneurs to solve our environmental problems.

As awareness of the climate crisis rose rapidly with the cost of energy during 2006–7, the “green consumerism” that was promoted as a conscientious lifestyle choice in the 1990s became an all-encompassing mass culture phenomenon. Mainstream lifestyle and even fashion magazines featured special “green” issues, and the *New York Times* reported that 35 million Americans were regularly seeking out (often high-priced) “earth-friendly” products, “from organic beeswax lipstick from the west Zambian rain forest to Toyota Priuses.”³ But the *Times* acknowledged rising criticism of the trend as well, quoting the one-time “green business” evangelist Paul Hawken as saying, “Green consumerism is an oxymoronic phrase,” and acknowledging that green living may indeed require buying less. With rising awareness of the cost of manufacturing new “green” products, even the iconic Prius has come under criticism for the high energy costs embedded in its manufacture.

The more forward-looking capitalists have had to admit in recent years that an increasingly chaotic natural and social environment will necessarily limit business opportunities. Some critics have suggested that this is one reason for the increasing hegemony of the financial sector:

In its disciplinary zeal, capitalism has so undermined the ecological conditions of so many people that a state of global ungovernability has developed, further forcing investors to escape

into the mediated world of finance where they hope to make hefty returns without bodily confronting the people they need to exploit. But this exodus has merely deferred the crisis, since “ecological” struggles are being fought all over the planet and are forcing an inevitable increase in the cost of future constant capital.⁴

The result is an increasingly parasitic form of capitalism, featuring widening discrepancies in wealth, both worldwide and within most countries, and the outsourcing of most production to the countries and regions where labor costs and environmental enforcement are at the lowest possible levels. As the profitability of socially useful production has fallen precipitously, we have seen the emergence of a casino-like “shadow” economy, in which a rising share of society’s material resources are squandered by elites in the pursuit of meaningless but lucrative profits from ever-more exotic financial manipulations.⁵

Simultaneously, capital is advancing a number of highly promoted, but thoroughly false solutions to the climate crisis. These vary from relatively trivial lifestyle suggestions, like changing light bulbs, to disastrous technical fixes such as reviving nuclear power, pumping sun-blocking particulates into the atmosphere, and processing the world’s grain supplies into automotive fuels. Different sectors of industrial and finance capital favor different variations on the general theme, but the overarching message is that solutions to global warming are at hand, and everyone should simply go on consuming. More hopeful innovations in solar and wind technology, “smart” power grids, and even energy saving technologies are promoted by some “green” capitalists as well, but these technologies continue to be marginalized by the prevailing financial and political system, raising serious questions about how such alternatives could be implemented. A comprehensive understanding of capitalism’s false solutions to the climate crisis is an essential prerequisite for moving forward in a thoughtful and proactive way.

False Solutions

Capitalist false solutions to the climate crisis fall into two broad categories. First are a series of technological interventions. They aim to either increase energy supplies while reducing reliance on fossil fuels, or to intervene on a massive physical scale to counter the warming effects of increasing carbon dioxide in the earth’s atmosphere. The former are certainly a necessary step, though attempting to transform our energy systems without changing the way economic decisions are made will likely prove to be a futile pursuit. The latter, broadly described by the term “geoengineering,” threatens to create a host of new environmental problems in the pursuit of a world-scale techno-fix to the climate crisis.⁶

The other broad category of capitalist false solutions relies on the tools of the so-called “free market” as a substitute for direct

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- 1 See, for example, Juliet Eilperin, “New Analysis Brings Dire Forecast Of 6.3-Degree Temperature Increase,” *Washington Post*, September 25, 2009; David Adam, “Met Office warns of catastrophic global warming in our lifetimes,” *The Guardian*, September 28, 2009. On the justice implications of the climate crisis, see Brian Tokar, “Toward a Movement for Peace and Climate Justice,” in *In the Middle of a Whirlwind: Journal of Aesthetics & Protest*, Summer 2008 (available at <http://inthemiddleofthewhirlwind.wordpress.com>).
- 2 Murray Bookchin, “Reflections: An Overview of the Roots of Social Ecology,” *Harbinger*, Vol. 3, No. 1 (October 2002), emphasis in original.
- 3 Alex Williams, “Buying Into the Green Movement,” *New York Times*, July 1, 2007.
- 4 Midnight Notes Collective, *Promissory Notes: From Crisis to Commons* (April 2009), p. 5.
- 5 For an insightful discussion of the capitalist trend toward financialization, see John Bellamy Foster and Robert McChesney, “Monopoly Finance Capital and the Paradox of Accumulation,” *Monthly Review*, Vol. 61, No. 5 (October 2009).
- 6 See, for example, the report *The Emperor’s New Climate: Geoengineering as 21st Century Fairytale* (Ottawa: ETC Group, 2009).

interventions against pollution. These include the creation of new markets in tradable carbon dioxide emissions allowances (now termed “cap-and-trade”), and the use of carbon offsets, i.e. investments in nominally low-carbon technologies elsewhere, as a substitute for reducing an individual or a corporation’s own emissions profile.

Among the technological false solutions, efforts to expand the use of nuclear power are by far the most insidious. Nuclear power has been subsidized for over fifty years by various governments – amounting to over a hundred billion dollars in the US alone – yet it still presents intractable technical and environmental problems. Any expansion of nuclear power would expose countless more communities to the legacy of cancer that critical scientists such as Ernest Sternglass have documented, and mainly indigenous communities to the even more severe consequences of uranium mining and milling. Scientists still have no clue what to do with ever-increasing quantities of nuclear waste that remain highly radioactive for millennia. Efforts to export the nominally most successful example of nuclear development, i.e., the French model, have utterly failed, as demonstrated by the French legacy of nuclear contamination, as well as years of delays, quality-assurance problems, and cost overruns at the French nuclear construction project in Finland.⁷

Recent studies of the implications of an expanded nuclear industry have also revealed some new problems. First it appears that supplies of the relatively accessible, high-grade uranium ore that has thus far helped reduce the nuclear fuel cycle’s greenhouse gas emissions are quite limited. If the nuclear industry ever begins to approach its goal of doubling or tripling world nuclear generating capacity – necessary to displace a significant portion of the predicted *growth* in carbon dioxide emissions – they will quickly deplete known reserves of high-grade uranium, and soon have to rely upon fuel sources that require far more energy to mine and purify.⁸

Additionally, the economics of nuclear power rule it out as a significant aid in alleviating the climate crisis. In one recent study, energy economist (and *Natural Capitalism* co-author) Amory Lovins compared the current cost of nuclear power to a variety of other sources, both in terms of their power output and their CO₂ emissions savings. He concluded that from 2 to 10 times as much carbon dioxide can be withheld from the atmosphere with comparable investments in wind power, cogeneration (simultaneously extracting electricity and heat from the burning of natural gas), and energy efficiency.⁹ Such findings, however, are far from adequate to sway either industrialists or politicians who are ideologically committed to the nuclear path. Well known environmental advocates, including the British scientist James Lovelock and *Whole Earth Catalog* founder Stewart Brand, reap the apparently unending adoration of the mainstream press for their “born-again” advocacy for nuclear power, while US Senator John

Kerry has offered generous new subsidies to the nuclear industry in an effort to win Republican Senators’ support for his cap-and-trade-centered climate bill.¹⁰

Claims that the coal industry will soon clean up its act and cease contributing to the climate crisis are equally fanciful. While politicians endlessly repeat the promise of “clean coal,” and the World Bank has recently announced a new carbon capture trust fund for developing countries, scientists actually engaged in efforts to capture and sequester CO₂ emissions from coal plants admit that the technology is decades away, at best. Many are doubtful that huge quantities of CO₂ can be permanently stored underground, and project that attempting to do so will increase the energy consumed by coal-burning plants as much as 40 percent.¹¹ Still, the myth of “cleaner” coal is aggressively promoted in the US and around the world, partly to justify the continued construction of a new generation of coal-burning plants, which are misleadingly described as “capture-ready.”

The consequences of efforts to minimize conventional pollution from coal plants were dramatized by a massive spill of hundreds of millions of gallons of toxic coal ash last year, following the breach of a large dam in the US state of Tennessee. The incident covered the valleys below with up to six feet of sludge, which is essentially the byproduct of scrubbers installed to make coal burning somewhat cleaner; contaminants that were once spewed into the air are now contaminating waterways instead. A recent investigation by *New York Times* revealed that more than 300 coal plants have violated US water pollution rules in the past five years, only 10 percent of which were fined or sanctioned in any way.¹² Activists in regions of the Appalachian Mountains that have relied on coal mining for over a century are now rising up against the practice of “mountaintop removal” mining, in which mountaintops are literally blasted off to reveal the coal seams below.

So-called “biofuels” present a more ambiguous story. On a hobbyist or farm scale, people are running cars and tractors on everything from waste oil from restaurants to homegrown oil from sunflowers. But industrial-scale biofuels present a very different picture; activists in the global South use the more appropriate term, “agrofuels,” as these are first and foremost products of global agribusiness. Running American cars on ethanol fermented from corn, and European vehicles on diesel fuel pressed from soybeans and other food crops, has contributed to the worldwide food shortages that brought starvation and food riots to at least 35 countries in 2007–8.¹³ The amount of corn needed to produce the ethanol for one large SUV tank contains enough calories to feed a hungry person for a year.¹⁴

Even if the entire US corn crop were to be used for fuel, it would only displace about 12 percent of domestic gasoline use, according to University of Minnesota researchers.¹⁵ The current push for agrofuels has consumed a growing share of US corn – as much as

30 percent in 2009 – and encouraged growers of less energy and chemical-intensive crops such as wheat and soybeans to transfer more of their acreage to growing corn. Land in the Brazilian Amazon and other fragile regions is being plowed under to grow soybeans for export, while Brazil's uniquely biodiverse coastal grasslands are appropriated to grow sugarcane, today's most efficient source of ethanol. Two studies released in 2008 show that deforestation and other changes in land use that go along with agrofuel development clearly make these fuels net contributors to global warming.¹⁶

Commercial supplies of biodiesel often come from soybean or canola fields in the US Midwest, Canada, or the Amazon, where these crops are genetically engineered to withstand large doses of chemical herbicides. Increasingly, biodiesel originates from the vast monoculture oil palm plantations that have in recent years displaced more than 80 percent of the native rainforests of Indonesia and Malaysia. As the global food crisis has escalated, agrofuel proponents have asserted that using food crops for fuel is only a temporary solution, and that soon we will run all of our cars on fuel extracted from grasses and trees; this dangerous myth is exacerbating global conversion of forests to timber plantations, and helping to drive a new wave of subsidies to the US biotechnology industry to develop fast-growing genetically engineered trees.¹⁷

Trading Pollution

Perhaps the most brazen expression of capitalist ideology in the climate debate is the notion that the capitalist market itself can be a tool for reducing global emissions of greenhouse gases. When Al Gore – then US Vice President – addressed the UN climate conference in Kyoto in 1997, he offered that the US would sign on to what soon became the Kyoto Protocol under two conditions: that mandated reductions in emissions be far less ambitious than originally proposed, and that any reductions be implemented through the market-based trading of “rights to pollute” among various companies and between countries. Under this “cap-and-trade” model, companies that fail to meet their quota for emission reductions can readily purchase the difference from another permit holder that was able to reduce its emissions faster. While economists claim that this scheme induces companies to implement the most cost-effective changes as soon as possible, experience shows that carbon markets are at least as prone to fraud and manipulation as any other financial markets. Over a dozen years after the Kyoto Protocol was signed, most industrialized countries are still struggling to bring down their annual rate of increase in global warming pollution.¹⁸

The intellectual roots of carbon trading go back to the early 1960s, when corporate managers were just beginning to consider the consequences of pollution and resource depletion. Chicago School economist R. H. Coase published a key paper in 1960,

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- 7 Linda Gunter, “The French Nuclear Industry Is Bad Enough in France; Let's Not Expand It to the U.S.,” *AlterNet*, March 23, 2009 (available at <http://www.alternet.org/story/132852>).
- 8 See, for example, Jan Willem Storm van Leeuwen and Philip Smith, *Nuclear Power: The Energy Balance* (available at <http://www.stormsmith.nl>).
- 9 Amory B. Lovins and Imran Sheikh, “The Nuclear Illusion” (available at <http://community.livejournal.com/greenparty/342794.html>).
- 10 John Kerry and Lindsey Graham, “Yes We Can (Pass Climate Change Legislation),” *New York Times*, October 11, 2009; Darren Samuelsohn, “Senate Dems Opening to Nuclear as Path to GOP Support for Climate Bill” (available at <http://www.nytimes.com/cwire/2009/10/07/07climatewire-senate-dems-opening-to-nuclear-as-path-to-go-28815.html>).
- 11 See, for example, Emily Rochon, *et al.*, *False Hope: Why Carbon Capture and Storage won't Save the Climate*, (Amsterdam: Greenpeace International, 2008).
- 12 Charles Duhigg, “Cleansing the Air at the Expense of Waterways,” *New York Times*, October 13, 2009.
- 13 For comprehensive analyses of the global food crisis and various activist responses, see “The Crisis in Agriculture and Food: Conflict, Resistance, & Renewal,” a special issue of *Monthly Review* (July/August 2009).
- 14 Lester R. Brown, “Supermarkets and Service Stations Now Competing for Grain,” *Earth Policy Institute Update*, July 13, 2006 (available at <http://www.earth-policy.org/Updates/2006/Update55.htm>); C. Ford Runge and Benjamin Senauer, “How Biofuels Could Starve the Poor,” *Foreign Affairs*, Vol. 86, No. 3 (May/June 2007), pp. 41–53.
- 15 Jason Hill, *et al.*, “Environmental, economic, and energetic costs and benefits of biodiesel and ethanol biofuels,” *Proceedings of the National Academy of Sciences*, Vol. 103 no. 30 (July 2006), pp. 11206–11210.
- 16 Joseph Fargione, *et al.*, “Land Clearing and the Biofuel Carbon Debt,” *Science* Vol. 319 (February 2008), pp. 1235–1238, and Timothy Searchinger, *et al.*, “Use of U.S. Croplands for Biofuels Increases Greenhouse Gases Through Emissions from Land-Use Change,” *Science* Vol. 319 (February 2008), pp. 1238–1240.
- 17 See Rachel Smolker, *et al.*, “The True Cost of Agrofuels: Impacts on food, forests, peoples and the climate,” (Global Forest Coalition, 2008), especially Chapter 6 (available at <http://www.globalforestcoalition.org/img/userpics/File/publications/Truecostagrofuels.pdf>). For continuing updates see <http://www.nogetrees.org>.
- 18 See, for example, Netherlands Environmental Assessment Agency, “Global CO2 emissions: annual increase halves in 2008” (available at <http://www.pbl.nl/en/publications/2009/Global-CO2-emissions-annual-increase-halves-in-2008.html>).

where he proposed a direct equivalence between the harm caused by pollution and the economic loss to polluting industries if they are compelled to curtail production. “The right to do something which has a harmful effect,” argued Coase, “is also a factor of production.”¹⁹ He proposed that steps to regulate production be evaluated on par with the market transactions that those regulations aim to alter, arguing that economics should determine the optimal allocation of resources needed to best satisfy all parties to any dispute.

Drawing partly on Coase’s work, the Canadian economist J.H. Dales carried the discussion two steps further. First, he argued that charging for pollution, via a disposal fee or tax, is more efficient than either regulation or subsidizing alternative technologies. Then, as an extension of this argument, Dales proposed a “market in pollution rights” as an administratively simpler and less costly means of implementing pollution charges. “The pollution rights scheme, it seems clear, would require far less policing than any of the others we have discussed,” Dales suggested – a proposition thoroughly at odds with the world’s experience since Kyoto.²⁰ In 1972, California Institute of Technology economist David Montgomery presented a detailed mathematical model, purporting to show that a market in licenses to pollute indeed reaches a point of equilibrium at which desired levels of environmental quality are achieved at the lowest possible cost.²¹

By the mid-1970s, the new US Environmental Protection Agency (EPA) was actively experimenting with pollution trading, initially through brokered deals, in which Agency would allow companies to offset pollution from new industrial facilities by reducing existing emissions elsewhere or negotiating with another company to do so. But it appears that the real breakthrough was a 1979 Harvard Law Review article by US Supreme Court Justice (then a law professor) Stephen Breyer. Breyer’s article introduced a broader array of policymakers to the concept of “marketable rights to pollute.”²²

By the late 1980s, Harvard economist Robert Stavins, associated with the uniquely corporate-friendly Environmental Defense Fund, was collaborating with environmentalists, academics, government officials, and representatives of corporations such as Chevron and Monsanto to propose new environmental initiatives to the incoming administration of George Bush, Sr., initiatives that featured market incentives as a supplement to regulation. Seeking to distinguish himself from Ronald Reagan, his rabidly anti-environmental White House predecessor, Bush soon announced a plan based on tradable permits to reduce the sulfur dioxide emissions from power plants that were causing acid rain throughout the eastern US.²³ The US has indeed reduced acid rain since 1990, but more slowly than other countries, and mainly as a result of pollution controls mandated by state-level regulators. Trading may have helped reduce the cost of some companies’ compliance with the rules, but also likely contributed to limiting the spread of important new technologies.²⁴

That didn’t stop the Environmental Defense Fund’s senior economist, Daniel Dudek, from proposing that the limited trading of acid rain emissions in the US was an appropriate “scale model” for a much more ambitious plan to trade global emissions of carbon dioxide and other greenhouse gases. Al Gore first endorsed the idea in his best-selling 1992 book, *Earth in the Balance*, and Richard Sandor, then the director of the Chicago Board of Trade, North America’s largest commodities market, co-authored a study for UNCTAD (UN Conference on Trade and Development) that endorsed international emissions trading. Sandor went on to found the Chicago Climate Exchange, which today engages nearly 400 international companies and public agencies in a wholly voluntary carbon market.

While the US never adopted the Kyoto Protocol, the rest of the world has had to live with the consequences of Gore’s intervention in Kyoto, which created what the British columnist George Monbiot has aptly termed “an exuberant market in fake emissions cuts.”²⁵ The European Union’s Emissions Trading System, for example, has produced huge new subsidies for highly polluting corporations, without demonstrable reductions in pollution. While European countries are also supporting energy conservation and renewable energy technologies with public funds, in the US we are told that solar and wind technologies need to prove their viability in the so-called “free market” – in marked contrast to ever-increasing subsidies for nuclear power and agrofuels.

Carbon offsets are the other key aspect of the “market” approach to global warming. These investments in nominally emissions-reducing projects in other parts of the world are now a central feature of carbon markets, and an even greater obstacle to real solutions. They are aptly compared to the “indulgences” that sinners used to buy from the Catholic church during the Middle Ages. Larry Lohmann of the UK’s CornerHouse research group has demonstrated in detail how carbon offsets are encouraging the conversion of native forests into monoculture tree plantations, lengthening the lifespan of polluting industrial facilities and toxic landfills in Asia and Africa in exchange for only incremental changes in their operations, and ultimately perpetuating the very inequalities that we need to eliminate in order to create a more just and sustainable world.²⁶ Even if they can occasionally help support beneficial projects, offsets postpone investments in necessary emissions reductions at home, and represent a gaping hole in any mandated “cap” in carbon dioxide emissions. They are a means for polluting industries to continue business as usual at home while contributing, marginally at best, to emission reductions elsewhere.

Capitalist techno-fixes, trading and offsets will simply not bring us any closer to the zero-emissions future that we know is both necessary and achievable. Nevertheless, markets in greenhouse gas emissions allowances continue to be a central feature of proposed climate legislation in the US and worldwide.²⁷ This conflict compels

us to revisit an earlier time in the evolution of popular movements around energy and climate issues, and re-evaluate the lessons that past movements may have to teach us today.

A Utopian Movement?

The last time a popular movement compelled significant changes in environmental and energy policies was during the late 1970s. In the aftermath of the OPEC oil embargo, imposed during the 1973 Arab-Israeli war, the nuclear and utility industries adopted a plan to construct more than 300 nuclear power plants in the United States by the year 2000. Utility and state officials identified rural communities across the US as potential sites for new nuclear facilities, and the popular response was swift and unanticipated. A militant grassroots antinuclear movement united back-to-the-landers and traditional rural dwellers with seasoned urban activists, as well as a new generation of environmentalists who only partially experienced the ferment of the 1960s.

In April of 1977, over 1400 people were arrested trying to nonviolently occupy a nuclear construction site in the coastal town of Seabrook, New Hampshire. That event helped inspire the emergence of decentralized, grassroots antinuclear alliances all across the country, committed to nonviolent direct action, bottom-up forms of internal organization, and a sophisticated understanding of the relationship between technological and social changes. Not only did these groups adopt an uncompromising call for “No Nukes,” but many promoted a vision of an entirely new social order, rooted in decentralized, solar-powered communities empowered to decide both their energy future and their political future. If the nuclear state almost inevitably leads to a police state – due to the massive security apparatus necessary to protect hundreds of nuclear plants and radioactive waste dumps all over the country – activists proposed that a solar-based energy system could be the underpinning for a radically decentralized and directly democratic model for society.

This movement was so successful in raising the hazards of nuclear power as a matter of urgent public concern that nuclear projects all across the US began to be cancelled. When the nuclear reactor at Three Mile Island near Harrisburg, Pennsylvania partially melted down in March of 1979, it spelled the end of the nuclear expansion. While politicians in Washington today are doing everything possible to underwrite a revival of nuclear power, it is still the case that no new nuclear plants have been licensed or built in the United States since Three Mile Island. The antinuclear movement of the late 1970s helped spawn the first wave of significant development of solar and wind technologies, aided by substantial but temporary tax benefits for solar installations, and helped launch a visionary “green cities” movement that captured the imaginations of architects, planners and ordinary citizens.

The antinuclear groups of the 1970s not only adopted an uncompromising call for “No Nukes!” Many also promoted a vision of an entirely new social order, rooted in decentralized, solar-powered communities empowered to decide both their energy future and their political future.

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- 19 R.H. Coase, “The Problem of Social Cost,” *Journal of Law and Economics*, Vol. 3 (October 1960), p. 44.
- 20 J.H. Dales, *Pollution, Property & Prices* (Toronto: University of Toronto Press, 1968), p. 97.
- 21 W. David Montgomery, “Markets in Licenses and Efficient Pollution Control Programs,” *Journal of Economic Theory*, Vol. 5 (1972), pp. 395–418.
- 22 Stephen Breyer, “Analyzing regulatory failure, mismatches, less restrictive alternatives and reform,” *Harvard Law Review*, Vol. 92, No. 3 (January 1979), pp. 547–609.
- 23 For a more complete treatment of the origins of the US Acid Rain Program, see Brian Tokar, *Earth For Sale: Reclaiming Ecology in the Age of Corporate Greenwash* (Boston: South End Press, 1997), pp. 33–45.
- 24 See, for example, Gar Lipow, “Emissions trading: A mixed record, with plenty of failures” (available at <http://www.grist.org/article/emissions-trading-a-mixed-record-with-plenty-of-failures>).
- 25 George Monbiot, “We’ve been suckered again by the US. So far the Bali deal is worse than Kyoto,” *The Guardian*, December 17, 2007.
- 26 Larry Lohmann, *Carbon Trading: A Critical Conversation on Climate Change, Privatization and Power* (Uppsala: Dag Hammarskjöld Foundation, 2006).
- 27 For a critical overview of current US climate legislation, see Brian Tokar, “Toward Climate Justice: Can we turn back from the abyss?,” *Z Magazine*, September 2009 (available at <http://www.zcommunications.org/zmag/viewArticle/22377>). Continuing updates are at <http://climatesos.org>.



Photo: Steve Punter

Derrick Jensen is one of the most prolific and popular anti-authoritarian writers today. He insists that a rational transition to an ecologically sustainable society is impossible, and that ecological activists must help bring on the collapse of Western civilization.

The 1970s and early '80s were relatively hopeful times, and utopian thinking was far more widespread than it is today. This was prior to the "Reagan revolution" in US politics and the rise of neoliberalism worldwide. The right had not yet begun its crusade to depict the former Soviet Union as the apotheosis of utopian social engineering gone awry. Many antinuclear activists looked to the emerging outlook of social ecology and the writings of social ecologist Murray Bookchin as a source of theoretical grounding for a revolutionary ecological politics. Social ecology challenged activists by overturning prevailing views about the evolution of social and cultural relationships to non-human nature and examining the roots of domination in the earliest emergence of human social hierarchies.²⁸ For the activists of that period, Bookchin's insistence that environmental problems are fundamentally social and political in origin encouraged forward-looking responses to ecological concerns and reconstructive visions of a fundamentally transformed society. Social ecology's emphasis on popular power and direct democracy continued to inspire activists during the emergence of the global justice movement in the 1990s.

While radically reconstructive social visions are relatively scarce in today's political climate, dissatisfaction with the status quo reaches widely among many sectors of the population. The more people consume, and the deeper they fall into debt, the less satisfied they seem to be with the world of business-as-usual. Though elite discourse and the corporate media continue to be confined by a narrowly circumscribed status-quo, there is also the potential for a new opening, reaching far beyond the confines of what is now deemed politically "acceptable."

Activists hesitant to question the underlying assumptions of capitalism tend to focus on their own mix of techno-fixes. While these are generally far more benign than the false solutions proposed by the coal, nuclear and agrofuel industries, they won't likely proceed very far in the absence of broader, systemic changes. Not that such proposals aren't often compelling in their own terms. For example, the acclaimed advocate Van Jones, who advised Barack Obama on green jobs policies before he fell victim to a vicious right wing witch-hunt, writes:

Hundreds of thousands of green-collar jobs will be weatherizing and energy-retrofitting every building in the United States. Buildings with leaky windows, ill-fitting doors, poor insulation and old appliances can gobble up 30 percent more energy... Drafty buildings create broke, chilly people – and an overheated planet.

Clearly, steps to address these problems will offer an important benefit for those most in need, and is a necessary step toward a greener future. But can such near-term measures be sufficient? Since the 1970s, Amory Lovins has been a tireless advocate for dramatically increased energy efficiency throughout the US and

global economies. He has demonstrated in exhaustive detail how we can feasibly reduce energy consumption by 60 - 80 percent, and how many of the necessary measures would result in an unambiguous economic gain. Lovins' pitch is unapologetically aimed at believers in the "free market," and at those whose primary concern is market profitability, yet adoption of his proposals has been spotty at best.

The problem, of course, is that capitalism aims to maximize profits, not efficiency. Indeed, economists since the 19th century have suggested that improvements in the efficiency of resource consumption will most often increase demand and further economic expansion under capitalism.²⁹ Nonetheless, while efficiency improvements often reduce the costs of production, corporations will generally accept the perhaps higher expense of sustaining existing methods that have proven to keep profits growing. The *New York Times* reported last year that corporations are hesitant to invest in measures to save energy and make their operations more efficient unless they can demonstrate a two year payback – a constraint that is rarely imposed on other investments.³⁰ Corporations almost invariably prefer to lay off workers, outsource production, or move factories overseas than to invest in environmentally meaningful improvements. Lovins' focus on efficiency runs counter to the inclinations of a business world aggressively oriented toward growth, capital mobility and accumulation. While important innovations in solar technology, for example, are announced almost daily, its acceptance in the capitalist marketplace is still decades behind other, far more speculative and hazardous alternatives.

Hope and Despair

If technological fixes are insufficient to usher in an age of renewable technologies, is the situation hopeless? Is a nihilistic, end-of-civilization response the only viable alternative? Are we limited to a future of defensive battles against an increasingly authoritarian world of scarcity and climate chaos? Or can the prefigurative dimensions of earlier, more hopeful radical ecological movements be renewed in our time?

Dystopian outlooks are clearly in the ascendancy in today's anti-authoritarian left. "Anarchists and their allies are now required to project themselves into a future of growing instability and deterioration," writes Israeli activist and scholar Uri Gordon. He acknowledges the current flowering of permaculture and other sustainable technologies as a central aspect of today's experiments toward "community self-sufficiency," but views these as "rear guard" actions, best aimed to "encourage and protect the autonomy and grassroots orientation of emergent resistances" in a fundamentally deteriorating social and political climate.³¹

Derrick Jensen, one of the most prolific and popular anti-authoritarian writers today, insists that a rational transition to an

ecologically sustainable society is impossible, and that the only sensible role for ecologically aware activists is to help bring on the collapse of Western civilization. Hope itself, for Jensen, is "a curse and a bane," an acceptance of powerlessness, and ultimately "what keeps us chained to the system." Well before Barack Obama adopted a vaguely defined "Hope" as a theme of his presidential campaign, Jensen argued that hope "serves the needs of those in power as surely as belief in a distant heaven; that hope is really nothing more than a secular way of keeping us in line."³²

This view is considerably at odds with decades of historical scholarship and activist praxis. Radical hopelessness may be sufficient to help motivate young people to confront authorities when necessary at events like the G20 summit in Pittsburgh and the UN climate conference in Copenhagen, but it seems unlikely to be able to sustain the lifetimes of radical thought and action that are necessary if we are to create a different world. As social movement historian Richard Flacks has shown, most people are only willing to disrupt the patterns of their daily lives to engage in the project he terms "making history" when social grievances become personal, and when they have a tangible sense that a better way is possible. This, for Flacks, is among the historic roles of democratic popular movements, to further the idea "that people are capable of and ought to be making their own history, that the making of history ought to be integrated with everyday life, that [prevailing] social arrangements ... can and must be replaced by frameworks that permit routine access and participation by all in the decisions that affect their lives."³³

Flacks' expansive view of democracy resonates well with social ecology's long-range, community-centered vision. Bookchin's reconstructive outlook is rooted in direct democracy, in confederations of empowered communities challenging the hegemony of the state and capital, and in restoring a sense of reciprocity to economic relationships, which are ultimately subordinated to the needs of the community. He viewed these as essential steps toward restoring harmony to human relations, and to the reharmonization of our communities with non-human nature.

Further, in his 1970s and eighties' anthropological studies, Bookchin sought to draw out a number of ethical principles common to preliterate, or "organic" societies, that could further illuminate the path toward such a reharmonization. These include anthropologist Paul Radin's concept of the irreducible minimum – the idea that communities are responsible for satisfying their members' most basic human needs, and an expanded view of social complementarity, through which communities accept responsibility to compensate for differences among individuals, helping assure that differences in skill or ability in particular areas will not serve to rationalize the emergence of new forms of hierarchy.

From the Zapatistas of southeastern Mexico, who have inspired global justice activists worldwide since the 1990s, to the landless workers of the MST in Brazil, and the scores of self-identified peasant organizations in some eighty countries that constitute the global network Via Campesina, a wide array of contemporary people's movements in the global South are challenging stereotypes and transcending the limits of the possible. These grassroots efforts to reclaim the means of life, while articulating far-reaching demands for a different world, represent a starkly different relationship to both the present and the future than is offered by relatively affluent activists and writers in the global North whose most insistent contribution is to contemplate the end of civilization.

Rather than prescribing blueprints for a future society, Bookchin sought to educe principles from the broad scope of human history that he saw as expressing potentialities for further human development. His outlook on social change is resonant with the best of the utopian tradition, as described in a recent essay by Randall Amster, who describes utopia as

a dynamic *process* and not a static *place* ... attaining a harmonious exchange with nature and an open, participatory process among community members are central features of these [utopian] endeavors; that resistance to dominant cultures of repression and authoritarianism is a common impetus for anarcho-utopian undertakings; and that communities embodying these principles are properly viewed as ongoing experiments and not finished products.³⁴

While people of different material circumstances and cultural backgrounds would surely emphasize differing needs and inclinations in their search for a better society, such a long-range utopian outlook can help us comprehend the fullest scope of human possibilities.

This view clearly has far more to offer than a bleak "end of civilization" outlook, both for people in Northern countries facing increasingly chaotic weather, as well as to the majority of people around the world who are experiencing more direct consequences of climate disruptions. It is the hope for a better society, along with the determination and support necessary to intervene to challenge current inequities, that has inspired movements of land-based peoples around the world to refuse to accept an oppressive status quo and act to take the future into their hands.

Toward Climate Justice and a Greener World

From the Zapatistas of southeastern Mexico, who have inspired global justice activists worldwide since the 1990s, to the landless workers of the MST in Brazil, and the scores of self-identified peasant organizations in some eighty countries that constitute the global network Via Campesina, a wide array of contemporary people's movements in the global South are challenging stereotypes and transcending the limits of the possible. These grassroots efforts to reclaim the means of life, while articulating far-reaching demands for a different world, represent a starkly different relationship to both the present and the future than is offered by relatively affluent activists and writers in the global North whose most insistent contribution is to contemplate the end of civilization.

The actions of mainly indigenous, land-based people around the world are also a central inspiration for the emerging climate justice movement. The outlook of climate justice reflects the growing understanding that those most affected by accelerating climate-related disasters around the world are generally the least responsible for causing disruptions to the climate. The call for

climate justice is uniting activists from both the North and the South, with a commitment to highlight the voices of these most affected communities. Many are simultaneously impacted by accelerating climate chaos and by the emerging false solutions to climate change, including carbon trading and offsets, the destruction of forests to create agrofuel plantations, large-scale hydroelectric projects, and the entire nuclear fuel cycle. Climate justice movements are also challenging the expanding scope of commodification and privatization, whether of land, waterways, or the atmosphere itself.

For example a recent statement by the European Climate Justice Action network, which coordinated plans for direct action around the UN climate summit in Copenhagen, was drafted by representatives from more than 20 countries, including several from the global South. “We cannot trust the market with our future, nor put our faith in unsafe, unproven and unsustainable technologies,” the declaration read. “Contrary to those who put their faith in ‘green capitalism,’ we know that it is impossible to have infinite growth on a finite planet.” The statement called for leaving fossil fuels in the ground, popular and community control over production, reducing the North’s overconsumption, respecting indigenous and forest peoples’ rights and, notably, reparations for the ecological and climate debts owed by the richest countries to those who are most affected by resource extraction and climate-related disasters. The worldwide confederation of peasant movements, Via Campesina, also joined the call for actions at the 2009 UN summit, challenging the status of carbon as a newly privatized commodity and arguing that the UN climate convention “has failed to radically question the current models of consumption and production based on the illusion of continuous growth.”³⁵

In the US, the call for climate justice is uniting indigenous communities, who are resisting increased mining of coal and uranium throughout North America, with long-time residents of southern Appalachia, who are regularly risking arrest to block the devastating “mountaintop removal” coal mining practices that have already destroyed over 500 mountains in their region. At the same time as they are challenging the most devastating mining practices, some people in coal-dependent communities are demanding a restorative economic model that relieves the stranglehold of the coal companies over their communities, protects people’s health, and facilitates the phase-out of the most environmentally-destructive form of energy production.

Meanwhile, hundreds of cities and towns in the US have defied the federal government’s 20 years of inaction on the climate crisis and committed to substantial, publicly-aided CO₂ reductions of their own. At the local level, people across the country are working to regenerate local food systems, develop locally controlled, renewable energy sources and, sometimes, to build solidarity with kindred movements around the world. Campaigns to create urban gardens

> NOTES

- 28 See Brian Tokar, “On Bookchin’s Social Ecology and its Contributions to Social Movements,” *Capitalism, Nature, Socialism*, Volume 19, No. 2 (March 2008).
- 29 John Bellamy Foster, “The Jeavons Paradox: Environment and Technology Under Capitalism,” in *The Ecological Revolution: Making Peace with the Planet* (New York: Monthly Review Books, 2009), pp. 121–128.
- 30 Matthew L. Wald, “Efficiency, Not Just Alternatives, Is Promoted as an Energy Saver,” *New York Times*, May 29, 2007.
- 31 Uri Gordon, “Dark Tidings: Anarchist Politics in the Age of Collapse,” in Randall Amster, et al. (eds.), *Contemporary Anarchist Studies: An Introductory Anthology of Anarchy in the Academy* (New York: Routledge, 2009).
- 32 Derrick Jensen, “Beyond Hope,” *Orion Magazine*, May/June 2006.
- 33 Richard Flacks, *Making History: The American Left and the American Mind* (New York: Columbia University Press, 1988), p. 7.
- 34 Randall Amster, “Anarchy, Utopia, and the State of Things to Come,” in Amster, et al. (eds.), *Contemporary Anarchist Studies*. Emphasis in original; several embedded references have been deleted here.
- 35 “Via Campesina Call to Mobilise for a Cool Planet: Don’t trade off Peasant’s agriculture for rights to pollute,” July 2009 (available at http://www.viacampesina.org/main_en/index.php?option=com_content&task=view&id=745&Itemid=1).
- 36 For evidence that factory farming may be raising agriculture’s contribution to global warming to as much as 50 percent, see Robert Goodland and Jeff Anhang, “Livestock and Climate Change,” *WorldWatch*, November/December 2009.
- 37 For an articulate political critique of the emerging “transition towns” movement, see Paul Chatterton and Alice Cutler, *The Rocky Road to a Real Transition* (Leeds: Trapeze Collective, April 2008).
- 38 “Worldwide poll: Vast majority say capitalism not working,” November 9, 2009 (available at <http://rawstory.com/2009/11/survey-capitalism-not-working/>).

and farmers' markets are among the most successful and well-organized efforts toward community-centered solutions to the climate crisis. In recent years, they have been joined in many areas by nonprofit networks aiming to more systematically raise the availability of healthy, local food for urban dwellers, especially those dependent on public assistance. The local foods movement in the US, once dominated by those affluent enough to seek out gourmet products, is learning from Slow Food activists in Europe that it is necessary to directly support farmers and food producers, and to aim to meet the needs of all members of their communities. As the food system is responsible for at least a quarter and possibly half of all greenhouse gas emissions, such efforts are far more than symbolic in their importance.³⁶

Community-based efforts to reduce energy consumption and move toward carbon-free energy systems have seen some important successes as well. More than two hundred cities and towns throughout the English-speaking world have signed on as "transition towns," initiating local efforts to address the dual crises of climate chaos and peak oil. While this movement has a disturbing tendency to focus on personal rather than political transformation, and has been critiqued for shying away from important local controversies in some areas, the effort is filling an important vacuum in social organization, and creating public spaces that more forward-looking and politically engaged efforts may be able to fill as the tangible effects of various crises strike closer to home.³⁷

Looking Forward

Still, many chronically vexing questions remain. Can the potential for a more thoroughgoing transformation of society actually be realized? Is it possible for now-isolated local efforts to come together in a holistic manner and fulfill the generations-old left-libertarian dream of a "movement of movements," organized from the ground up to radically change the world? Can we envision a genuine synthesis of oppositional and alternative-building efforts able to challenge systems of deeply entrenched power, and transcend the dual challenges of political burn-out and co-optation of counter-institutions? Can a new movement for social and ecological renewal emerge from the individual and community levels toward the radical re-envisioning of entire regions and a genuinely transformed social and political order?

In these often cynical times, with ever-increasing disparities in wealth and media-drenched cultures of conspicuous consumption in the North, together with increased dislocation and looming climate crises in the South, it is sometimes difficult to imagine what a genuinely transformative movement would look like. In the US, right wing demagogues appear to be far more effective than progressive forces in channeling the resentments that have emerged from the continuing economic meltdown toward serving their narrow political agendas. But it is clear that when people have the opportunity to act on their deepest aspirations for a stronger sense of community, for the health of their families and neighbors, and for a more hopeful future, people's better instincts often triumph over parochial interests. This is a reliable feature of daily life, and one that also illuminates the entire history of popular social movements. It offers an important kernel of hope for the kind of movement that can perhaps reinvigorate the long-range reconstructive potential of a social ecological outlook.

In September, the popular American documentary filmmaker Michael Moore released his latest film, focusing on the broad implications of the current economic crisis. Among other themes, the film highlights the often subterranean resistance by people across the US to the wave of home foreclosures that has swept the country over the past year. The film ends on a striking note. "Capitalism is an evil, and you cannot regulate evil," Moore states above a backdrop of present-day Wall Street. "You have to eliminate it and replace it with something that is good for all people and that something is democracy."

A recent poll commissioned by the BBC confirmed that people in a dozen key countries now agree that capitalism has serious endemic problems, and that we may need a fundamentally different economic system. Only in Pakistan and the US did more than 20 percent of those interviewed express confidence in the present status quo.³⁸ Perhaps this is the kind of sensibility that will reopen a broader popular discussion of the potential for a different kind of society. Perhaps we don't yet need to resign ourselves to apocalyptic visions of the end of the world. Perhaps the climate crisis, along with the continuing meltdown of the neoliberal economic order of recent decades, can indeed help us envision a transition toward a more harmonious, more humane and ecological way of life. ●