

Rachel Carson Center Perspectives

How to cite:

Trim, Henry. “We Are as Gods’: The Green Technical Fix.” In: “Environmental Knowledge, Environmental Politics,” edited by Jonathan Clapperton and Liza Piper, *RCC Perspectives: Transformations in Environment and Society* 2016, no. 4, 55–60. <https://doi.org/10.5282/rcc/7700>.

RCC Perspectives: Transformations in Environment and Society is an open-access publication. It is available online at www.environmentandsociety.org/perspectives. Articles may be downloaded, copied, and redistributed free of charge and the text may be reprinted, provided that the author and source are attributed. Please include this cover sheet when redistributing the article.

To learn more about the Rachel Carson Center for Environment and Society, please visit www.rachelcarsoncenter.org.

Rachel Carson Center for Environment and Society
Leopoldstrasse 11a, 80802 Munich, GERMANY

ISSN (print) 2190-5088
ISSN (online) 2190-8087

© Copyright of the text is held by the Rachel Carson Center.
Image copyright is retained by the individual artists; their permission may be required in case of reproduction.

SPONSORED BY THE



Federal Ministry
of Education
and Research

Deutsches Museum 



Henry Trim

“We Are as Gods”: The Green Technical Fix

The environmental movement exploded into North American politics in the 1970s. Emerging environmentalist groups broke with the tradition of conservation, abandoned the Sierra Club and other, larger professional organizations, and, drawing on new sources of knowledge, experimented with novel strategies. Denis Hayes organized the Earth Day Network to kick off the inaugural Earth Day in the 1970s. The media-savvy leaders of Greenpeace dramatized global environmental issues with daring marine protests. “Countercultural environmentalists,” as Andrew Kirk calls them, also pioneered a new approach.

Gathered around the *Whole Earth Catalog*, an iconic magazine which merged back-to-the-land and Californian techie culture, these environmentalists embraced technological optimism. They attempted to discover or invent the technology and the knowledge required for a sustainable society. This strand of environmentalism attempted to eschew political conflict and rely instead on innovation and on cooperation with small-scale businesses and local government. Some leaned towards E. F. Schumacher’s “Buddhist economics” and attempted to develop small-scale technology capable of providing prosperity while protecting the biosphere’s complexity. Others, particularly those at the *Whole Earth Catalog*, championed the promise of new technology, better science, and human potential with a motto that foreshadowed the rise of the Anthropocene: “We are as gods and we may as well get good at it.”¹

While this optimistic and heavily technological strand of environmentalism was a novel approach in the 1970s, it has since become ubiquitous. A multitude of institutes, companies, and government departments are dedicated to sustainability and green development. The world famous advocate of efficiency Amory Lovins, whose Rocky Mountain Institute champions green technology and advises corporate clients on sustainability, is just one example of the many promoters of innovation and “natural capitalism” who have enjoyed great success helping companies cut energy and resource use and designing green “disruptive” technologies. Despite this success, questions circle this intersection of environmental knowledge and political compromise. Can

1 *Whole Earth Catalog* (1969), 1.

knowledge depoliticize environmental issues? Are green projects about economic development or environmental health? Perhaps most important of all, does approaching environmental issues as technical problems amenable to innovation and better engineering help solve the conundrum of sustainability? To explore these questions this essay returns to one of the first green development projects: the Prince Edward Island Ark project.

It was launched in the unlikely location of Prince Edward Island (PEI), Canada's smallest and, at the time, its poorest province. The pioneering project owed its birth to a unique confluence of circumstances in the 1970s. In 1968 the newly formed government of Pierre Elliott Trudeau named economic development a top federal priority. It generously funded a series of regional development programs for the Atlantic provinces, including PEI. Designed to create "growth poles" by industrializing existing urban centres and subsidizing selected local resource industries, these programs provided the provinces with cash. This cash, however, required the selected regions and industries to undergo federally supervised "modernization," with no regard for environmental impacts. Unsurprisingly, the highhandedness of these conditions annoyed Atlantic Canadians. Alex Campbell, the premier of PEI, was unhappy with the direction of these programs and, prodded by local protests, decided to experiment with a different approach, one more environmentally aware and better adapted to the local conditions of his small province.

Campbell and his chief advisor, Andy Wells, began searching for a means of realizing this goal. They quickly discovered that their interests paralleled those of countercultural environmentalists. Both sought an environmentally appropriate way to organize small-scale, decentralized economic and social systems and technologies that supported their alternative vision. Campbell and Wells's earnest desire to try something new, as well as their access to substantial federal and provincial funds, generated considerable interest within the emerging community of scholars, analysts, and activists dedicated to alternative technologies and small-scale development.

To start his new venture, the premier invited countercultural environmental groups to help formulate Canada's first alternative development program. In early 1976, scientists and developers invited to PEI included: the "hip" scientists of the New Alchemy Institute, a group of biologists that specialized in sustainable architecture and aqua-

culture; Amory Lovins, then the leading energy analyst for the international environmental group Friends of the Earth; and George McRobie from E. F. Schumacher's Intermediate Technology Development Group, which pioneered programs of village-scale development in the Global South. Leveraging their presence on PEI, Campbell and Wells held a lengthy conference at which these environmental experts met with Canadian energy analysts and scientists to extoll the benefits of energy conservation, renewables, and green architecture to local politicians and members of the federal government. "Energy Days," as the event was called, put Campbell's ideas on the map and resulted in Can\$3 million of funding for a local institute to oversee green development on PEI.

On top of this success, the scientists of the New Alchemy Institute convinced both the federal and provincial governments that PEI would be the perfect place for an "Ark": a "family-sized food, energy and housing complex." This "synergistic" structure incorporated solar heating, an experimental wind turbine, and a solar greenhouse. More importantly, it promised to provide PEI with the means to live in a decentralized and environmentally sustainable way, and to help develop local wind and solar industries. The Ark made waves in Canada. Prime Minister Trudeau flew to the island to deliver an optimistic speech on the promise of appropriate technology for its official opening in September 1976. The excited crowd included such countercultural environmentalists as Stewart Brand, the founder and editor of the *Whole Earth Catalog*. Local islanders, however, were less impressed. They remained unsure how this large, futuristic, and expensive structure could help them deal with PEI's high energy prices and falling farm incomes.

With the construction of the Ark, green development went national. Inspired by the possibilities for economic growth, the Minister of Energy unabashedly stated that Canada needed to become a leader in the field before the United States and other countries came to dominate what promised to be a profitable new industrial sector. To do this, the government promised Canadian solar companies hundreds of millions of dollars in funding over five years. Echoing the claims made by advocates of solar power at Energy Days, the government claimed that its funding would create a solar industry worth hundreds of millions of dollars and capable of providing tens of thousands of "man-years" of employment by 1990.

Unfortunately for countercultural environmentalists, this optimism created a liability. The first problems emerged on PEI where it quickly became obvious that the New Alchemists' Ark could not live up to its promise of decentralized self-sufficiency. Its experimental wind turbine was its most egregious failure; rushed through development and under-engineered, the turbines' hydraulics seized up in 1977, soon after it was completed. For many local islanders who had never been convinced of the project's value, the collapse of the wind turbine—and with it the most visible promise of a local wind industry—proved the project's harebrained nature. Some even began to suggest that the entire approach to development only served to funnel federal and provincial dollars to Campbell and Wells's hippie friends. This combination of bad press and a close association with the now former Premier Campbell led a newly elected conservative provincial government to quickly distance itself from the Ark in 1979. Promising innovation and economic growth had generated interest and brought in funds. But it also meant that the Ark and other projects had to provide more than environmental benefits: they had to provide new industries in one of Canada's most economically depressed regions.

Federal solar programs ran into similar problems in the early 1980s. Immediately after launching their funding programs, federal managers noticed problems with the technology when inexperienced or badly managed companies flooded into the new solar market. Even worse, those Canadian companies that could produce quality solar collectors and provide good installations proved unable to innovate and rapidly improve performance, a requirement for driving down prices as quickly as environmentalists and energy analysts had promised. This caused serious problems. The funding program had been premised on projections of very rapid technological development, which did not account for possible technological failures or the necessary shake-out of the newly created industry. When the Canadian government began cutting spending to combat inflation in 1983 and oil prices fell, support for solar energy unceremoniously ended and the program dissolved.

Countercultural environmentalists' recasting of environmental health as an issue of technological development and as a possible engine of economic growth generated substantial support. In the 1970s it attracted substantial sums of money for new experimental technologies. It prompted prime ministerial visits and national media cov-

erage. It even helped launch the renewable energy sector. Despite this, the technical fix was far from an unalloyed success.

Political support came with expectations of successful technological innovation and rapid economic growth. Moreover, refocusing environmental action around technology did nothing to remove politics from the equation. While advocating investment in solar energy may seem less political than protesting against nuclear testing, it relied fundamentally on a friendly government. When green development projects, such as the Ark, ran into technical problems, failed to deliver promised benefits, or simply inconvenienced a segment of the population, they created significant political costs for their advocates. Despite their efforts to escape the entangling reach of politics through technology, countercultural environmentalists simply ended up becoming enmeshed in a different set of political conflicts.

Thus, treating environmentalism as a technical problem did not remove conflicts. Rather, it shifted the debate from questions of ethics and environmental science into the terrain of economics and technical innovation. This has undoubtedly expanded the reach of environmental issues. Above all, it has made them an object of interest for politicians and business people seeking to provide new jobs and chase new markets. But in doing so, it also enmeshed environmental health in existing political and corporate structures, where it becomes one of many elements of corporate strategy or federal cost-benefit analysis. Unfortunately, this means that in order to succeed, green technologies and industries must deliver economic or political returns as well as environmental benefits. This is a far cry from Stewart Brand and the New Alchemists' desire to transcend politics and from their hoped-for environmental transformation. That said, it also represents a profound improvement because environmental concerns have been inserted into technological and economic calculations. Power politics, it seems, are inescapable. But, thanks in part to countercultural environmentalists' efforts to escape them through technology, the environment has also become an inescapable political reality in "light green" societies the world over.

Suggested Further Reading:

Bess, Michael. *The Light Green Society: Ecology and Technological Modernity in France, 1960–2000*. Chicago: University of Chicago Press, 2003.

Dale, Stephen. *McLuhan's Children: The Greenpeace Message and the Media*. Toronto: University of Toronto Press, 1996.

Kirk, Andrew. *Counterculture Green: The Whole Earth Catalog and American Environmentalism*. Lawrence, KS: University Press of Kansas, 2007.

MacEachern, Alan. *The Institute of Man and Resources: An Environmental Fable*. Charlottetown: Island Studies Press, 2003.

Trim, Henry. "Experts at Work: The Canadian State, North American Environmentalism, and Renewable Energy in an Era of Limits, 1968–1983." PhD diss., University of British Columbia, 2014.

Zelko, Frank. *Make it a Green Peace!: The Rise of Countercultural Environmentalism*. New York: Oxford University Press, 2013.