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A Subaltern Perspective on China's Ecological Crisis

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According to the *Inclusive Wealth Report 2014*, between 1990 and 2010, China's Gross Domestic Product (GDP) grew by 523 percent, but only 47 percent in terms of "inclusive wealth," taking environmental factors into consideration. The Inclusive Wealth Index's adjusted average growth rate for China was negative during this period. China's Ministry of Environmental Protection estimates that redressing and preventing water contamination alone will cost $320 billion and take at least forty years, and experts estimate that treating the three most severe sites of contamination—water, air, and soil—will cost $960 billion. These most severe contaminations foreground not only the question of remedial expenses, but also the ways different social sectors are affected both by the contaminations and by the government's responsive efforts. Below, I adopt subaltern and ecological perspectives to challenge statist, elitist, and anthropocentric discourses and practices related to the question of sustainability in China.

In late 2017, two news stories from Beijing drew popular attention and anxiety: the expulsion of over three million people from so-called low-end populations within a few days of the Daxing fire in southern Beijing, and the coercive conversion of fuel from coal to gas in northern China, leaving massive numbers of people in towns and villages without heat in the freezing cold.[1] The former was a move to expel migrant workers as well as small and medium industries from Beijing; the latter was part of an effort to improve air quality, with immediate negative consequences for the poor.

On their surface, both actions could be justified. In the first case, the Daxing fire, which killed nineteen people, made clear the fire hazards of slum communities in peripheral Beijing, where migrant workers on the margins of society find cramped but inexpensive lodging. After the fire, in the name of safety, residents were speedily evicted and their homes demolished.

Such slums were also sites of enormous accumulations of urban waste. Among the reported millions of migrant workers forced to move further out to the edges of the city or to return to their home villages, many were

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scavengers. It is estimated that there are 3.5 million scavengers in China, with 150 thousand to three hundred thousand working in about four hundred garbage sites around Beijing, which produces around twenty-three thousand tons of garbage per day, with about 30 percent collected for recycling.[2] In 2008, there was only one waste incinerator in Beijing; by 2018, there were eleven, able to incinerate 5.97 million tons of garbage each year. According to a 2017 report, the dioxins produced by these incinerators caused 3,779 persons in Beijing to contract cancer every year, with a social cost of over 37.3 billion yuans—around 1.33 percent of Beijing's GDP.[3] It is not known what percentage of scavengers left Beijing after the eviction or if they would return; the city has a stated aim of keeping its population under twenty-three million; hence eviction is not an interim measure, but part of a long-term policy.

Paradoxically, even as more and more incinerators pump dioxins into the air, the Beijing government has vowed to improve air quality. Thus, in the second case—the switch from coal to gas in northern China—the official rationale is more convincing: there is undeniably a dire need to clean up the air. The situation directly recalls Chai Jing's documentary *Under the Dome*, which exposed the prevalence of lung cancer, heart disease, and other chronic conditions linked to China's catastrophic pollution. The documentary became a major cultural and political event in March 2015, receiving over two hundred million online hits in the first forty-eight hours after its posting on major websites—meaning almost one in three of the 637 million internet users in China had watched it. The World Health Organization's *World Cancer Report 2014* found that China, home to 19 percent of the global population, accounted for one-third of global deaths from lung cancer. The lung cancer mortality rate in China had risen by ten times from 5.46 per 100,000 persons forty years ago to 45.57 per 100,000 in 2013.[4]

The burning of coal was identified as a main cause of air pollution. An estimated forty to fifty million people in Hebei province and 1.2 million families in Beijing and Tianjin relied on around ten million small coal burners for domestic heat in the winter, burning three hundred thousand tons of coarse coal each day, or thirty-six million tons annually.[5] Central heating is not readily available to these scattered rural households, and to eliminate 80 percent of small coal burners, three hundred million rural residents in northern China would have to be "urbanized." In addition, it would cost three times as much to replace coal with gas. Heating for the four cold months of the year would cost around six thousand yuan ($1,000)—a heavy burden for a population whose monthly expenses now average between six hundred and one thousand yuan ($100–200).[6]

The Beijing government's Five-Year Plan (2013–17) to eliminate coal burners was to be completed by December 2017, prompting a bureaucratic directive to establish a "no-coal zone" for Beijing, Tianjin, and twenty-six cities in the provinces of Hebei, Shanxi, Shandong, and Henan, involving three million families, by the end of October of that year.[7]

An official from the Energy Department of Hebei Province stated that gas demand in 2017 was 8.2 billion cubic meters, an increase of 134 percent over the same period in the preceding year, and that the province faced a shortage in its gas supply of 26 percent.[8]

By early December 2017, when the government softened its formerly uncompromising ban on all coal burning, conceding the need to prioritize heating for the population, most coal burners had already been destroyed.[9] The good news, at least for those able to heat their homes, was that air quality in northern China seemed to have improved.

The South-to-North Water Diversion Project

If the compulsory conversion from coal to gas revealed official biases against rural populations and the urban poor, the question of water diversion shows the biases in favor of metropolitan centers at the expense of provincial regions. The South-to-North Water Diversion Project is a marked example. Like the Three Gorges Dam project, it is a mega project with potentially catastrophic ramifications for public health and the environment, but launched with a deep faith in the benefits of science and technology.

The modernization paradigm that China has pursued in recent decades has tended to privilege industry over agriculture, urban areas over rural ones, and the middle class over the subaltern, with the country's growth statistics and policy emphases accordingly geared to such a paradigm. "Modernization" itself is not questioned and justifies the "price" that must be paid. Underpinning the modernization fantasy is science and technology, perceived as inherently progressive. The result—the almost mindless degradation of nature—derives from the arrogance and vanity of the anthropocentric urge to control.

Building a dam at the Three Gorges of the Yangtze River had been a goal of Chinese leaders since Sun Yat-sen in the early twentieth century. One deterrent was strategic concern for national defense: a mega dam in the country's largest waterway would be an obvious military or terrorist target. The consequences would be devastating: around four hundred million people live along the river, a third of China's total population.[10] There has been much controversy among scientists and engineers on the pros and cons of the project. When it was finally put to a vote at the National People's Congress in April 1992, the approval rate was the lowest in its history: of

2,633 deputies, 67 percent voted in favor, while 33 percent voted against it, abstained, or did not vote at all.[11]

The Three Gorges Dam was built to be the largest in the world: 185 meters high and 2.15 kilometers long, with a water level reaching 175 meters and the dam reservoir extending 600 kilometers in length and on average 1.12 kilometers in width and containing 39.3 cubic kilometers of water over a total surface area of 1,045 square kilometers.[12] There was speculation that the devastating Sichuan Earthquake of 2008 might be attributable to the dam, though such an effect is difficult to prove or disprove scientifically.

The Three Gorges Dam was intended to generate hydroelectric power, whereas the South-to-North Water Diversion Project was inspired by concerns about water resources. China's per capita access to fresh water is only 25 percent of the world average. Over the last two decades, climate change and weather extremities, including droughts in the North and floods in the South, have exacerbated the already uneven distribution of water. Furthermore, after the early 1980s, the decentralization of industries and mining from the national government to township and village enterprises (TVEs) was for a while seen as an impetus toward expanding China's manufacturing sector and extending opportunities for rural "development." Per capita income in many rural regions has indeed increased since the mid–1980s. However, rural industries exploit not just local labor, but also water resources, which in turn also contaminate the soil. After industrial pollution, the leading sources of contamination are untreated urban sewage disposal and excessive use of pesticides and chemical fertilizers.

The quality of China's water resources deteriorated rapidly from the early 1980s on, and by the mid–1990s, the situation was so grave that the state announced the first major cleanup initiatives. According to the government's Environmental Quality Standards for Surface Water, surface water is classified in five grades. Grade I stands for the best quality, while "Worse than Grade V" represents the worst. Any water rated above Grade III—Grade IV, V, and worse than Grade V—cannot be used for drinking. According to the Ministry of Environmental Protection Report on the State of the Environment in China 1991–2010, which tracked the quality of seven main rivers in China (Yangtze River, Yellow River, Pearl River, Songhua River, Huaihe River, and Liaohe River), water quality reached alarming lows in 2001–02, when 40 percent of water from the seven rivers was rated worse than Grade V. In 2010, even after significant state remedial efforts, 20 percent of the water was worse than Grade V, and 42 percent was above Grade III.[13] In Beijing, which consumes 3.6 billion cubic meters of drinking water per year, the seven rivers the city relied

on half a century ago are now almost dried up or so polluted as to be unusable. Excessive drawing has caused the city's underground water levels to drop from around twelve meters in 1999 to around twenty-four meters in 2010.[14] In northern China, the proportion of water surface to land area had dropped from 5.0 percent fifty years earlier to 0.35 percent. Government statistics showed that 136 cities suffered from severe water shortages, and about three hundred million people, almost 25 percent of China's population, lacked access to clean fresh water.[15]

This was the background to the argument for the South-to-North Water Diversion Project. With construction beginning in 2002, the water diverted for all three Eastern, Central, and Western routes was projected to total 44.8 billion cubic meters by 2050, when the entire project would be completed. The Central route alone is 1,264 kilometers long and takes one-third of water from the Han River to the North; Beijing and Tianjin will each receive over one billion cubic meters per year, while Hebei and Henan provinces will each get three billion cubic meters. The first phase of the Eastern route began diverting water in November 2013, and the first stage of the Central route started in October 2014.

The challenge along the Eastern route, which covers 1,476 kilometers, is to channel Yangtze water upward by sixty-five meters, through thirteen pumping stations, to Dongping Lake in Shandong province, before sending it flowing down to the North, crossing the Yellow River through an underground channel. From there, one route would go north to Beijing, Tianjin, and Hebei, while another would travel east to Shandong Province.

One positive consequence of the project was remedial work to clean up the water. The water in Nansi Lake, the main collection nexus of the Eastern route, was rated worse than Grade V when the project started. To improve the water quality to Grade III, a major program was introduced to remove heavily polluting industries, such as the seven hundred paper factories in Shandong Province, which together accounted for 70 percent of the province's pollution.[16] Water diversion would not be possible until water quality could be improved to Grade III.

The projected scale of diversion could amount to an annual thirteen billion cubic meters of Yangtze water. In the first three years, a total of 18.766 billion cubic meters of water had been pumped from the Yangtze River for the Eastern route. Of this, a total of 1.1 billion cubic meters was channeled to Shandong Province.

By contrast, water along the Central route does not have to climb up before it flows down to the North. The two main difficulties of this 1,400-kilometer route are raising the dam height of the Danjiangkou Reservoir to 162 meters and channelling the water under the Yellow River. Water

running into the reservoir has to be above 150 meters before it could begin to flow downward. On average, forty billion cubic meters of water flows into the reservoir, but this figure has varied with the years; in 2014, it came to just thirty-two billion cubic meters, and brought with it one hundred million tons of silt, an estimated 95 percent of which settled in the reservoir.[17] As with the Eastern route, decontaminating the water was an arduous task. Before the project started in December 2003, water flowing into the Danjiangkou Reservoir was rated Grade IV.[18]

A December 2014 article on a Chinese news website marshalled an array of data to argue that the project was a "total failure."[19] The author calculated the duration, volume, and flowing speed of water diverted in the Eastern and Central routes in 2013 and 2014, and concluded that at best 5 percent and at worst 1 percent of the planned volume of water would be diverted. With the two routes costing five hundred billion yuan, plus the expense of energy to pump water, the cost of the diverted water would be more expensive than bottled water. In response, government statements gave largely rhetorical reassurances that the project was effective, acknowledging, for example, that although 16 percent of the water carried had been lost to evaporation this nevertheless did not qualify as "wastage."[20]

The Western route of the project was even more controversial, not only because it threatened more severe environmental disruptions, but also because it would substantially reduce hydroelectricity generation capacity in Southwest China. A 2006 book criticizing the project, co-authored by sixty experts, managed to convince the government to take a more prudent approach.[21] Some high-ranking officials had already voiced reservations about the project; Chou Baoxing, vice-minister of the Construction Ministry, noted in 2006 that if cities could simply recycle one-third of the water they were consuming, it would be equivalent to the entire water supply of the South-to-North Water Diversion Project.[22]

This is a classic example of major cities making unsustainable use of water and energy resources. Instead of reducing metropolitan populations, promoting deurbanization, or finding local alternatives to disruptive mega-projects, the supreme human will to dominate nature is asserted, and resources are mobilized to suit the needs of the nation's power centers.

The South-to-North Water Diversion project will reportedly cost twice as much as the Three Gorges Dam Project.[23] As if this were not enough, in March 2018, the government announced plans for another mega water diversion project, which by the state's own admission would encounter even more challenges. That project, to divert water from the sources of the Yangtze River to the Northwestern regions of Xinjiang, is expected to cost ten times more than the Three Gorges Dam. Dubbed the Red Flag

River Project, its entire distance would be 6,188 kilometers, including two hundred kilometers of current river segments, and would divert an estimated sixty billion cubic meters of water, constituting 21 percent of water taken from major rivers. All this would irrigate the Northwestern arid region of Xinjiang, Inner Mongolia, and Yan'an, creating an oasis of two hundred thousand square kilometers.[24] A second assessment conference of experts was convened in Beijing in January 2018, and news reports about experts' views were positive.[25] The project's main goal, according to these experts, would be to develop over fifty thousand hectares of irrigated farmland. They conceded that the estimated one trillion yuan price tag would be exorbitant.[26]

Beyond its huge cost, the project is founded on a kind of contempt for nature that is sure to invite nature's revenge. The south-to-north diversion crosses over seven thousand rivers, tributaries, and streams that flow largely from west to east. It is not difficult to imagine the huge disruptions and engineering challenges involved in channelling the water to run above, below, or across west-east flowing rivers. In some regions water will flow in a tunnel under the Yellow River, while in others elevated pipes will hang in the air, and if they were to break, these areas would face catastrophic floods. Some scientists also warn that the mixing of river waters entailed by such diversions can cause disastrous contaminations.

If the only priority is to supply Beijing and other cosmopolitan cities, one could ignore the huge disruptions in the habitats sustaining the livelihood of rural and provincial populations, given how sustainability is conceived by the elites. As long as Beijing continues to get enough water, these projects are considered "sustainable," however irrational the project may be in its costs, technological flaws, or burden on other sectors. The "sustainability" of Beijing is vital to the vision of the state leadership and urban middle class, the upper echelons of the social and political hierarchy: the partial "sustainability" in the power center is presented as universal "sustainability" for the rest of the nation. The rural, the marginalized, and those who cannot afford to live in cities and pay for highly priced water do not appear in this picture. The only value is Beijing's sustainability in its supply of water, energy, clean air, and clear skies.

Modernization and Growth at All Costs

China's single-minded pursuit of modernization and GDP growth are thus fraught with paradoxes. Its investment in pollution control as a proportion in GDP saw a steady increase from 1.06 percent in 2001 to 1.51 percent in 2014.[27]

Table 1. China (in millions of constant 2005 US$)

	1990	2010	Per capita in 1990	Per capita in 2010	% change 1990–2010
Produced capital	1,567,556	11,734,004	1,369	8,748	539
GDP	531,890	3,883,552	464	2,895	523
Wealth	18,571,020	31,969,803	16,216	23,834	47
Human capital	9,210,965	13,446,810	8,043	10,025	25
Natural capital	7,792,499	6,788,988	6,805	5,061	-26
Renewable resources	4,929,045	4,751,033	4,304	3,542	-18
Non-renewable resources	2,863,453	2,037,955	2,500	1,519	-39
Agricultural land	3,689,250	3,793,372	3,229	2,828	-12
Forest resources	1,230,795	957,661	1,075	714	-34
Fossil fuels	2,723,608	1,937,952	2,378	1,445	-39
Minerals	139,845	100,003	122	75	-39

Source: United Nations University–International Human Dimensions Programme on Global Environmental Change 2014, *Inclusive Wealth Report 2014: Measuring Progress Toward Sustainability*, http://ihdp.unu.edu, 220–313.

We can draw on the calculations of the Inclusive Wealth Index to see the broader picture. The Inclusive Wealth Index was developed by the United Nations University–International Human Dimensions Programme on Global Environmental Change and the UN Environment Programme, taking into account produced human and natural capital, so as to evaluate the capacity of nations to improve their citizens' well-being and sustainability for the benefit of the present and future generations. Between 1990 and 2010, while China's GDP grew by 523 percent, China only grew 47 percent in terms of "inclusive wealth," according to the *Inclusive Wealth Report 2014*. According to the Inclusive Wealth Index, China's economy shrank by an adjusted average rate of 6.2 percent from 1991 to 1995, 2.0 percent in 1996–2000, 1.7 percent in 2001–05, and 5.2 percent in 2006–10.[28] Thus, when the environmental costs of growth are taken into account, China's spectacular GDP rise is demystified. Rectifying and preventing water contamination alone will take at least forty years and two trillion yuan ($320 billion), estimates China's Ministry of Environmental Protection. The Ministry also calculates that water, air, and

soil – the three most severely contaminated resources – will cost six trillion yuan ($960 billion) to treat.[29]

The reality of the ecological crisis is thus too grave for the ruling elite to ignore. In response, however, they resort to technocratic management by experts serving the status quo. These experts come with a very different agenda from that of the communities worst affected by these problems. Where will the experts lead us in their effort to avoid any disruption in the steady rise in national "affluence"? According to André Gorz, the heedless pursuit of economic growth under capitalism must end one way or another: "De-growth is…imperative for our survival. But it presupposes a different economy, a different lifestyle, a different civilization and different social relations. In the absence of these, collapse could be avoided only through restrictions, rationing and the kind of authoritarian resource-allocation typical of a war economy."[30]

In the modernization discourse in China, "de-growth" is almost unthinkable, even as China's vaunted "growth" under the market reforms of the last thirty-five years has undeniably fostered gross economic and social injustice, incurred environmental devastation that renders large sections of the population vulnerable, and undermined the quality of life for the majority. Human-made ecological catastrophes could in one moment wipe out the gains of these decades of so-called progress.

Yet the modernization paradigm remains unchallenged in the discourse of the ruling elite and mainstream intellectuals. These policies are often justified with a litany of familiar slogans: that China must rise above its humiliation and violation by imperialist powers; its only salvation lies in the legacy of movements starting in the late nineteenth century, unequivocally articulated during the May 4 Movement of 1919 under the banner of "For Science and Democracy," and practically pursued after 1949, and especially since the 1980s, with a modernization path modelled on that of the West. Today the Asia Infrastructure Investment Bank, launched in October 2014, rivals the World Bank, International Monetary Fund, and Asia Development Bank. Unfortunately, the ambition "to be a strong power" or "resume being a strong power" takes the development paradigm of the Western powers as virtually its only point of reference, and the only viable path for China's nation-building.[31] Thus, however the party-state regime describes China's society and economy today – since June 1981, China has officially been in the prolonged "preliminary stage of socialism" – no "exit" from capitalism, and thus no serious effort to avoid ecological collapse, is on the agenda.[32]

China's situation is one in which, as C. A. Bowers writes, "what appears to be a progressive development may contribute to destructive

consequences that generally go unrecognized."[33] To understand how the negative consequences of development in China "generally go unrecognized" by the ruling elite, we have to question the shaping of subjectivity. This implies much more than a question of knowing what was previously unknown, which rarely requires any deeper change of mindset, or a redrawing of the boundaries of one's perspective. In the words of Gregory Bateson, the challenge is to change the unconscious rules that govern one's ways of relating to others and to oneself, criticizing the coercive rules that govern thoughts, perceptions, and experiences—and beyond that, to break such rules and form new ones.[34] This radical change must address what Felix Guattari calls the three ecologies: not only the ecology of the social and of nature, but also the ecology of the self.[35]

From the subject position of the ruling elite, China is forced to modernize itself to protect its national pride and sovereignty. But China's forced modernization is not simply a cure with calamitous side effects. It is destructive such that those made to embrace it are also made oblivious to its destructive power, deprived of any other vantage point except those permitted by the dominant forces of capitalist development.

Indeed, the dangers of modernization in China today should be obvious enough for anyone willing to confront them, yet those who so identify with the criteria, norms, and values of the discourse of developmentalism still allow their capacity for experience and imagination to be held captive by notions of modernity and linear progress, the benevolent power of science and technology, and monetized notions of "wealth" and "poverty." In China's development paradigm, "wealth" is increasingly a monetary term, and the determining factor of poverty is the simple absence of money. Under marketization, money is the "god" that produces poverty. Markets determined by capitalist relations can only thrive on the basis of socioeconomic polarization, deprivation, and marginalization. Such polarizations and inequalities have increased in China, concurrent with "growth" and "poverty reduction." With marketization as the driving force of the country's modernization and development, greater growth can only bring deeper socioeconomic and ecological injustice.

Michael Hardt and Antonio Negri argue that "modernity must be understood as a power relation: domination and resistance, sovereignty and struggle for liberation."[36] They further argue that "the project of modernity and modernization became key to the control and repression of the forces of anti-modernity that emerged in the revolutionary struggles. The notions of 'national development' and the 'state of the entire people,' which constantly held out an illusory promise for the future…merely served to legitimate the existing global hierarchies." Indeed, they observe

that "'really existing socialism' proved to be a powerful machine of primitive accumulation and economic development."[37]

It is no accident that the ruling elite in China long ago succumbed to the developmentalist ideology of "growth" and "development"; the pursuit of modernization after the fashion of "the West" provides powerful tools to establish hierarchical structures in producing and maintaining inequality, privilege, and systems of inclusion and exclusion. The forces of the state and capital that gain from and defend such a development paradigm represent power blocs with deep vested interests: the party-state regime seeks to retain its legitimacy through continual economic development; the nouveau riche exercise their monopoly on political and economic power by appropriating public and state property; and the state and private capital in China and global finance capital variously partner and contest between and amongst themselves. The ways that finance capital has permeated China's economy and wreaked havoc deserve intense scrutiny and analysis.[38]

Articulating Socioeconomic Justice with Ecological Justice

Rather than being relegated to the level of "superstructure" or a place of secondary or complementary importance, the cultural dimensions of Chinese society and political economy should be considered part and parcel of the development paradigm. A radical change in the perceptions, values, and preferences of the popular majority is necessary for any meaningful reversal of the current developmentalist trajectory. Most people might subscribe to the ideal of "sustainability," because this buzzword is so much in vogue in the mass media, education, and official discourse. The questions we have to probe are: How is this term so widely accepted but so little heeded? How do we enable the majority to see how in the hegemonic interpretation of "sustainability," the interests of an elite minority displace those of the majority, thus rendering "sustainability" void of "justice"? How can people be convinced to struggle instead for a paradigm of sustainability *with* justice, seeing the two as interdependent? How can the relations between humans, and relations with nature, be demonetized?

In debates among progressive intellectuals in China, discussion of the issue of modernization itself remains inadequate. The evils of modernization may be reckoned: it is a logic of an elite minority plundering the majority within and among nations; it is savagery clothed in suit and tie; it is taking the human species, along with the earth itself, toward imminent destruction—yet, modernization is still largely accepted as a necessary evil. Perhaps this is a vulgarized Marxist formulation of "revolution by stages": that only after passing through a period of capitalism

can the foundation be laid for socialism and communism; or a nationalist formulation, that only through modernization can China become strong enough as a nation-state to rival the imperialist powers; or a Darwinist formulation that the more exploited the laboring classes are, the faster China is modernized, and the higher it goes up the global chain. Even a utopian formulation is conceivable: that when China is sufficiently modernized, it can progress to an "alter-modernity" or even "anti-modernity."

I hope, however, that the examples elaborated above show that the path of modernization has left China deeply mired in the mud of ecological and socioeconomic injustice. The question confronting China is not one of more progress or more growth, but of the multiple tasks of reversing the dire damage already done to its ecology, society, and culture. Alternative ways of reading history and defining sustainability are urgently needed. The movements and struggles for socioeconomic and ecological justice require the active participation of the people, not as individuals but as communities. The last two decades have seen the rise of people's initiatives to counter the adverse effects of developmentalism and marketization, through self-organized peasant cooperatives, local trading of organic food products, community-supported agriculture, food safety campaigns, rural–urban interactions, and environmental protection efforts.[39] The "rural reconstruction" movements that began some fifteen years ago have involved thousands of people, especially the younger generation.[40] Nevertheless, these efforts are inadequate if they cannot be articulated as part of an agenda for ecological justice with socioeconomic justice.[41]

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31. Before the incursion of Western imperialist powers, China accounted for one-third of global trade. The British attempted to redress this trade imbalance by substituting opium for silver. The opium trade for Britain between 1821 and 1840 was worth at least 100 million yuan, equivalent to 20 percent of China's total currency at the time, and 10 percent of the total revenue of the Manchu Dynasty (Liu Huijun, "Opium Trade and the Outbreak of the Opium War," Sina, November 9, 2009, http://blog.sina.com.cn). When the Manchu Dynasty was determined to eliminate opium, Britain went to war with China, which subsequently lost and ceded Hong Kong to the British in 1842. In 1901, the joint invasion of eight imperialist powers not only looted the palaces in Beijing, seizing numerous items now residing in the British Museum and elsewhere; China was also forced to pay a war indemnity to the Eight-Nation Alliance equivalent to one tael per capita of silver, totaling 450 million taels of fine silver (equivalent to $333 million today) to be paid over thirty-nine years on a rising scale at 4 percent interest. By the end of the payment period, the total amount paid was almost one billion taels, or thirty-seven thousand metric tons, of pure silver. Imposing the indemnity on a per capita basis was a deliberate insult no less damaging than the material plunder itself.

32. "The Resolutions on a Number of Questions of the Party's History Since the Founding of the People's Republic of China," adopted by the Sixth Plenary Sesy sion of the Eleventh Central Committee of the Communist Party of China, 1981, available at http://marxists.org.

33. C. A. Bowers, *Educating for Eco-Justice and Community* (Athens: University of Georgia Press, 2001), x.

34. Gregory Bateson, *Steps to an Ecology of Mind* (Chicago: University of Chicago Press, 2000), 274–78.

35. Félix Guattari, *The Three Ecologies* (London: Athlone, 2000).

36. Michael Hardt and Antonio Negri, *Commonwealth* (Cambridge, MA: Harvard University Press, 2009), 67.

37. Hardt and Negri, *Commonwealth*, 92–93.

38. For an excellent review of the eight crises in China's economic development in the six decades since the founding of the People's Republic, see Wen Tiejun, *Eight Crises: Lessons from China 1949–2009* (Beijing: Dongfang, 2013) (in Chinese). I have been part of a team of scholars working on a comparative evaluation of China as an emerging country in relation to six other emerging countries, a project that forms the basis of a forthcoming book, to be published in both Chinese and English. For related research reports, see the website of the Global University for Sustainability, http://our-global-u.org.

39. Erebus Wong and Sit Tsui, "Rethinking 'Rural China,' Unthinking Modernisation: Rural Regeneration and Post-Developmental Historical Agency," in Rémy Herrera and Lau Kin Chi, eds., *The Struggle for Food Sovereignty: Alternative Development and the Renewal of Peasant Societies Today* (London: Pluto, 2015).

40. Wen Tiejun, Lau Kinchi, Cheng Cunwang, He Huili, "Ecological Civilization, Indigenous Culture, and Rural Reconstruction in China," *Monthly Review* 63, no. 9 (February 2012): 29–35. This paper reviews a movement of urban youth voluntarily going to the countryside or taking up organic farming in the last decade in China.

41. Herrera and Lau, eds., *The Struggle for Food Sovereignty*.