

China's drivers and planetary ecological collapse

Richard Smith [System Change Not Climate Change]

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Abstract

Can China lead the fight against climate change? If not, why not? Richard Smith, drawing on his forthcoming book *China's Engine of Ecological Apocalypse* (Verso, 2018) argues that the built-in drivers and barriers of China's hybrid bureaucratic-collectivist capitalism severely limit President Xi Jinping's options, rendering his ambitions impossible and reinforcing China's role as the world's leading driver of global warming and thus planetary ecological collapse.

Since President Trump pulled out of the Paris climate accord, there has been speculation that China could take the lead in the fight against global warming. China's leader, Xi Jinping, has certainly been eager to assume this role just as at Davos in January he championed globalisation and free trade against Trump's nationalist posturing.

At first glance, this might seem improbable. After all, China is by far the leading emitter of CO₂, pumping out more emissions per year than the US, the EU, and Japan combined. Moreover, China wastes staggering quantities of energy in its inefficient industries: According to the US Energy Information Administration, China's industries consume 7.9 times as much energy per US dollar of GDP as Japan, 5.8 times as much as the UK, and 3.9 times as much as the US.¹ Though China's GDP is still only two-thirds that of the United States, the country's disproportionate resource consumption and out-of-control pollution mean that "China has now passed America and is now the most physically important country on the planet. No other country has a more important influence on the biosphere, whether in terms of what we take from it or what we dump in to it."²

Yet while China is the world's leading polluter by far, it is also, ironically, the world's leading producer of both wind turbines and solar panels. China also leads the world in installed capacity of both wind and solar. So Xi Jinping's ambition is perhaps not entirely implausible.

Trump trashes the United States while Xi tries to build a "sustainable China"

What's more, Xi's public persona – his calm, serious demeanour and his rational, comprehensive and progressive environmental agenda – could scarcely be more opposite to those of the rampaging *enfant terrible* Americans elected president. Where I live, Trump is trashing the country, championing pollution for the sake of pollution, coal for sake of coal regardless of economics or climate science, wrecking regulation for the sake of wrecking any restraint on ruling-class greed. He has freed coal power plants to spew out more toxins, freed coal miners to dump toxic waste in rivers and streams, slashed the Environmental Protection Agency (EPA) budget, suppressed EPA enforcement, appointed cretinous know-nothings and

¹ Brian Wingfield, 'China's Power Problem', *Forbes*, 7 July 2007, and the sources cited therein: https://www.forbes.com/2008/07/03/energy-efficiency-china-biz-energy_cx_bw_0707efficiency_china.html.

² Robert Wilson, 'America Versus China: The New Reality of Global Energy', *Energy Collective*, 12 May 2014: <http://www.theenergycollective.com/robertwilson190/380971/america-versus-china-what-difference-decade-makes>.

fossil-fuel-industry hacks to run regulatory agencies, dismissed science advisers and slapped gag orders on climate scientists, approved the Keystone XL pipeline, ordered offshore drilling expanded, taken steps to scrap the Clean Power Plan and the Mercury and Air Toxics Rule, thrown open national parks to oil drilling rigs, abandoned endangered-species protection for whales and other creatures, loosened ozone standards, shrinking and privatising national parks – and, not least, pulled the United States out of the Paris climate accord.

By contrast, since taking office in 2012, President Xi Jinping has increasingly stressed his government's commitment to building an "ecological society", to cleaning up pollution, building "beautiful cities",³ most of which have been rebuilt over the past two decades with new housing, schools, hospitals, public parks, impressive new subway systems, and more. In addition, most of China's cities are now connected via the country's incomparable network of ultra-smooth high-speed trains. Xi's government has promised to reduce China's dependence on coal and declared its intention to phase out all fossil-fuel-powered cars in the next decades. It has already invested more money in renewable energy and electric vehicles than the rest of the world combined. And it has now banned the import of electronic and other toxic waste that poisoned Chinese recycling communities for decades.⁴ In his address to the Nineteenth Congress of the Communist Party in October 2017, Xi spoke like an eco-socialist:

"Man and nature form a community of life; we, as human beings, must respect nature, follow its ways, and protect it. Only by observing the laws of nature can mankind avoid costly blunders in its exploitation. Any harm we inflict on nature will eventually return to haunt us. This is a reality we have to face...

We must realise that lucid waters and lush mountains are invaluable assets and act on this understanding, implement our fundamental national policy of conserving resources and protecting the environment, and cherish the environment as we cherish our own lives. We will adopt a holistic approach to conserving our mountains, rivers, forests, farmlands, lakes, and grasslands, implement the strictest possible systems for environmental protection, and develop eco-friendly growth models and ways of life. We must pursue a model of sustainable development featuring increased production, higher living standards, and healthy ecosystems. We must continue the Beautiful China initiative to create good working and living environments for our people and play our part in ensuring global ecological security...

The modernization that we pursue is one characterised by harmonious coexistence between man and nature. In addition to creating more material and cultural wealth to meet people's ever-increasing needs for a better life, we need also to provide more quality ecological goods to meet people's ever-

³ Xinhua, State Council of the CPC Central Committee, 'Overall Plan for the Reform of Ecological Civilization System' (Zhonggong zhongyang guowuyuan yinfa 'shengtai wenming tizhi gaige zongti fang'an'), Central Government Portal, 21 September 2015, http://www.gov.cn/guowuyuan/2015-09/21/content_2936327.htm; Li Liafang and Huang Yan, 'Xinhua Insight: President Xi Sets the Pace on a Better Environment', *People's Daily*, 21 March 2017, <http://en.people.cn/n3/2017/0321/c90000-9192976.html>.

⁴ Michael Standaert, 'China's Notorious E-waste Village Disappears Almost Overnight', *Bloomberg*, 17 December 2015, <https://www.bna.com/chinas-notorious-ewaste-n57982065266>; Zhuang Pinhui, 'China's Most Notorious E-waste Dumping Ground Now Cleaner but Poorer', *South China Morning Post*, 22 September 2017, <http://www.scmp.com/news/china/society/article/2112226/chinas-most-notorious-e-waste-dumping-ground-now-cleaner-poorer>.

growing demands for a beautiful environment. We should, acting on the principles of prioritising resource conservation and environmental protection and letting nature restore itself, develop spatial layouts, industrial structures, and ways of work and life that help conserve resources and protect the environment. With this, we can restore the serenity, harmony, and beauty of nature.”

To give force to his policy initiatives, Xi elevated China’s State Environmental Protection Agency to ministerial rank: it’s now the Ministry of Environmental Protection (MEP), with powers equal, in theory, to the big industrial ministries. At the Congress, he announced,

“We will establish regulatory agencies to manage state-owned natural resource assets and monitor natural ecosystems, and improve environmental management systems. These agencies will, in a unified way, perform the duties of the owner of public-owned natural resource assets, the duties of regulating the use of all territorial space and protecting and restoring ecosystems, and the duties of monitoring the discharge of all pollutants in urban and rural areas and conducting administrative law enforcement.”

He further pledged that his government,

“will complete work on drawing redlines for protecting the ecosystems, designating permanent basic cropland, and delineating boundaries for urban development... we will promote afforestation, take comprehensive steps to control desertification... and soil erosion, strengthen wetland conservation and restoration... We will improve the system for protecting natural forests... rigorously protect farmland”, and more.⁵

Finally, as Trump walked away from the Paris climate accord, Xi announced his intention to “take the driver’s seat in international cooperation to respond to climate change”. Not only that but Xi’s government has also pledged to wipe out the last vestiges of poverty in China by 2030 and turn China into a “moderately prosperous society” where the basic needs of all including jobs, housing, and healthcare, are met. Trump, as we know, has different priorities: tax cuts for the rich.

In short, the contrasts between Donald Trump and Xi Jinping could hardly be more striking. Little wonder, then, that more and more people around the world look to China to take the lead to save us from climate collapse.

Systemic drivers of destruction

Alas, that is not going to happen. I don’t doubt Xi’s earnest intentions. But for all of that, I’m going to argue here that Xi Jinping cannot lead the fight against global warming because he runs a political-economic system characterised by systemic growth drivers – the need to maximise growth beyond any market rationality, the need to maximise employment, and the need to maximise consumerism – which are, if anything, even more powerful and even more eco-suicidal than those of “normal” capitalism in the West, but which Xi is powerless to alter.

⁵ Xinhua, ‘Full Text of Xi Jinping’s Report at the 19th CPC National Congress’, http://news.xinhuanet.com/english/special/2017-11/03/c_136725942.htm.

These drivers are responsible for China's irrational "blind growth", "blind production" and out-of-control pollution, what Xi himself describes as "meaningless development at the cost of the environment".⁶ But Xi cannot systematically compel his subordinate officials to stop squandering resources in useless overproduction and overconstruction, and stop polluting the country and the planet because for all of his nominal authority as head of the most powerful and ferocious police state in history, in reality, power is widely shared throughout the 88-million-member ruling party. This means that most of the time, he cannot force officials to give up their ruinous practices when to do so would undermine their economic interests.⁷ Furthermore, I contend that for all his eco-socialist rhetoric, Xi does not try very hard to suppress these destructive practices because Xi Jinping himself is the leading driver of "meaningless growth at the expense of the environment." Xi's priority is not to build an "ecological society." His overriding priority, like Mao and Deng before him is to make China rich and powerful, to achieve superpower status equal to if not superior to the United States, to "Make China Great Again" and reclaim its role as the centre of the world economy.⁸ These achievements are the *sine qua non* of ruling-class reproduction and guarantor of the communist party's grip on power. The problem with Xi's vainglorious ambition is that the hyper industrialization required to realize this China Dream of great power status compels him to break the "harmonious coexistence between man and nature", to let the polluters pollute, pump China's CO₂ emissions off the chart, and thereby bring on the ecological collapse not just of China but the whole planet. Why is that?

Here's why: In capitalism, competition is the motor that drives growth like a perpetual motion machine. It's automatic: Competition forces producers to cut costs systematically, find cheaper inputs, wider markets, bring in new technology – in short, to constantly revolutionise the instruments and processes of production on pain of failure and extinction in the marketplace. Growth is built in and cannot be exorcised. All efforts to date to "green capitalism" – cap-and-trade, carbon taxes, the dematerialisation of production, and so on – have foundered on the brutal reality that no government or industrialised economy will accept binding limits on greenhouse-gas emissions because no one has yet found a way to staunch emissions without staunching economic growth.⁹

Yet in capitalism there is a one built-in, if temporary, limit to growth: profits. If companies can't make a profit, they will cease production and lay off workers, sometimes masses of workers. Now and again, economic recession or collapse brings growth to a halt, at least temporarily, until sufficient value has been destroyed such that the cycle can begin all over again on an enlarged scale. Hence the business cycle. Further, in capitalist democracies, there is still some freedom to organise, so environmental organisations have been able to impose some restraint on pollution – gains which, as we know, are now under unprecedented assault.

But most of this does not apply in China state-sector economy because China's rulers are not private capitalists – at least not with respect to their state economy (though plenty of them have private businesses on the side, not to mention millions and billions stashed away in

⁶ *People's Daily*, 'President Highlights Importance of Protecting the Environment', 21 April 2017, <http://en.people.cn/n3/2017/0421/c90000-9206085.html>.

⁷ See my 'China's Communist-Capitalist Ecological Apocalypse', *Real-World Economics Review* 71 (May 2015): 19–63.

⁸ See Howard W. French, *Everything Under the Heavens* (New York: Alfred Knopf, 2017).

⁹ Richard Smith, *Green Capitalism: The God That Failed* (Bristol, UK: World Economic Association Books, 2016).

Panama and other hideaways).¹⁰ China's rulers are bureaucratic collectivists who run a hybrid bureaucratic-collectivist capitalist economy, a system largely – though, of course, not entirely – exempted from the laws of capitalism. It's difficult to make generalisations about the "Chinese economy" because what's true of the state-owned sector (about half the economy) is not necessarily true of the foreign-invested joint-venture sector (about a third of the industrial economy) or the domestic private-capitalist sector. Here I'm mainly concerned with the state-owned, state-controlled, state-planned economy because this is the main engine of the economy and because it over-determines the rest as well. China's State-Owned Enterprises (SOEs) do not live and die by the rules of the market. For all the market reforms since 1978, the government has not allowed a single major SOE to fail and go bankrupt, no matter how inefficient, no matter how indebted, because those industries serve a different purpose. They do not exist just to make money. They exist to fulfil the wishes of China's Communist Party rulers, especially as they contribute to import substitution and national industrialisation. China's statist economy thus abides by different laws of motion, different drivers, which I shall try to elucidate in what follows.

I. China's drivers

Capitalist economies are driven by a single maximand: profit maximisation. China's state-led economy is driven by a different maximand: maximising the security, power, and wealth of the Chinese Communist Party (CCP) bureaucracy. This driver isn't automatic like the motor of competition in capitalism. In China's state-owned economy, growth is driven by the conscious decisions of party authorities: if the leaders choose to develop (or not develop) an industry, it will be developed (or not).¹¹ Central planning replaces market competition to shape economic development. Given the massive foreign-exchange (forex) surpluses of China's export economy over the past three decades, its rulers are positioned to lavishly fund strategic priorities; build up their industrial "national champions" like China National Petroleum, China Telecom, State Grid and others; hothouse new high-tech and import-substitutionist industries; spend monies to smooth out global recessionary crises, as in 2008-09, and so on – all prompting grudging admiration and concern about the threat of China's "state capitalism" from the business press like the *Economist*.¹²

Making China Great Again

Since China's rulers are state-based, they must first and foremost be nationalists. They used to be socialists and internationalists in the 1920s when the party consisted almost entirely of industrial and commercial workers. But after the workers' revolution was crushed in 1927, Mao built an entirely new party in the 1930s and '40s out of déclassé elements: student revolutionaries, nationalist intellectuals, defecting Guomindang soldiers, bandits, and

¹⁰ Stuart Lau, 'Chinese Dominate List of People and Firms Hiding Money in Tax Havens, Panama Papers Reveal', *South China Morning Post*, 10 May 2016, <http://www.scmp.com/news/hong-kong/article/1943463/chinese-dominate-list-people-and-firms-hiding-money-tax-havens-panama>; Patti Waldmeir and Tom Mitchell, 'Panama Papers: Top Officials Tied to Offshore Companies', *Financial Times*/CNBC News, 7 April 2016, <https://www.cnbc.com/2016/04/07/panama-papers-top-china-leaders-tied-to-offshore-companies.html>.

¹¹ China's leaders are in the enviable position of having the freedom to plan their economic development more or less as they choose because of their triumphant success in turning their export bases into an engine of growth, the workshop of the world for more than three decades – a feat no other bureaucratic collectivist regime, notably the Soviet Union, could match. On China's unique developmental model, see Richard Smith, 'The Chinese Road to Capitalism', *New Left Review* 199 (May–June 1993): 55–99.

¹² *Economist*, 'The Rise of State Capitalism', 11 August 2016; Michael Wines, 'China Fortifies State Businesses to Fuel Growth', *New York Times*, 30 August 2010.

peasants. This surrogate party-army was explicitly nationalist, elitist, and deeply anti-democratic. It functioned as a proto-ruling class in its rural base areas and consolidated itself as a bureaucratic collectivist ruling class with the revolutionary victory in 1949. In so doing, Mao's surrogate party-army substituted not for China's proletariat but for its enfeebled national bourgeoisie.¹³ As nationalists, and in particular as "communist" nationalists, they faced Cold War hostility, blockades, and other threats from the first days of the People's Republic under Mao, so they had little choice but to self-industrialise. Partly by circumstance and partly by choice, Mao sought to build China as a more or less fully autarkic economy, though he had some help from the Soviets in the 1950s. Hostile to markets and lacking capitalist technology and methods of economic development, he tried to drive the economy to "surpass Britain and catch up with the US" by means of political campaigns based on heroic "revolutionary" self-sacrifice and voluntarism. That didn't work out so well.¹⁴ After Mao's death in 1976, Deng Xiaoping abandoned politics for economics and, under the banner of "market reform and opening up", invited Western companies to set up in China, initially in an archipelago of coastal Special Economic Zones (SEZs), where foreign companies partnered with state-owned industries to exploit China's vast pool of ultra-cheap migrant labour in exchange for technology and know-how transfer from the West.

The three "must dos"

From Deng Xiaoping to Xi Jinping, China's leaders have sought to build their nation into a modern industrial superpower, but one which is still largely self-sufficient in order to prevent the return of foreign domination.¹⁵ Thus, while introducing capitalism, the government has systematically maintained state supremacy and induced foreign companies to hand over technology and intellectual property for market access. It has also restricted foreign investors to limited sectors (auto manufacturing, electronics, export industries, some retail, and others) in order to prevent their taking over key sectors and the commanding heights of the economy.¹⁶ Since the advent of market reform, the party's strategic goal of comprehensive economic development has obliged it to rely on three main levers, or what here I'm going to call drivers: state-led import-substitutionist industrialisation, employment generation, and consumerism. All these have had enormous environmental consequences.

1. Maximise economic growth and national self-sufficiency

First, profitable joint-venture partnerships brought in mountains of forex earnings which enabled the party to renovate, modernise, and greatly expand its state-owned industries from the 1990s. In the 1970s, no company from the People's Republic of China was counted among the Fortune Global 500 list. By 2016, 128 of the Global 500 companies were Chinese (versus 110 American companies, down from 138 the year before), including three of the top

¹³ On the transformation of the CCP during the course of the revolution, see my 'Mao Zedong and the First Party-Army Revolution', *Against the Current* 1, no. 1 (Summer 1981), <http://www.richardanthonymsmith.org/mao-rev-1>.

¹⁴ Yang Jisheng, *Tombstone: The Great Chinese Famine 1958–1962* (New York: Farrar, Straus and Giroux, 2012).

¹⁵ E.g., Keith Bradsher and Paul Mozur, 'China Has a Plan to Be Nearly Self-Sufficient by 2025. Global Rivals Call It Unfair', *New York Times*, 8 March 2017.

¹⁶ E.g., Tom Mitchell, 'The Door to China's Real Investment Riches Remains Locked', *Financial Times*, 31 March 2015, <https://www.ft.com/content/719b1134-d763-11e4-94b1-00144feab7de>.

ten, and nearly all of them – and all the big ones – were state-owned. The government also modernised and monetised its central planning apparatus.¹⁷

China's Five-Year Plans have spelled out strategic goals of comprehensive development and import-substitutionist industrialisation plans and funded priority and “pillar” industries, from basic steel, coal, power generation and so on in the 1950s up through the highest-tech aspirations today: smart manufacturing, robotics, cloud computing, 5G internet, AI, big data, new materials, renewable energy, hybrid vehicles, and more, detailed in the Twelfth and Thirteenth Five-Year Plans (2010-20).

With his call for “national rejuvenation” (*fuqing*), centred on his Made in China 2025 initiative and New Silk Road project, Xi Jinping is taking all this to a new level. He aims not just to make China the world's leading high-tech manufacturer but also to bring much of Asia, Africa, and even Europe under the sway of Chinese market domination and political hegemony in order to construct a New World Order in which China regains its “rightful” place as the centre of the world economy and a dominant superpower equal if not superior to the United States.¹⁸ So this is the first driver: the need to compete and succeed as a *national economy* against Western, especially US domination.

2. Maximise employment

Second, the Chinese leadership must maximise growth to generate jobs to keep up with its population growth and create new jobs for workers in sunset industries like coal. In capitalist economies, corporations don't care about the unemployed. If workers, even masses of workers, get laid off, that's not the capitalists' problem. It's not even the government's problem either – except in severe downturns like the Great Depression when the US government, for example, was obliged to create Civilian Conservation Corps and WPA-type jobs programmes or face unrest if not revolt. But because the CCP was once a workers' party and because the party claims its legitimacy, its very *raison d'être*, as the (self-appointed) representative of the working class for whom it led the revolution, it cannot completely ignore the workers as capitalists can do in the West.

The CCP has been very cruel to China's workers, as when it subjected them to merciless exploitation at the hands of foreign corporations in the SEZs. But it must still strive to keep them employed to keep the peace. Since the 1990s the government has faced hundreds of mass protests across the country every day, more than 160,000 “mass incidents” a year by official count, including strikes and protests against unpaid back pay or overtime, land grabs, pollution, and corruption.¹⁹ The government cannot afford to have masses of unhappy unemployed workers milling about. That's why, in November 2013, prime minister and economic czar Li Keqiang said: “Employment is the biggest thing for well-being. The

¹⁷ Sebastian Hellmann and Oliver Melton, ‘The Reinvention of Development Planning in China, 1993-2012’, *Modern China* 39, no. 6 (November 2013): 580–628.

¹⁸ Bai Yang, ‘China to Become a “World Space Power” by 2045: Expert’, *People's Daily*, 22 October 2017, <http://en.people.cn/n3/2017/1022/c90000-9283262.html>.

¹⁹ Max Fisher, ‘How China Stays Stable Despite 500 Protests Every Day’, *Atlantic*, 5 January 2012, <https://www.theatlantic.com/international/archive/2012/01/how-china-stays-stable-despite-500-protests-every-day/250940/>; Hou Liqiang, ‘Report Identifies Sources of Mass Protests’, *China Daily*, 9 April 2014, http://www.chinadaily.com.cn/china/2014-04/09/content_17415767.htm.

government must not slacken on this for one moment... For us, stable growth is mainly for the sake of maintaining employment.”²⁰

This explains why the Twelfth and Thirteenth Five-Year Plans have insisted that the government will do all it can to keep unemployment below 5 percent, declaring that it will create some 15 million new jobs each year if necessary. This is the main reason, apart from import substitution and their contribution to national industrialisation, that the government keeps its “zombie” steel companies, aluminium companies, coal mines, and construction companies in business year after year, rolling over their debts rather than letting them fail and close down as Western economists are always admonishing them to do.²¹

3. Maximise consumerism

Third, after the collapse of communism in East Europe and Russia and the Chinese communists’ own near-death experience with the Tiananmen uprising of 1989, the party leadership determined to prioritise the creation of a mass consumer economy and also gradually raised incomes to focus people’s attention on consumption instead of politics. This is why, ever since the early 1990s, successive Five-Year Plans have prioritised new consumer industries and the government has promoted one after another consumer craze: the car craze, the house-building / “condo-mania” craze, the shopping-mall craze, the tourism craze, the golf-course craze, the theme-park craze, the glass-bridge craze, the bike-sharing craze, the cruise boat craze, and more. The government reports that tourism, mostly Chinese, now accounts for 11 percent of the GDP and the government is keen to grow this sector.

The government has also partnered with and backed private capitalists, including Jack Ma’s Alibaba (China’s eBay) and other consumer-oriented industries to promote shopping, video gaming, plastic surgery, social media, and more shopping. State newspapers including the *People’s Daily*, flagship of the Communist Party, read like the shopping news and devote front page space to bragging about how many billionaires ‘socialist’ China has produced this year.²² In recent years, state banks created a consumer credit industry from scratch and went into the mortgage business to spur consumption and drive economic growth. But shopping has certainly been a smash hit for Xi and the CCP. China’s 2017 Singles’ Day grossed more than America’s Black Friday and Cyber Monday combined (of course). After centuries of privation and decades of Maoist austerity, it seems the Chinese have gone in for consumerism with a vengeance. As many say, “It’s our turn now”.²³ Greenpeace China has sharply criticized the environmental consequences of all this pointless overconsumption.²⁴

²⁰ Quoted in Keith Bradsher, ‘China’s Leaders Confront Economic Fissures’, *New York Times*, 5 November 2013.

²¹ Frank Tang, ‘Beijing Can Boost Economic Growth if it Beats the Corporate “Zombies”, IMF Says,’ *South China Morning Post*, 29 November 2017: <http://www.scmp.com/news/china/economy/article/2122159/beijing-can-boost-economic-growth-if-it-beats-corporate-zombies>.

²² Shi Futian, ‘Video Gaming Hitting New Highs’, *China Daily*, 8 November 2017. Xu Junqian, ‘Chinese girls dazzle at Victoria’s Secret Fashion Show’, *China Daily*, 25 November 2017. Editor, ‘Top 10 Chinese Billionaires’, *People’s Daily*, 9, March 2015: <http://en.people.cn/business/n/2015/0309/c90778-8860134.html>. Xin Wen, ‘Hansome future for beauty sector’, *China Daily*, 24-26 November 2017 (on the plastic surgery craze among young, not older, women (!))

²³ Cindy Sui, ‘What the World’s Largest Shopping Day Says about China’, *BBC News*, 11 November 2011, <http://www.bbc.com/news/world-asia-china-41954591>.

²⁴ Lu Yen Roloff, ‘Why You Shouldn’t Buy Anything on Single’s Day,’ *Greenpeace China*, 10 November 2010: <http://www.greenpeace.org/international/en/news/Blogs/makingwaves/overconsumption-buying-singles-day-fashion-shopping/blog/60678/>

There are further drivers, below the top leadership. Industrial ministries led by the oil ministry, the coal ministry, the steel ministry, the railroad ministry, state construction companies, and others are all mighty drivers of growth in their own right. They employ millions and contribute billions in GDP growth and tax revenues. They compete fiercely for centrally allocated resources. And as China's growth has slowed since 2012, they've resisted efforts by the central government to force them to cut back.

Then there are the local drivers. When Deng Xiaoping introduced market reforms in local governments and state industries, he cut various profit-sharing deals with local officials and SOE bosses. He insisted that SOEs fulfil their planned production as previously (government planners still impose numerous quotas and targets), but gave them the right to sell over-quota output on the new free markets, to reinvest their retained profits as they saw fit, and to initiate new lines of production for market.

With the rise of Poland's Solidarność trade union in 1980 and the Tiananmen uprising and collapse of communism in 1989, Deng saw China's opportunity in stark Manichaeian terms: China's communists were presented with a once-in-an-epoch opportunity to catch up with the West – to use capitalism to save communism – or join their Soviet comrades in the dustbin of history. In 1980, Deng ordered China's officials and managers to rev their engines and double per capita GDP to \$500 by 1990, then double it again to \$1,000 by 2000, then once more by between 2030-50 to achieve a national GDP of \$1 trillion. In 1992, he invited local officials and SOE bosses to *xia hai* ("jump into the sea of commerce") and exhorted them to grow the economy or get out of the way: "Any leader who cannot boost the economy must leave office".²⁵

GDP "tournaments", investment manias, and redundancy

Local officials didn't need to be told twice. Deng's exhortations led in short order to GDP "tournaments" as overachieving local officials competed to generate higher growth rates to win promotions and more government largesse. Thus, the Eleventh Five-Year Plan (2006-10) set a national GDP target of 7.5 percent. But all of China's thirty-one provinces set targets higher than this. The average was 10.1 percent, with the highest 13.0 percent and the lowest 8.5 percent.²⁶ Local officials pursued "blind production," "blind investment" and "blind growth", squandering resources and profligately wasting energy in all these processes in full confidence that the government would continue to bail them out, which, so far, it continues to do.

What's more, for the most part, the introduction of market reforms has amplified (instead of reducing) tendencies in the old bureaucratic economy toward redundant investment. Officials in, say, inland Sichuan Province can't invest in industries in coastal provinces like Guangdong or Shanghai like capitalist investors in a market economy. They're more or less stuck with what they've got, what they control, what they "own". In this circumstance, every local official sees his or her neighbour as a competitor in a zero-sum game of competition for central disbursements, market profits, and promotions. Thus the incentives and penalties discourage cooperation, efficiency, and economies of scale and encourage redundancy, inefficient plant,

²⁵ Quoted in Michael E. Marti, *China and the Legacy of Deng Xiaoping* (Washington, D.C.: Brassey's, 2001), 87, 94.

²⁶ Mark A. DeWeaver, *Animal Spirits with Chinese Characteristics* (New York: Palgrave MacMillan, 2012), 81. I am much obliged to Mark for this example and for his insights into and analyses of the complex motivations of local officials regarding economic growth.

and small-scale backward technology.²⁷ So if local officials out in Sichuan or up in Henan or down in Yunnan want to profit off central government initiatives to boost auto or solar or windmill production, the way to do so is to build their own – DIY. So local officials have built thousands of redundant, mostly small- to medium-sized enterprises (SMEs) across the economy. As a result, today China has at least 140 auto plants (versus 45 in the US), some producing fewer than a thousand cars per year, one even producing fewer than a hundred. It has more than a hundred wind-turbine producers, most operating at less than 50 percent capacity; more than 200 electric-car makers, none of which make money; and so on.²⁸ Every mayor wants his or her city to be a Detroit or a Wall Street or a Silicon Valley. But instead of large-scale, efficient, specialised plants dominating production, what one more often finds is enormous numbers of SMEs surrounding China's cities. "In Jiangsu province, which surrounds Shanghai, roughly one such enterprise can be found per square kilometer".²⁹ Same with power plants. And local SOEs not infrequently build their own small-scale but "captive" power plants to ensure regular supplies of power.³⁰ Little wonder China's industrial regions are blanketed in coal smog and dust.

In the urbanisation drive the government has promoted since the 1990s, local officials have expropriated land from hundreds of millions of peasants, uprooting some 400 million farmers and selling their farmland to developers building masses of apartment blocks, industrial parks, shopping malls, infrastructure, and useless "blingrastructure" and "ghost cities" across the country.³¹ Real estate development has accounted for 20 percent or more of GDP growth since the 1990s.

Redundant development, in turn, helps overdrive the national GDP. Since the beginning of market reform in 1978, China's Five-Year Plans have never called for national GDP growth rates higher than 8 percent per year, yet this target has been regularly exceeded: in 1983-88, GDP growth averaged 11.9 percent per year. In 1985 the economy grew at 15.2 percent, nearly double the target. Over two decades, from 1992 to 2011, GDP growth averaged 10.5 percent, hitting 13 and 14 percent on the crest of the boom in 2006 and 2007. In this way, China's competitive, overachieving officials easily soared past Deng's targets to a GDP that exceeded *11 trillion dollars* in 2016.

This is why, with just 19 percent of the world's population and a GDP equal to just 63 percent of the US's in 2016, China has nevertheless become by far the world's biggest consumer of

²⁷ DeWeaver, *Animal Spirits*, chapters 5 and 8. I explored the persistence of bureaucratic economic irrationality in the face of market reforms during the first decade of market reform in my dissertation, *Class Structure and Economic Development: The Contradictions of Market Socialism in China* (Los Angeles: UCLA History Department, 1989), chapters 3 through 5, <http://www.richardanthony-smith.org/class-structure-and-economic-development>.

²⁸ Alexandra Ho, 'Too Many Car Factories in China?' *Bloomberg*, 12 February 2015: <https://www.bloomberg.com/news/articles/2015-02-12/china-s-car-factory-binge-risks-hurting-automakers-margins>; Reuters, 'China to Clamp Down on New Car Plants in Fight against Capacity Glut, Pollution', 12 June 2017, <http://www.reuters.com/article/us-china-autos-overcapacity/china-to-clamp-down-on-new-car-plants-in-fight-against-capacity-glut-pollution-idUSKBN19314U>; Li Fusheng, 'New Energy Vehicles – a Case of Too Many, Too Soon?' *China Daily*, 30 October 2017.

²⁹ Elizabeth C. Economy, *The River Runs Black* (Ithaca, NY: Cornell University Press, 2004), 70-71.

³⁰ 'The central government has tried to consolidate energy suppliers into large-scale power plants, where environmental technologies are easier to enforce. But local governments have encouraged the proliferation of small (under 50 megawatts [MW]), inefficient, and highly polluting coal-fired power plants to meet growing local energy needs. The smallest of these plants (12 MW) release three to eight times more particulates, consume 60 percent more coal, and are 35-60 percent more costly to operate than plants of 200 MW or more' (Economy, *River Runs Black*, 73).

³¹ Wade Shepard, *Ghost Cities* (London: Zed, 2017); Tom Miller, *China's Urban Billion* (London: Zed, 2012).

marketed primary-industrial raw materials (cement, metal ores, industrial minerals, fossil fuels, and biomass). China consumes more than 32 percent of the world's total of these resources – nearly four times as much as the United States, the second-largest consumer. China is the leading producer and consumer of steel, with 50 percent of world output. It consumes just over half the world's coal and a third of the world's oil.³² It also consumes 60 percent of the world's cement. Technology analyst Vaclav Smil published the astonishing statistic that, in building and over-building its infrastructure, China poured more cement in just the three years from 2011 to 2013 than US builders poured *during the entire twentieth century* to build all US cities, ports, road and rail systems, airports, and more.³³

China has also become the world's largest consumer of lumber and forest products, levelling forests from Siberia to Southeast Asia, New Guinea, Congo, and Madagascar. Thanks increasingly to China's voracious consumption, Greenpeace has warned that "future generations will be living on a planet without ancient forests".³⁴ This is also why China surged past the US to become the world's largest consumer of energy in 2009 and, given present trends, will soon be consuming fully twice as much energy as the United States with an economy less than two-thirds as big.³⁵

To be fair, some of these resources – roughly 20 percent – are embedded in the production of goods for export to the West. But these exports are partially offset by China's own imports of embedded resources in the form of Boeing airplanes, soybeans, beef, pork, and other commodities the country imports in large quantities. The rest is consumed in domestic production, overproduction and waste.

The logic and necessity of "blind growth", "blind demolition" and "blind construction"

"Out with the old, in with the new; out with the new, in with the newer"
(Wade Shepard).³⁶

Given these drivers, in China's statist economy it becomes rational to regularly overproduce – to produce mountains of steel and aluminium that can't be sold at home, that can only be dumped overseas at below cost. It becomes rational for state construction companies to build empty airports all over the country, near empty high-speed trains, empty expressways, and empty bridges.³⁷ It's likewise sensible, if bizarre and stupendously wasteful, to build hundreds of surreal "ghost cities" and "New Areas" all over the country where almost no one lives. Indeed, right now, China's planners and builders are reported to be in the process of building 3.4 billion new homes – in a nation of 1.4 billion people, most of whom have already been

³² Elizabeth C. Economy and Michael Levi, *By All Means Necessary* (Oxford: Oxford University Press, 2014).

³³ Ana Swanson, 'How Did China Use More Cement between 2011 and 2013 than the US Used in the Entire 20th Century?', *Independent*, 25 March 2015, <http://www.independent.co.uk/news/world/asia/how-did-china-use-more-cement-between-2011-and-2013-than-the-us-used-in-the-entire-20th-century-10134079.html>.

³⁴ Craig Simons, *The Devouring Dragon* (New York: St. Martin's, 2015).

³⁵ Malcom Scott and Cedric Sam, 'China and the United States: A Tale of Two Giant Economies,' *Bloomberg*, 12 May 2016, <https://www.bloomberg.com/graphics/2016-us-vs-china-economy>.

³⁶ Shepard, *Ghost Cities*, 17.

³⁷ Chris Buckley, 'China's New Bridges: Rising High, but Buried in Debt,' *New York Times*, 10 June 2017: https://www.nytimes.com/2017/06/10/world/asia/china-bridges-infrastructure.html?_r=0.

rehoused since the 1990s.³⁸ Since 1995, China has levelled and rebuilt a huge percentage of its housing stock. Some 40 percent of all its homes have been built since 2000.³⁹

Worse, because housing construction in China is often so shoddy, it's soon torn down and replaced, over and over again, with all the waste that entails. As Wade Shepard writes,

“Li Dexiang of Tsinghua University told the *China Daily* that ‘what we see nowadays is the blind demolition of relatively new buildings, some of which have only been standing for less than 10 years’. Modern Chinese buildings are essentially disposable; they stand for one, two, or three decades and are then requisitioned and demolished, whereupon bigger, better and more expensive buildings will go up in their place. This fits in well with the country’s broader economic structure: houses that can last a century are not nearly as profitable as ones that can be demolished, rebuilt and sold three times over within this span of time. As 40 percent of construction land in China is created every year by the demolition of older buildings, the financial incentives for these urban upgrades is evident. Demolition, too, increases the GDP. Under this strategy there is no limit on development, as once all the available construction land is used it will be high time to start tearing down what was just built to build it again.”

Who says the Chinese can’t innovate?

The Chinese have applied the economic stimulus of consumer culture to urbanization; these shiny new cities that are going up across the country are like new refrigerators which are designed to break down after a few years of use so you have to go out and buy a new one – built-in obsolescence in urban planning.⁴⁰

Voilà: disposable cities! And with them disposable culture, disposable communities, universal alienation.⁴¹ This is how, in what can only be described as industrial-scale architectural vandalism, Beijing’s ancient *hutong* (alleyway) neighbourhoods with their courtyard homes dating back to the Ch’ing and Ming dynasties, have been levelled, their close-knit families and communities broken up, and replaced with ugly shopping malls, gargantuan and garish hotels, and pompous SOE headquarters skyscrapers filled with suited drones dozing over their teacups while the former residents are dispersed to shabby suburbs far from the city centre. The same happens in Shanghai and other cities.

³⁸ *Shanghaiist*, ‘Chinese Local Governments Are Planning Enough Housing for 3.4 Billion People by 2030’, 19 July 2016, http://shanghaiist.com/2016/07/19/too_many_houses.php. This can happen because China’s rich and middle classes have few other legal investment options. Bank interest is nil. Ordinary Chinese can’t buy stocks in New York or even Hong Kong. So they invest in property. Middle-class families often own two or three or extra apartments – not to live in, not vacation homes, just investments, like “gold bricks” as the Chinese say, bought purely for speculation.

³⁹ Shepard, *Ghost Cities*, 15.

⁴⁰ Shepard, *Ghost Cities*, 16.

⁴¹ For a sense of the alienated life of Beijingers today, see Zhang Wumao’s biting essay ‘Beijing Has 20 Million People Pretending to Live Here’, *What’s On Weibo*, 26 July 2017: https://www.whatsonweibo.com/beijing-20-million-people-pretending-live-full-translation/?utm_campaign=Revue%20newsletter&utm_medium=Newsletter&utm_source=What%27s%20on%20Weibo. Or the migrant worker essay that also went viral in China: “I am Fan Yusu”, trans. in China Digital Times, 2 May 2017: <https://chinadigitaltimes.net/2017/05/translation-fan-yusu-part-1/>.

Exporting over-production, over-construction, and surplus labour

Since 1999, when the government ordered its large SOEs to “go out, go global, in search of new markets, they have been building hundreds of infrastructure-for-resources (and/or for loans) projects across Southeast Asia, Africa, Latin America, and even Europe and the US.⁴² In most cases, China compels its weaker neo-colonies, like Britain and Cambodia, to use Chinese companies, Chinese finance, and Chinese labour.⁴³ Today, with China already massively overbuilt, Xi Jinping’s New Silk Road initiative is pushing this imperialist venture to a new level, to expand China’s economic empire around the world to contest the United States for global hegemony.⁴⁴

China’s nonstop construction frenzy is, at bottom, the world’s largest ever make-work project, though it’s also a mighty engine of cadre corruption – one of many means for officials to loot the state.⁴⁵ It’s also a mighty engine of global ecological collapse; cement and steel production are among the largest contributors of greenhouse gas emissions.

II. Built-in barriers to change

The foregoing overview summarised the built-in drivers of excessive growth, over-production, over-construction, resource and energy waste, and pollution in China. Now what about the built-in barriers to change? And how are these different from capitalism elsewhere?

First of all, China’s formidable police state brooks no opposition. Trade unionists, environmentalists, democrats, feminists, and their lawyers are all routinely arrested and imprisoned, sometimes tortured or even killed. Chinese activists risk their lives to fight the social and environmental destruction of their country and yet, astonishingly, many brave⁴⁶ly fight on as best they can. Things have not yet reached that stage in the remaining democratic capitalist states, though who knows for how long?⁴⁷

Second: China’s ruling class owns the state economy collectively, not privately like capitalists, and this gives the Chinese economy a radically different character and trajectory from “normal” capitalism elsewhere. The party-state owns the whole economy, all the land and natural resource as well as the profits of its industries, tax receipts, foreign-exchange surpluses and more. But no party member owns any of this personally. In this system, economic power is dispersed throughout the party-state bureaucracy, though concentrated in nodes of power, especially family-based and factional sections of the party bureaucracy. This

⁴² Ouyang Shijia, et al., ‘US Workers Learn How to Make Chinese Subway Cars’, *China Daily*, 31 May 2017.

⁴³ Howard French, *China’s Second Continent* (New York: Random House, 2015); Emily Gosden, ‘China to Build Nuclear Reactor in Essex after Hinkley Deal Approved’, *Telegraph*, 15 September 2016. Thanks to Thatcher’s anti-industrial policies, Britain is so deindustrialized today that besides nuclear power plants, the Brits even have to import basic steel from China. Even the London Taxi Company is now owned by a Chinese company that produces London’s taxis in Shanghai. Tycho De Feijter, ‘London’s Iconic Black Cab to be Replaced with Chinese Automaker Geely’, *Forbes*, August 17, 2016: <https://www.forbes.com/sites/tychodefeijter/2016/08/17/geely-to-replace-londons-iconic-black-cab-with-a-hybrid/#537a7b3a396c>.

⁴⁴ Tom Miller, *China’s Asian Dream* (London: Zed, 2017); Howard French, *Everything Under the Heavens*.

⁴⁵ Smith, ‘China’s Communist-Capitalist Ecological Apocalypse’; DeWeaver, *Animal Spirits*, chapter 5.

⁴⁶ Paul Huang, ‘Chinese Regime Sentences Taiwan Activist to Five Years in Prison for Discussing Democracy on Facebook and WeChat,’ *Epoch Times*, 1 December 2017.

⁴⁷ Michael Safi, et al., ‘You Can Get Killed: Journalists Living in Fear as States Crack Down’, *Guardian*, 29 November 2017.

collectivist power and property has major implications with respect to Beijing's effort to control and direct the economy and to enforce its own environmental rules and regulations.

In the West it's often argued, "Well, China may be a dictatorship, but at least a dictator should be able to get things done. So it should be able to force a transition to solar and wind power quickly". Indeed, China's government gets things done like no other nation on Earth – "at China speed", as the *People's Daily* likes to brag.⁴⁸ A new airport? Consider it done. A new high-speed train line? Done. A new fifty-seven-story skyscraper? One was recently put up in nineteen days. An entirely new city like Xiongan now under construction south of Beijing? That might take a couple of years or so. But it's a whole city, and it's planned to be triple the size of New York City.⁴⁹ The government has little trouble forcibly evicting hundreds of millions of people to use their lands for dams, developers, industrial parks, shopping malls, highways, airports, or anything else it wants to build. Thousands of migrant workers were just evicted in November from Beijing, their homes demolished, in the latest gentrification push.⁵⁰

But when it comes to halting over-construction, over-production, and pollution, not to mention corruption, the central government can't seem to enforce its will. It can't systematically discipline the people in its own ranks. When the government orders local officials to stop over-building or over-producing, to obey state environmental laws, to stop dumping pollutants into waterways, to turn on the sewage-treatment plants or power-plant coal-desulphurisation equipment, or to suppress coal production and shift to solar and wind, strangely, its orders often fall on deaf ears, ignored or defied.

These bureaucratic obstructionist practices are so universal and long established that they've given rise to a raft of popular aphorisms, including:

- Xi Jinping is master of nothing;
- Orders don't leave Zhongnanhai [the compound adjacent to the Forbidden City in Beijing, where the top CCP leaders have lived and worked since 1949];
- Above are orders, below are counter-orders;
- Complying in public but opposing in private;
- Glancing left and right.⁵¹

⁴⁸ *People's Daily*, "'China Speed' Amazes World', 30 November 2015, <http://en.people.cn/n/2015/1130/c90000-8983488.html>.

⁴⁹ Tom Phillips, 'China Plans to Build New City Nearly Three Times the Size of New York', *Guardian*, 4 April 2017, <https://www.theguardian.com/world/2017/apr/04/china-plans-build-new-city-nearly-three-times-the-size-of-new-york>; Wade Shepard, *Ghost Cities*, chapter 3.

⁵⁰ Chris Buckley, "Why Parts of Beijing Look Like a Devastated War Zone," *New York Times*, 30 November 2017: <https://www.nytimes.com/2017/11/30/world/asia/china-beijing-migrants.html>. Also, Ian Johnson, 'China's Great Uprooting: Moving 250 Million into Cities', *New York Times*, 15 June 2013, <http://www.nytimes.com/2013/06/16/world/asia/chinas-great-uprooting-moving-250-million-into-cities.html>; and Miller, *China's Urban Billion*.

⁵¹ These are extensively discussed in Zhang Linshan and Sun Fenyi, *The Phenomenon of Reform Obstruction in China: Performance, Origin, and Solution* (Beijing: Social Sciences Academic Press, 2017), 5–7ff (in Chinese). See also *China Quarterly* 231 (September 2017), Special Section: Central-Local Relations and Environmental Governance in China, particularly: Sarah Eaton and Genia Kosta, 'Central Protectionism in China: The 'Central SOE Problem' in Environmental Governance'; Benjamin van Rooij, et al., 'Centralizing Trends and Pollution Law Enforcement in China'; Christine Wong and Valerie J. Karplus, 'China's War on Air Pollution: Can Existing Governance Structures Support New Ambitions?'; and Xuehua Zhang, 'Implementation of Pollution Control Targets in China: Has a Centralized Enforcement Approach Worked?' The CQ articles explore systematic resistance up and down the bureaucratic hierarchy to Beijing's environmental initiatives. They more or less all conclude that, as Xuehua Zhang writes: '[C]entralized enforcement . . . is arguably ineffective in addressing China's long-standing problem of weak environmental policy implementation' (749).

What these expressions mean is that CCP leaders are dependent upon subordinate officials who are not powerless themselves and often have ample means to ignore or defy orders from above. As a local official I quote in my book said, “We don’t think those orders [to stop polluting] apply to us”. He doesn’t *think* they apply to him? Imagine a division chief of a major US corporation saying he doesn’t think the CEO’s orders apply to him. How long would he keep his job?

But in China, ministerial officials, provincial governors, local officials, and SOE bosses mostly need not worry. Why is that? How is it that a highly centralised neo-totalitarian police state cannot force its own subordinate officials to obey its own orders, laws, rules, and regulations? This is a most interesting question. The answer, I suggest, is to be found in the collective nature of China’s ruling class. Beijing can’t systematically enforce its writ against resistance from below because it can’t systematically fire subordinates for insubordination: they’re not just employees, as in capitalism. They’re Communist Party members, members of the same ruling class as the leaders in Beijing. So they’re not necessarily “subordinates”. Of course, all party officials are ranked in the hierarchical *nomenklatura* system, which assigns rank, responsibilities, duties, salaries, housing assignments, and so on. Cadres have bosses and bosses have bosses. But since there’s no rule of law in China, formal rank and position are not absolute and not the only determinant. As they say in China, “Without the rule of law there is only the rule of men”. This means that in this formally hierarchical system, the day-to-day reality is that all relations are intensely *personal*, governed by what the Chinese call *guanxi* (connections or relations). If you’ve got good *guanxi*, good connections with higher-ups (especially all the way to Beijing), and a solid base of supporters below, then you can be reasonably sure that you “own” your job; you can ignore orders from above; and you can keep making money on your polluting factory, buy off your superiors, pay your taxes, and carry on. (If you’re unsure, just stuff cotton in the monitoring devices, fake your emissions data, and hope your superiors turn a blind eye.)⁵²

If you’re head of a ministry or an SOE, especially a big “national champion” SOE that Beijing wants to forge into a world-beating industrial competitor, then Beijing is willing to overlook your pollution. In fact, what Sarah Eaton and Genia Kostka found in their research is that the bulk of reported air and water pollution violations are caused by big national champions, such as state-owned oil and gas giants Sinopec and China National Petroleum Company and electricity-generation giants, such as National Grid and its subordinates: “Central SOEs have been the source of a large number of environmental rule violation as well as serious pollution incidents within China. Large SOEs in the electricity generation and oil and gas industries are particularly culpable, with six firms alone accounting for 62 percent of all 2,370 reported violations in the database.”⁵³

China’s coal and oil ministries and its giant SOEs are very powerful and profitable, with millions of party bureaucrats and employees. Heads of large SOEs have ministerial rank. Of the 120 SOEs directly managed by the central government, fully fifty-four heads of those firms enjoy ministerial rank.⁵⁴ They like things the way they are and they intend to keep them that way. They resist efforts to suppress pollution at the expense of profits or dismantle coal or oil

⁵² Yuan Suwen, et al. ‘Northern China Fakes Emissions Data’, *Caixin*, 6 April 2017, <http://www.caixinglobal.com/2017-04-06/101075101.html>; Edward Wong and Vanessa Piao, ‘When China Wants Better Air Readings, Cotton Does the Trick’, *New York Times*, 28 October 2016, <https://www.nytimes.com/2016/10/29/world/asia/china-xian-air-pollution-data.html?mcubz=1&r=0>.

⁵³ Sarah Eaton and Genia Kosta, ‘Central Protectionism in China: The ‘Central SOE Problem’ in Environmental Governance’, *China Quarterly* 231, September 2017, 686.

⁵⁴ Eaton and Kostka, Central Protectionism, 693.

and replace them with wind and solar, and, as members of the ruling class and “co-owners” in the economy, they have so far largely prevailed. For all these reasons, across the country, officials can and do often ignore or defy Beijing with impunity.

Last winter (2016-17), for example, the government sent a team of environmental inspectors to see how effectively local officials were implementing the leadership’s orders to clean up the environment in three of China’s largest cities. Here’s what they found:⁵⁵

Beijing

- The city planned to clean up nineteen heavily polluted waterways last year, but work on only one was completed.
- Three mining companies continue to operate near the Miyun Reservoir, one of the city’s main sources of drinking water, even after they were ordered to close in 2008.
- None of the fourteen planned facilities to deal with waste from sewage-treatment plants was built . . . resulting in 630,000 tonnes of waste being dumped in temporary sites near residential areas for years.
- The city’s upmarket Shuyi district has failed to meet its goal for reducing a cancer-causing PM2.5 (particulate matter) in its air for two consecutive years from 2014.

Shanghai

- Only ten of 50 sewage treatment plants met the required standards. These ten were small plants that accounted for just 4 percent of the city’s sewage-handling capacity.
- 46 landfill sites built before 2008 didn’t have facilities to treat wastewater.
- Water quality in the city’s Baoshan district has continued to deteriorate since 2013; all sixteen samples taken from local waterways were heavily polluted.

Chongqing

- 39 of the 54 sewage-treatment facilities the city government promised to build between 2011 and 2015 were still under construction.
- The city gave the green light to build 98 large chemical plants near the Yangtze River, including 62 that would handle hazardous materials, threatening water quality.

Local authorities, the inspectors reported, “had failed to meet environmental goals, and lax government oversight had led to widespread violations of environmental protection laws”. Inspectors “upbraided” city officials for dodging responsibility by “trying to blame air pollution on pollutants from neighbouring cities and provinces”. And so on.

But the investigators couldn’t really do much about these insubordinate officials because they don’t have much power. Pollution controls and environmental clean-ups subtract from profits, so local authorities routinely ignore them. Thus, in her sensational documentary *Under the Dome*, Chai Jing queries the director of the MEP’s Vehicular Pollution Research Institute about why his agency doesn’t enforce anti-pollution laws and regulations. He told her that regardless of the law, his agency had no real power to enforce it: “Nowadays, I don’t dare open my mouth out of fear that [the polluters] will see that I have no teeth”.⁵⁶ Since the government can’t systematically threaten to fire its subordinates, its hands are often tied. All Xi’s enforcers can do is unleash terror campaigns, as in Mao’s day: send down discipline

⁵⁵ Zhou Chen and Li Rongde, ‘Cities’ Pollution Violations Have Inspectors Fuming’, *Caixin*, 13 April 2017, <http://www.caixinglobal.com/2017-04-13/101078097.html>.

⁵⁶ Chai Jing, *Qiong Ding Zhi Xia* (Under the Dome), 2015 (at 48:19).

inspection teams, issue rebukes, and levy fines. But fines tend to have little effect because the government that's levying the fine also owns the polluters. It's just fining itself.

Of course, here and there the government has been able to suppress pollution, at least temporarily.⁵⁷ Often, in response to mass protests, governments intervene to close down polluting plants or delay construction of some incinerator. For the Olympics and big conferences, the Beijing forced factories in the capital region to close. Xi just ordered steel plants around Beijing to shut down from November to March 2018 in hopes of preventing a repeat of the “airpocalypses” that have smothered the region in recent winters when the coal-fired heating systems are turned on. As of this writing (6 December), the prospects don't look good.⁵⁸ In any case, temporary shutdowns do nothing to solve the systemic problems while cutting production threatens jobs and undermines other central priorities.⁵⁹ Beijing's threats, interventions and campaigns tend to be short-lived and ineffectual: Polluters reopen after the inspectors have left, incinerators are relocated to despoil some other location, and so on.⁶⁰ This is why for all Xi's talk, his government is still losing its five-year-old “war on pollution”.⁶¹



“What have you just gone through?”⁶²

⁵⁷ For one in-depth study, see Bryan Tilt, *The Struggle for Sustainability in Rural China* (New York: Columbia University Press), chapter 6.

⁵⁸ Le Rongde, ‘Beijing Area Sees Fewer “Blue-Sky Days” This Year’, *Caixin*, 17 November 2017, <https://www.caixinglobal.com/2017-11-17/beijing-area-sees-fewer-blue-sky-days-this-year-101172743.html>. ‘China admits it will struggle to meet smog reduction targets’, *South China Morning Post*, 1 September 2017: <http://www.scmp.com/news/china/policies-politics/article/2109307/china-admits-it-will-struggle-meet-smog-reduction>.

⁵⁹ Shen Fan et al., ‘China's Sweeping Pollution Crackdown Puts Chill on the Economy’, *Caixin*, 22 September 2017: <https://www.caixinglobal.com/2017-09-22/chinas-sweeping-pollution-crackdown-puts-chill-on-economy-101148891.html>.

⁶⁰ For examples, see Smith, ‘China's Apocalypse’.

⁶¹ Smith, ‘China's Apocalypse’; *Caixin*, ‘Air Pollution in Jing-Jin-Ji Worsened in First Half of 2017’, 20 July 2008, http://k.caixinglobal.com/web/detail_19528; Li Rongde, ‘Beijing Area Sees Fewer “Blue-Sky” Days’; AP, ‘Four-Fifths of China's Water from Wells ‘Unsafe Because of Pollution’, *Guardian*, 12 April 2016, <https://www.theguardian.com/environment/2016/apr/12/four-fifths-of-chinas-water-from-wells-unsafe-because-of-pollution>; Zheng Jinran, ‘Lax Anti-Pollution Efforts Highlighted’, *China Daily*, 2 August 2017, http://www.chinadaily.com.cn/cndy/2017-08/02/content_30325231.htm; Zhang Chun, ‘Hebei's Lung Cancer Spike Raises Questions about Role of Pollution’, *China Dialogue*, 15 February 2016. Etc.

⁶² *South China Morning Post*, “What Have You Just Gone Through?": Photos of China's Smog-Covered High-Speed Trains Go Viral’, 5 January 2017, <http://www.scmp.com/news/china/society/article/2059576/what-have-you-gone-through-photos-chinas-smog-covered-high-speed>.

Third: The fact that subordinate local, provincial, and ministerial authorities can defy central government orders to reduce pollution is bad enough. But this problem is compounded by the fact that Xi himself still refuses to subordinate growth to environmental protection. For all his talk about building an ecological society, Xi's government is still systematically prioritising growth over the environment. In their 2017 study of central-local relations, Eaton and Kostka found that the central government systematically protects its SOE polluters:

Officials in the central bureaucracy, principally SASAC (State-owned Assets Supervision and Administration Commission – the nominal owner/manager of government-owned enterprises), provide a measure of shelter for chronic polluters within SASAC's ranks by incentivizing senior SOE managers to look upon the achievement of traditional industrial policy goals such as profitability, scale, market share and efficiency – and not compliance with environmental regulations – as the *sine qua non* of a positive enterprise performance evaluation and possible promotion for managers themselves.⁶³

Why? Because the central government's overriding concern is to build up its "national champions":

As subjects of a long-standing industrial policy programme that aims at creating global players in key sectors, central SOEs face tacit, yet nonetheless strong, incentives to shirk on environmental rules that would harm their economic performance... [Enterprise groups] are relentlessly called upon to go "go bigger and go stronger"... via scaling up and striving to attain global standards of competitiveness... maintaining and increasing the value of state assets.⁶⁴

Given this priority, it comes as no surprise that, despite its formal elevation from agency to ministry, the MEP under Xi Jinping remains very much a second-class ministry. It is severely underfunded and understaffed, it lacks properly trained inspectors and monitoring equipment, it has no enforcement power, and its local regulators are often subordinate to the officials they're supposed to regulate. As a result, it is frequently ignored, as Chai Jing discovered.⁶⁵

The Chinese Communist Party versus planet Earth

I don't doubt that Xi Jinping sincerely wishes to build an "ecological society". But the fact remains that his options are severely limited by the imperatives of ruling-class reproduction: He can't prioritise environmental protection over economic growth because given the pressures he faces to grow the economy, build all those new industries to "make China great again", to produce jobs, to bring mass consumerism to a billion and a half Chinese, to sell his economy's overproduction and employ the country's surplus workers overseas, he has no choice but to prioritise growth over the environment.⁶⁶

As the people of Beijing last winter suffered through the worst bout of smog in the city's history, the government called on people to "be patient" and "wear respirators" (!) "It will take

⁶³ Eaton and Kostka, *Central Protectionism*, 694.

⁶⁴ Eaton and Kostka, *Central Protectionism*, 694.

⁶⁵ Eaton and Kostka, *Central Protectionism*, 690–91.

⁶⁶ Jiang Je, 'China to Pour Trillions into Belt and Road Projects', *People's Daily*, 13 July 2017, <http://en.people.cn/n3/2017/0713/c90000-9241409.html>.

time to solve this complicated problem.” Since the government couldn’t suppress the bad news, it shot the messenger: it ordered local forecasters to stop issuing smog alerts.⁶⁷ The prospects for winter 2017–18 don’t look much better. Beijing was smothered in a foul smog with the air quality index hitting the 280s in mid October when I snapped the picture below, while up in Harbin, capitol of Heilongjiang Province, the readings were over 500. (The World Health Organisation advises limiting exposure to PM2.5 particulates to no more than 20ppm, or parts per million.)⁶⁸ The government’s chronic inability to solve its pollution problems, especially the most visible problem of air pollution, is why more and more of China’s upper and middle classes are voting with their feet: fleeing China’s northern cities, even emigrating en masse abroad to Sydney, Vancouver, New York, Los Angeles, and beyond.⁶⁹ As the government paper *Global Times* put it during the most recent bout in October: “Despite the warnings, many Beijing residents were seen not wearing masks in public. And some netizens posted photos of their grey cities accompanied by statements like “So eager to flee this city”.”⁷⁰



October sun through 245 ppm
PM2.5 smog over Kunming Lake,
Summer Palace (after Monet).

Photo by author

⁶⁷ Sidney Leng, ‘Heavy Smog Back to Choke Northern China over Three-Day New Year Holiday’, *South China Morning Press*, 31 December 2016,

<http://www.scmp.com/news/china/society/article/2058439/heavy-smog-back-choke-northern-china-over-three-day-new-year>; Reuters, ‘China Orders Local Forecasters to Stop Issuing Smog Alerts’, 1 January 2017, <http://www.dw.com/en/china-orders-local-forecasters-to-stop-issuing-smog-alerts/a-37170575>.

⁶⁸ Tian Xuefei and Zhou Huiing, ‘Smoggy Days Arrive Early in Northeastern Regions’, *China Daily*, 3 November 2017.

⁶⁹ Tom Phillips, ‘Smog Refugees Flee Chinese Cities as “Airpocalypse” Blights Half a Billion’, *Guardian*, 21 December 2016.

⁷⁰ Zhang Hui, ‘Heavy Smog Hovers over North China’, *Global Times*, 28–29 October 2017.

III. What does all this mean for global warming?

What this means that Xi Jinping has no chance of leading a global fight against global warming. It means that, instead, China's economy is likely to continue leading the drive towards planetary ecological collapse. Short of nuclear war, China's economic engine poses the greatest threat to life on Earth. While the US, Europe, and Japan limp along at 1 to 3 percent annual GDP growth, China's supercharged communist-capitalist economy is still barreling along at just under 7 percent GDP increase per year. To be sure, this is down from its rate of 10 percent or more during the two decades leading up to 2011. But it's still double and triple the growth rates in capitalist countries. China's breakneck growth is driving global planetary collapse and yet for all his police-state powers and ecological ambitions, Xi Jinping is unable or at least unwilling to try to reverse those priorities.



Artist's rendering of Shanghai c. 2100, with 4°C warming.⁷¹

He can't have it both ways

Xi's problem, like our problem, is that there's just no way to grow an industrialised economy without growing resource consumption and pollution because, so far, no one has come up with a way to "dematerialise" production.⁷² That's why year after year, decade after decade, UN climate negotiations collapse in failure and acrimony: no industrial economy will accept finite caps on pollution because that would mean caps on growth. And that's why as economic growth has picked up this year, global emissions are accelerating again – driven mainly by China's emissions, which are projected to rise this year by 3.5 percent.⁷³

⁷¹ Climate Central, 'New Report and Maps: Rising Seas Threaten Land Home to Half a Billion,' 8 November 2015, <http://sealevel.climatecentral.org/news/global-mapping-choices>. Used with permission.

⁷² Richard Smith, *Green Capitalism*.

⁷³ Bob Berwyn, 'Global CO2 Emissions to Hit Record High in 2017,' *Inside Climate News*, 13 November 2017, <https://insideclimatenews.org/news/12112017/climate-change-carbon-co2-emissions-record-high-2017-cop23>.

More growth has to mean more fossil-fuel consumption – lots more. The fact that China reduced coal production by a few percentage points between 2014 and 2016 raised hopes in the West that China would soon reach “peak coal”. But, in truth, this slight drop of 2-4 percent hardly matters, since coal is still king in China and is set to remain so for decades to come. It still accounts for 75 percent of China’s electricity generation, and even the most optimistic official Chinese government projections foresee renewable energy (hydro, solar, wind, biomass) contributing no more than 20 percent by 2030. Xi’s government has promised to shut down a hundred coal-fired power plants at home. But China’s state-owned companies are building some 700 coal-fired power plants abroad, driving coal consumption far beyond China itself.⁷⁴

Yes, China is also building solar and wind power plants at a furious pace. But it’s building new fossil fuel capacity, especially natural gas, almost as fast. And though China leads the world in installed capacity for wind and solar, these still only account for a trivial share of its electricity generation. In 2015, China spent a record \$102 billion on wind, solar, geothermal, and other low- or no-carbon renewable energy. Yet in 2016 wind turbines produced just 4 percent of China’s electricity generation, and solar barely reached 1 percent. By comparison, the US invested just \$44 billion in 2015 but in 2016 wind produced 6.9 percent of its electric generation – nearly double China’s production with less than half the investment. The reason China produces so little renewable energy despite all the investment is that so much of its renewable energy is “curtailed” (wasted). Nationally, the government concedes that about 21 percent of wind energy is curtailed, as much as 40 percent in some provinces and even more than 60 percent in Xinjiang (ironically, the province with the most installed wind power).⁷⁵

Why? Again, the answer is to be found in the system of ruling-class reproduction in China. Ever since the founding of the People’s Republic, its economic administration has been highly decentralised, fragmented, and compartmentalised, with each locality striving to be largely self-sufficient, in effect mirroring Mao’s national economy. For all the market reforms since 1978, this remains largely true today for much of the economy. China doesn’t have a national electric grid. It has many local grids. Many wind and solar farms have been built in good locations, but then not connected to any grid.⁷⁶ Further, as noted above, local officials can normally profit only from enterprises in their bailiwicks. So to maximise their income they must maximise their output and sales, including power generation in their own locality. Wind and solar aren’t suitable for every location, and they’re intermittent. So rather than buy wind and solar power from distant locations at higher prices (when possible at all) and face the inevitable problem of intermittency and possibly “market blockades,” local officials prefer to build and protect their own coal-fired power plants. Thus even in Xinjiang Province with all its installed wind power, still:

A stunning 60 percent of all electricity generated... comes from captive coal-fired power plants, which factories operate to meet their own requirements.

⁷⁴ Hiroko Tabuchi, ‘As Beijing Joins Climate Fight, Chinese Companies Build Coal Plants’, *New York Times*, 1 July 2017.

⁷⁵ Kate Gordon and Anders Hove, ‘How China Wastes Its Renewable Energy’, *Wall Street Journal*, 13 September 2016, <https://blogs.wsj.com/experts/2016/09/13/how-china-wastes-its-renewable-energy>; China Electricity Council, *China Energy Portal*, 2017, <https://chinaenergyportal.org/en/2016-detailed-electricity-statistics>; Simon Göss, *Energy BrainBlog*, 9 February 2017, <https://blog.energybrainpool.com/en/power-statistics-china-2016-huge-growth-of-renewables-amidst-thermal-based-generation/>.

⁷⁶ E.g., Javier C. Hernandez, ‘It Can Power a Small Nation. But This Wind Farm in China Is Mostly Idle’, *New York Times*, 15 January 2017.

This is putting the region's electricity grid at risk and making the transition to renewables harder... The availability of cheap coal is a major driver in the northwestern Chinese province for energy and resource intensive enterprises, such as coal chemicals and electrolytic aluminium plants... these factories can cut their electricity cost by more than half by building their own captive power plants. In 2016, such coal plants generated 63 percent of all electricity in Xinjiang.⁷⁷

In effect, local officials and the coal ministry sabotage renewable energy to keep their coal-fired plants in operation. Yet, because they're all members of the ruling class and have responsibility for employing hundreds of thousands of workers, they very often do so with Beijing's tacit approval, despite public government pronouncements to the contrary.

"Irrational" coal-to-gas is dooming the planet

Worse, in the effort to clear the air in China's northern cities, Xi Jinping's government is building vast "coal gasification" bases out west in Shanxi, the Ordos Basin, Inner Mongolia, and other remote areas. These plants will burn coal directly on site to generate electricity and convert coal to liquid fuels like "syngas", which will then be transported to the cities to be burned in power plants, factories, and cars, basically, moving the smog to Western China.⁷⁸ These huge bases, some encompassing areas larger than the states of Delaware and Connecticut, will be the largest fossil-fuel development projects on Earth and will consume so much coal-fired energy that they will generate almost twice as much CO₂ emissions as if the coal were just directly burned in Beijing power plants. Scientists tell us that if these plants come online they will "doom the climate". Some already have and are adding to the recent global surge in CO₂ emissions.⁷⁹

Finally, if all this weren't awful enough, "climate fight leader" Xi Jinping is putting pedal to the metal to frack the country like the US in a bid to enforce his higher priority: making China relatively self-sufficient in oil and natural gas production to reduce coal consumption⁸⁰ and fuel his country's ever-growing fleet of useless cars, mostly stalled in traffic jams in China's smog-choked cities.⁸¹

And all this for what purpose? China overproduces electricity like everything else. Even as the Three Gorges, the world's largest dam, can't sell all the power it produces, the government is

⁷⁷ *Jingji Cankao Bao* (Economic Information Daily), 2 February 2017, my translation.

⁷⁸ Zhang Chun and Tang Damin, 'Pressure Builds to Fight Smog in Western China,' *Chinadialogue*, 5 January, 2017 <https://www.chinadialogue.net/article/show/single/en/9531-Pressure-builds-to-fight-smog-in-Western-China->.

⁷⁹ William J. Kelly, 'China's Plan to Clean Up Air in Cities Will Doom the Climate, Scientists Say', *Inside Climate News*, 13 February 2014, <http://insideclimatenews.org/news/20140213/chinas-plan-clean-air-cities-will-doom-climate-scientists-say>; Greenpeace, 'China's Planned Coal-to-Gas Plants to Emit Over One Billion Tons of CO₂', 25 July 2014, <http://www.greenpeace.org/international/en/news/features/China-coal-to-gas-plants-to-emit-billion-tons-of-CO2/>;

Edward Wong, "'Irrational' Coal Plants May Hamper China's Climate Change Efforts', *New York Times*, 7 February 7, 2017.

⁸⁰ Jaeah Lee and James West, 'America's Fracking Boom Comes to China', *Atlantic*, September 2014; Sophie Beach, 'China's Fracking Boom and the Fate of the Planet', *China Digital Times*, 14 September 2014 (includes video): <http://chinadigitaltimes.net/2014/09/chinas-fracking-boom-fate-planet/>.

⁸¹ Eva Li, 'Drone Footage Showing Extent of Smog-Stricken Beijing's Traffic Jams Leaves Viewers Gasping', *South China Morning Post*, 3 January 2017, <http://www.scmp.com/news/china/society/article/2058926/drone-footage-beijing-smog-traffic-jams-leaves-internet-viewers>.

building the world's second largest dam downstream.⁸² The country doesn't need all this electricity: In 2016 Chinese households consumed just 800 terawatt hours (TWh) of electricity, while industry consumed 5,120 TWh.⁸³ Most of China's electricity is squandered on unsustainable resource-hogging, polluting, superfluous industries, superfluous construction, superfluous consumer goods and services the Chinese and we don't need – not to mention powering the ever-growing fleet of computer servers China's surveillance state needs to process the flow of data from its zillions of video cameras, facial recognition devices, finger print readers and internet censors in its relentless drive to police every waking moment of every citizen's life.⁸⁴

IV. Planned deindustrialization or unplanned ecological collapse

Given the foregoing, it's very difficult to see how China's drive to ecological collapse can be averted. One thing is for sure: the Communist Party cannot save China, let alone the world. The CCP is locked in a death spiral it can't pull out of: Xi can't cut industrial production enough to drastically suppress emissions without inviting mass strikes, the rise of a Chinese Solidarność, and perhaps even revolt. So he can't slam on the brakes and has every incentive to keep the engines of destruction at full throttle.

What can be done? It goes without saying that the Chinese have every right to modernise, industrialise, and improve their material standard of living. But they don't need a higher *standard of living* based on ever-growing consumerism, like that of Americans. That's one more thing they don't need to copy. They need a better *mode of living*: clean unpolluted air, water, and soil; safe, nutritious, untainted, unadulterated food instead of toxic water, polluted adulterated foods, junk foods, and cancer villages – the “lucid waters and lush mountains,” the “healthy ecosystems” and “beautiful environment” Xi promised them. They need safe, quality housing that doesn't fall down. They need a public transportation system centred on urban bicycles and public transit instead of private cars and ring roads. They need good public schools and universities that encourage free intellectual inquiry and critical thinking so they don't have to send their children abroad to get a decent education and access Google and Facebook and Twitter and so on like the rest of the world. They need socialised medicine – free public healthcare like they used to have, but better, instead of the massively corrupt, bribery-driven pay-for-service system they've had to endure since medical care was privatised in the 1990s.⁸⁵

But Xi Jinping and the Communist Party can't give them that better mode of living, that better life, because the industrial retrenchment necessary to maintain “a harmonious coexistence between man and nature” would undermine the CCP's dreams of economic supremacy,

⁸² Eg. Darrin Magee and Thomas Henning, 'Hydropower boom in China along Asia's rivers outpaces regional demand', *thethirdpole.net*, April 28, 2017: <https://www.thethirdpole.net/2017/04/28/hydropower-boom-in-china-and-along-asias-rivers-outpaces-regional-electricity-demand/>. Xinhua: 'Construction of World's Second Largest Hydropower Station Begins', *People's Daily*, 4 August 2017: <http://en.people.cn/n3/2017/0804/c90882-9251172.html>.

⁸³ National Energy Administration, "Total Energy Consumption in 2016 Increased by 5.0%" (2016 Nian quan shehui yong dian liang tongbi zenzhang 5.0%) 16 January 2017, http://www.nea.gov.cn/2017-01/16/c_135986964.htm. Gordon and Hove, 'How China Wastes Its Renewable Energy'.

⁸⁴ Coco Liu, "For China's Massive Data Centers, a Push to Cut Energy and Water Use," *Yale Environment 360*, 22 August 2016: <http://e360.yale.edu/features/for-chinas-massive-data-centers-a-push-to-cut-energy-and-water-use>.

⁸⁵ Manya Koetse, 'Another Hospital Scandal: Nanchang Doctor Asks Woman for More Money During Abortion', *What's On Weibo*, 12 April 2017, <https://www.whatsonweibo.com/doctor-asks-female-student-money-abortion>. Weibo has hosted numerous discussions of the horrors of China's capitalism-with-vengeance medical system since privatisation.

superpower status and Communist Party glory, while to encourage critical thinking in China's schools would open the floodgates to challenge the whole CCP narrative and its dubious claims for legitimacy. So instead, the party gives the masses more stuff, more bread and circuses, while producing this stuff is destroying the country and bringing the planet down with it. As many Chinese say today, "Who cares if we have the world's highest GDP if we can't live here?"

We all need to live better by consuming less and consuming rationally, fairly, and sustainably. Given the planet's desperate shape today, the only way humanity is going to survive this century is if developed countries and developing countries "contract and converge" our resource consumption around a sustainable global average that will permit all the world's peoples to live in acceptable material comfort while setting aside resources for future generations and for the other life forms with which we share this small blue planet.

Climate scientists tell us that given the failed promises, backpedalling, and soaring CO₂ emissions we now face a *climate emergency*. On present trends we're on course to a 4 to 6°C warming before the end of this century; if we don't radically suppress fossil-fuel burning over the next few decades to keep the warming below the 2° threshold, global warming will accelerate beyond any human power to stop it, and ecological collapse and the collapse of civilisation will be unavoidable. To have a chance of staying below 2°, the industrialised nations and China must cut carbon emissions by about 6 percent per year in order to reach a 90 percent cut in emissions by 2050 as compared to 2010.⁸⁶

Xi Jinping's government has promised to "flatten" its CO₂ emissions by 2030, to increase renewable energy's share to 20 percent, to introduce carbon taxes, and, most recently, to stop production and sales of fossil-fuel-powered cars in China. Climate scientists say this is too little and too late: China's emissions need not just to flatten but to "fall sharply" beginning *now* and keep falling by around 6 per cent per year through 2030 and beyond, whereas currently, they've resumed their long-term upward trend, growing by 3.5 percent this year.^{87 88}

⁸⁶ James Hansen et al., 'Assessing "Dangerous Climate Change": Required Reduction of Carbon Emissions to Protect Young People, Future Generations and Nature,' PLoS ONE 8(12), 3 December 2013: <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0081648>.

Ecofys, *WWF Report 2015: 'It's Time to Peak: Why China's Corporate Sector Needs to Set Ambitious Greenhouse Gas Reduction Targets'*, World Wildlife Federation, February 2015, 11, <http://www.ecofys.com/files/files/wwf-ecofys-2015-it-is-time-to-peak.pdf>.

⁸⁷ Brad Plumer and Nadja Popovich, 'Here's How Far the World Is from Meeting Its Climate Goals', *New York Times*, 6 November 2007, <https://www.nytimes.com/interactive/2017/11/06/climate/world-emissions-goals-far-off-course.html>.

⁸⁸ If China's economy keeps growing at its current annual rate of about 7 percent, its GDP will overtake America's in the 2020s to reach US\$38 trillion by 2030 (as against \$23.5 trillion for the US in that year with the US economy growing at 3 percent p.a.). Even if coal consumption continues to fall as a share of energy generation, tripling the GDP by 2030 is going to mean more coal consumption – a lot more – and a lot more oil and gas too. According to projections by British Petroleum (BP) and the IEA, China's coal and oil and natural gas consumption will continue to rise steadily, "notwithstanding the Paris agreement". China's coal-fired generation capacity is projected to grow by as much as 19 percent in just the next five years. China is closing down older inefficient plants, but then opening new plants. It's closing marginal coal mines, but coal production is still up 5 percent this year over last year, and coal imports are also growing. Steel production was up 1.2 percent in 2016 over 2015, and right now steel is at an all-time high in China. Same with aluminium. These metals are heavy consumers of coal.

Sources: PricewaterhouseCoopers, *The World in 2050*, February 2017, <http://www.pwc.com/gx/en/issues/economy/the-world-in-2050.html>.

Luo Guoping and Fran Wang, 'China Expected to Step Up Use of Natural Gas', *Caixin*, 18 August 2017: <https://www.caixinglobal.com/2017-08-18/101132543.html>.

Xi's government has promised to introduce a carbon tax. But this is just Potemkin environmentalism. Carbon taxes are just a sham to delay or avoid cutting emissions. They don't impose a cap on output, the cost can be passed onto consumers, and the companies can pose as good citizens contributing to the "solution". That's why lots of oil and even coal companies *support* carbon taxes: they're not looking to put themselves out of business.⁸⁹ In China the whole charade is manifestly fake: since the government that would be imposing the carbon taxes also owns the polluting power plants, steel and aluminium mills, auto plants, airlines, ship builders and shippers, it would just be taxing itself. If the government wants to keep those companies in business producing the coal, steel, aluminium, robots, telecom equipment, big data computers and servers, and more to fulfil the government's Five-Year Plans, build its Made in China 2025 industries and build the highways, rails, ships and ports, and telecommunications along the New Silk Road and the Maritime Silk Road, then it's going to have to "lend" the polluting companies the money to pay the carbon taxes. And so it goes.

Xi's widely hailed plan to replace gasoline- and diesel-powered cars with electric cars is another charade. Electric cars are only as clean as their power source. In China this is going to be mainly coal for decades to come. Official Chinese government projections as well as those by BP and the IEA all show fossil fuels supplying the bulk of China's electric power, at least 60 to 80 percent, from now through to 2050 – by which time it will too late to matter. That's why one study showed that for coal-dependent China and India, switching from gasoline-powered to electric-powered vehicles would actually result in *more* CO₂ emissions than if they just stick with the gasoline-powered cars they've got.⁹⁰

Contradictions abound: Xi wants to cut pollution but since he also wants China to be an "air travel superpower" he's ordering up 7,240 new, mostly Boeing, airliners over the next 20 years, worth \$1.1 trillion, the largest airplane purchase in history, so that he can distract millions of Chinese into pointless package weekend vacations like the Brits to Spain.⁹¹ The problem is, aviation is the fastest-growing source of CO₂ emissions in the world. And every gain in jet engine fuel economy is rapidly outstripped by production of ever more new planes. *So if we don't have a magic tech fix for this problem, the only way to suppress aircraft emissions is to stop flying them, ground most planes, shut down most aircraft production, and ration air travel.* That's what Xi, and we, would have to do if we want an "ecological civilization."

Or consider this: Cruise ships are by far the most polluting mode of tourist travel ever invented: Large ships can burn more than 150 tons of the filthiest diesel bunker fuel per day, spewing out more emissions, and massively more toxic emissions than *five million cars*. Imagine. And all this to ferry a few thousand boozy passengers about bashing coral reefs.⁹²

Institute for Energy Research, 'China and India Will Continue to Increase Oil and Coal Consumption, Paris Agreement Notwithstanding', 26 May 2017, <http://instituteforenergyresearch.org/analysis/china-india-will-continue-increase-oil-coal-consumption-paris-agreement-notwithstanding/>.

Fang Hao, 'Efforts to Cut Steel Capacity Not Working', *ChinaDialogue*, 3 February 2017, <https://www.chinadialogue.net/article/show/single/en/9642-Efforts-to-cut-steel-capacity-not-working>;

Bethany Allen-Ebrahimian, 'Chinese Steel Output Hits All-Time High', *Foreign Policy*, 19 July 2017, <http://foreignpolicy.com/2017/07/19/chinese-steel-output-hits-all-time-high/>.

⁸⁹ Richard Smith, 'Green Capitalism: The God that Failed', *Real-World Economics Review* 56 (2011): 131–33, <http://www.paecon.net/PAEReview/issue56/Smith56.pdf>.

⁹⁰ Smith, 'Green Capitalism', 119–22 and sources cited therein.

⁹¹ Zheng Xin, "Plane purchases expected to top trillion-dollar mark in 20 years," *China Daily*, September 7, 2017.

⁹² John Vidal, "The world's largest cruise ship and its supersized pollution problem," *Guardian*, May 21, 2016: <https://www.theguardian.com/environment/2016/may/21/the-worlds-largest-cruise-ship-and-its->

Five million is about the number of cars registered in Beijing today. Xi wants to replace those five million gasoline- and diesel-powered cars with five million electric cars in an effort to make Beijing a “beautiful city.” But as part of his vaunted “Made in China 2025” initiative, Xi’s government also announced that the State Shipbuilding Corp. in Shanghai is going to break into the global cruise ship market and begin building a fleet of Chinese cruise ships, one a year from 2019, and send 4.5 million Chinese out to sea by 2020.⁹³ One might reasonably ask Mr. Xi, “Why bother pulling the fossil fuel-powered cars off the road if you’re just going to replace their pollution with even dirtier pollution from ships – if your priority is to build an ‘ecological civilization’ as you say? After all, the atmosphere doesn’t care where the pollution comes from, only how much.” *Here again, since there’s no tech solution on the horizon, the only rational solution to this industry’s immense pollution is to shut it down, or in China’s case, forego building it altogether.*

China Dream, China Nightmare. Will the Chinese people stand up?

When all is said and done, the irreducible fact is that, in the absence of some miracle *deus ex machina*, there’s just no way to radically suppress China’s CO₂ emissions that’s compatible with continuing economic growth. Xi Jinping can create an ecological civilization or he can build a rich superpower. He can’t do both. As I’ve argued elsewhere, the only way to effectively meet the climate emergency we face is with an *emergency shutdown* of useless, superfluous, unnecessary and harmful industrial production around the world, but most particularly in China and the United States, the biggest polluters. The only way the Chinese can suppress greenhouse gas emissions by anything like what they need to do to would be to impose a drastic across-the-board economic contraction, including radical retrenchments and shutdowns of most of the industries that have been built up in the last four decades of market mania.⁹⁴ That sounds extreme, no doubt. But the 4 to 6° rise in temperatures that’s coming our way unless this growth is halted will be a lot more extreme. What’s more, if China were to retrench and shut down its unsustainable industries, then it would have to find or create new jobs for all those displaced workers. That’s a problem too. But unbreathable air, undrinkable water, toxic food, polluted farmland, the cancer epidemic, soaring temperatures, melting glaciers, collapsing agriculture and sinking coastal cities are bigger problems. The heat and drought and melting are already coming in China.⁹⁵ If the Chinese don’t organise a rationally managed retrenchment and shutdown of unsustainable industries, Mother Nature is going to shut those industries down for them and in a much less pleasant manner. There’s just no way around this very inconvenient truth: Making too much stuff has to stop; stopping it will

[supersized-pollution-problem](#). For example, each gallon of bunker fuel contains 3,500 times more sulphur than diesel for cars and trucks.

⁹³ Xinhua, “Chinese cruise industry enters golden decade,” *China Daily*, November 7, 2017. *Bloomberg*, “Cruise boom as millions of Chinese take to the seas,” May 14, 2017:

<https://www.bloomberg.com/news/articles/2017-05-14/cruise-ships-navigate-hostile-sea-beauty-pageants-to-lure-china>. Brenda Goh, “Chinese Shipbuilders Tap Rising Cruise Demand, Rattle European Rivals,” *Reuters*, 15 June 2017: <https://www.reuters.com/article/us-china-cruise-ship-analysis/chinese-shipbuilders-tap-rising-cruise-demand-rattle-european-rivals-idUSKBN1A92QU>.

⁹⁴ Smith, ‘China’s Apocalypse’. Also, Richard Smith, ‘Six theses on saving the planet,’ *The Next System Project*, 2016: <https://thenextsystem.org/six-theses-on-saving-the-planet>.

⁹⁵ “Blistering heat waves sweep across China”, *People’s Daily*, 13 July 2017: <http://en.people.cn/n3/2017/0713/c90000-9241298-5.html>. Fang Tian, “Over half of NW China’s glaciers could vanish in 50 years,” *People’s Daily*, 19 July 2017: <http://en.people.cn/n3/2017/0719/c90000-9243785.html>. Liu Qin, “Source of Mekong, Yellow and Yangtze Rivers Drying Up”, *Chinadialogue*, 3 August, 2017: <https://www.chinadialogue.net/article/show/single/en/9654-Source-of-Mekong-Yellow-and-Yangtze-rivers-drying-up>. Edward Wong, “Drought in Northern China is Worst on Record, Officials Say,” *New York Times*, 29 June 2017.

unemploy tens of millions of workers; and other, nondestructive, low-carbon jobs have to be found or created for them.

Can the Chinese find a way to grab hold of the brakes and wrench their locomotive of destruction to a halt before it's too late? Can China's suppressed but incredibly brave human rights activists, labour unionists, democrats, lawyers, environmentalists, and authentic socialists come up with a viable, ecologically sustainable, socially fair, and democratic eco-socialist alternative to Xi's state-capitalist drive to ecological apocalypse?

At the moment there's certainly no hint of any revolutionary threat from below in the consumerist delirium of urban China. But appearances can be deceiving in China as in all dictatorships and radical upsurges can appear out of nowhere without warning, as the communists are very well aware from their experience in 1989. That's why Xi Jinping finds it increasingly necessary to shut his internet off from the rest of the world, and to arrest and imprison democrats, feminists, trade unionists, book sellers, and even Hong Kong high-school students and force confessions out of them in Stalinist-revival show trials. But Xi's intensifying repression is less a manifestation of his strength than of his fear: The relentless worsening of China's ecological crisis and the growing tensions and contradictions in Chinese society are setting the stage of history for a radical shock: the next Chinese revolution.

When Mao Zedong proclaimed the establishment of the People's Republic from the balcony of the Gate of the Forbidden City on October 1, 1949, he declared that "the Chinese people have stood up". At the end of her harrowing documentary *Under the Dome*, documentary filmmaker Chai Jing said something no one else has dared say on China's police-state monitored media: she called on her fellow citizens to take action, to organize from below, to report violations of environmental laws, to stand up and demand change. "It's tens of millions of ordinary people", she says. "One day they say 'no'. I'm not satisfied. I don't want to wait. I'm not going to shirk the responsibility. I'm going to stand up and do something. I'm going to do it right now. At this moment. At this place".⁹⁶

It's time the Chinese people stood up again. The fate of their nation and the fate of the planet depend greatly on them.

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⁹⁶ See Steven Mufson, 'This documentary went viral in China. Then it was censored. It won't be forgotten.' *Washington Post*, 16 March 2015.