

OBSERVATIONS OF AN ILLITERATE LAW PROFESSOR: THE PEARL RIVER AND CHINESE TRAFFIC LAWS, AMONG OTHER IMPORTANT TOPICS

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INTRODUCTION^{**}

While I was in China, during the fall of 2010, I broke through a major technological barrier and wrote a series of blog entries reflecting on my experience of Chinese environmental law and policy. My blog topics included clothes drying methods, traffic rule enforcement, appliance

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instructions, walks along a river, and a boat cruise, among other mundane topics. How my blog entries relate to China or U.S. environmental law and policy are mostly an accident of me trying to connect my day-to-day experiences with my efforts to teach U.S. law and environmental policy to Chinese law students.

My hope is that this essay has synthesized those reflections into a somewhat useful set of observations, incomplete and anecdotal as they are; by an American law professor trying to understand the collective challenge to our planet that we all face. My ultimate conclusion is that the current course defined by our countries' respective leaders, a course that relies primarily on our two nations pursuing competing economic futures separately and without full regard for the environmental consequences, will not satisfy our obligation to pass a better world on to our children and grandchildren.

Before elaborating on this conclusion, I want to offer a disclaimer, more substantial than the official, and hopefully obvious, disclaimer below that my views are my own and not the State of Vermont's. This more important disclaimer follows: please do not allow the potential gloss of my former academic title or the Fulbright Scholarship to obscure the limited nature of my knowledge of China. While I have been carefully studying, observing, and reflecting on China's system of environmental law for the last few years, I know only enough to be confident that what I know is superficial and incomplete. The bulk of my learning, as a result of studying China's system, has really been to strengthen my understanding of the U.S. system of environmental law and policy. This is because teaching U.S. law required me to step back and consider principles including how our cultures and our laws have co-evolved. I was unable to come close to engaging in a similar analysis of Chinese law and policy.

In addition to considering my opinions, in light of my incomplete experience, it is generally wise to take anyone's theories about China with a grain of salt. If I have taken one lesson from my experience in China that is worth holding on to, it is that American students of China's legal system should maintain a healthy skepticism of any one person's opinions, no matter how well-educated that person may be. China is full of contradictions and is not easily reduced to one individual's set of assumptions. My experience of China was not and will not be the same as that of others who travel to or study China.

The reasons for these diverse experiences of China are easy to state, yet harder to comprehend unless you visit. China is a diverse place with a range of climates; differences in local and regional languages and cultures; and incredible and accelerating change over the past century. Due simply to the

pace of change, my experience of China last year, even if repeated in all particulars, could not be my experience of China at any other time.

A quick side story illustrates the pace of change in China. I recently had the opportunity to watch with a friend a slideshow of his experience in China in the mid-1980s, really not that long ago. On his visit, he toured many of the same major cities I visited. The contrast between the colorless streets then, filled with people in drab clothing riding old bicycles, and Chinese cities today, could not be more dramatic. My experience living in Guangzhou is telling. Guangzhou is a dense, bustling city of fifteen million people with a modern and complex transit system, which did not exist fifteen, or perhaps even ten, years ago. Guangzhou has electronic flashing billboards; neon lights; and all of the other trappings of any major developed city in the West. This experience alone drives home the pace of change in China, and illustrates the level of difficulty associated with trying to guess where China will be in ten or fifteen years from now.

With my disclaimer in mind, and with hopes that anyone reading this will thus be skeptical of my views, I intrepidly add another conclusion for your consideration in support of the opening volley in the first paragraph of this essay: If China does not rapidly develop a system of environmental law and policy, in time to catch up with, manage, and reverse the environmental and human health harms resulting from its highly accelerated pace of economic development, then the efforts of the U.S., Japan, and Europe to find an equilibrium in which they achieve ecological sustainability while maintaining current standards of living will be for naught. Without a change in China's system of environmental law and policy, all of our efforts to find new ways to reduce pollution and waste in the West, including lowering greenhouse gas emissions and finding more ecologically sustainable ways to live on the landscape, will not matter. Chinese economic development policies have already caused massive and profound disruptions to China's natural systems as well as widespread impacts to the health of China's citizens. So amazing and rapid is China's economic growth, however, that the ecological and public health of the entire globe is now at risk if China's economic development policies do not change.

As I write this, the U.S. Congress and U.S. President are locked in a showdown over whether to raise the debt ceiling to allow greater U.S. borrowing. In addition to reflecting a shifting global economic paradigm involving China as a major, if indirect, player, this debate mirrors a global debate between the developed and the developing nations over climate change. China, firmly in both, yet neither in the developed nor the developing category, has chosen to side with the developing nations. Thus positioned, China argues that it should be given the time and flexibility to

pursue economic policies that would allow it to obtain the same economic opportunities for itself as the developed nations have already achieved. Adding to the climate debt, argues China, is justified because it will allow China to climb out of poverty. “Economic development now, environmental protection later” has long been both the official and unofficial mantra of China’s leadership at all levels.¹ China can pay back its climate and ecological debt later, goes the argument, when it has fully developed.²

The U.S., in contrast, argues that the collective climate debt levels are too high already, and that we risk global climate catastrophe unless major developing economies like China make substantial commitments to reduce greenhouse gas emissions.³ Fearing that unilaterally reducing greenhouse gas emissions will leave it at a competitive disadvantage, the U.S. demands that China take more aggressive steps to curb its emissions as a prerequisite to U.S. commitments.⁴ This debate shows no signs of being resolved, leaving us on a dangerous trajectory of continuous increases in greenhouse gas emissions at a time when experts are saying we need to go in the other direction.⁵

The lesson I have taken from the global climate debate between the U.S. and China is that the leadership of both countries are either foolish and not worried about climate change, or are locked into political systems that do not have the capacity to overcome the political imperative to allow mostly unmanaged economic development. Like the partisan fight over the debt ceiling in the U.S., the core argument over climate and carbon emissions is not driven by a desire to increase our debt. No one wants more

1. See CHARLES R. MCELWEE, ENVIRONMENTAL LAW IN CHINA: MITIGATING RISK AND ENSURING COMPLIANCE 6 (2011) (discussing how China’s leadership values economic development over environmental protection).

2. *Id.* at 6 n.15 (suggesting that China will continuously fail to implement environmental regulations so long as the pursuit of high economic growth is the government’s goal).

3. See Barack H. Obama, President of the United States of America, Remarks by the President at United Nations Secretary General Ban Ki-Moon’s Climate Change Summit (Sept. 22, 2009) (transcript available at http://www.whitehouse.gov/the_press_office/Remarks-by-the-President-at-UN-Secretary-General-Ban-Ki-moons-Climate-Change-Summit/) (presenting the risk of global climate change resulting from putting economic interests over environmental and challenging developing nations to reduce their impact).

4. See George W. Bush, former President of the United States, President Discusses Global Climate Change (June 11, 2001) (transcript available at <http://georgewbush-whitehouse.archives.gov/news/releases/2001/06/20010611-2.html>) (suggesting that the United States will not commit to the Kyoto Protocol requirements to reduce greenhouse gas emissions if China is exempt from the Protocol’s requirements).

5. See Dale Jamieson, *The Post-Kyoto Climate: A Gloomy Forecast*, 20 GEO. INT’L ENVTL. L. REV. 537, 551, 558 (2008) (predicting difficulty in global governance and resolution of the global climate debate).

debt, whether in the form of national monetary debt or greenhouse gases emitted into the atmosphere. The core argument is over whether the economic status quo, in which the West is dominant, will continue. China is determined to upset that apple cart. The U.S. is hunkering down during a period of significant recession.

More than our respective economies, however, hang in the balance. Wise people in both nations recognize the risk to our environment and realize that the quality of our lives depend upon more than just gross national product. Some of those people have started to talk to each other, across the Pacific Ocean and a wide chasm of language, culture, and history. Whether we, as a global community, can envision and achieve a way to live on the planet such that we reduce greenhouse gas levels in the atmosphere, lower levels of waste and pollution, use natural resources at a sustainable rate, and protect and restore ecological health depends upon our leaders joining this discussion.

The following reflections, gleaned from my experiences in China, are intended to reinforce this conclusion.

I. READING CHALLENGED

The first step in joining a discussion with China about solving environmental challenges is to acknowledge another significant problem—a lack of shared fluency in language, history, and culture. For Americans, the problem is particularly acute, given our tendency to view our own culture, language, and history as the central narrative of modern history for the entire globe. We Americans can be justifiably proud of our stable democracy and the prosperity that we have achieved. Yet, if we do not take the time to understand countries like China, we will miss a critical opportunity to adapt to the modern realities of a global economy and the chance to share in the protection of the global environment. China can and wants to learn from us, but we need to be prepared to learn from China as well.

On China's end, communications are clouded by decades of propaganda about America and an equal dose of nationalistic sentiment. For younger Chinese in particular, the myths are fading rapidly due to modern communication systems and the dramatic increases in openness to exchanges with the West, despite intense censorship. Nevertheless, Americans risk further inflaming nationalist tendencies in China if we do not enter into conversations with an appropriate level of humility. A good start would be for us to invest in providing the next generation of American citizens with an understanding of Chinese language and culture.

When I first arrived in China, I felt my inability to understand the Chinese language, written and spoken, acutely. This was a problem that was reinforced daily. Whether operating the small washing machine in our apartment or playing a movie on our DVD player, I was reduced to randomly pushing buttons. When I went to the market, I was frequently unsure whether I was buying dish detergent or cooking oil. The list of information that was inaccessible to me, without help, included everything written.

If not for the help of translators, I would have been challenged to get through the chores of daily living. Even with translation it was possible to go astray. Chinese and English are both challenging, somewhat temperamental languages, and they do not match up easily. Some of the translations of public signs I have encountered in China take a little time to sort out. “Watch out knockhead” on a low doorway is one I enjoyed on a foray into a Chinese building.

So, if I struggled to negotiate the language of daily living, how was I possibly going to manage to comprehend Chinese law? Law is, after all, dependent upon knowledge of language. Court decisions frequently turn on nuanced interpretations of words and phrases. Legislators spend large amounts of time and energy attempting to negotiate the language of statutes. Agencies frequently create new meanings for words in the course of administering programs. As one of my law school professors, David Firestone, is fond of pointing out, if you ignore a word in a statute because you do not understand what it means, you are probably committing malpractice.

Translating the words of Chinese law into American terminology is particularly challenging. A couple of years ago, Professor Jerome Cohen of New York University spoke at Vermont Law School on the topic of translation in the context of understanding Chinese law.⁶ His lecture, entitled “Lost in Translation: Is a Chinese ‘Judge’ a Judge?,” raised the importance of this issue for those who would try to understand Chinese law.⁷ He described the important differences between Chinese and U.S. judges; differences that go to the heart of our respective legal systems.⁸

Another scholar of Chinese law, Daniel Guttman of Johns Hopkins University and currently a visiting scholar at several Chinese universities,

6. Jerome A. Cohen, Adjunct Senior Fellow on Asian Studies, Council on Foreign Relations, *Lost in Translation: Is a Chinese “Judge” a Judge?*, Vermont Law School Waterman Lecture (Oct. 16, 2008) (DVD of lecture available by request from Vermont Law School Cornell Library).

7. *Id.*

8. *Id.*

has also written and lectured on this challenge.⁹ Professor Guttman cautions any who would purport to travel through Chinese law to tread carefully.¹⁰ In one article about environmental law, he even questions whether Chinese lawyers would have the same understanding of the word “law” held by U.S. lawyers.¹¹

After living in China and experiencing firsthand how foreign the written and spoken languages are to a native English speaker, I have a new appreciation for the admonitions of these distinguished scholars of Chinese law. One consequence of this appreciation was my effort in my classes with Chinese students to spend time discussing the meanings of the words I use in explaining U.S. law—I did not assume that my understanding of what the words “law” or “judge” equated to that of my students. Another consequence was my practice of listening carefully and asking many questions of my Chinese colleagues during our discussions of public interest and environmental law. I quickly learned that my first understanding of what Chinese scholars meant was not always the correct one.

One important step for me was to learn more patience in communicating and to ask many questions. I suspect that this approach might be useful in the context of climate negotiations as well. Perhaps our best long-term solution, one being pursued by an increasing number of universities and graduate schools—including Vermont Law School—is to invest heavily in a new generation of leaders and problem solvers who are fluent in Chinese culture, history, and language.

II. PEACE FOR THE PEARL?

Communication challenges aside, the scope of environmental problems we read about in American media are not exaggerated. If anything, the full breadth and impact of China’s economic transformation will not be known for many years. One way in which I began to understand the nature of the environmental challenges in China was by dealing with the constant and unavoidable air pollution—the ambient air quality in every Chinese city I visited was terrible. I have visited every major city in the U.S. and have

9. See e.g., *Daniel Guttman*, THE HALLE INSTITUTE, <http://halleinstitute.emory.edu/events/speakerseries/guttman.html> (last visited Oct. 7, 2011) (lecturing on the referenced topic).

10. Daniel Guttman, *Different Operating Systems*, THE ENVIRONMENTAL FORUM, Nov./Dec. 2008, available at <http://www.epa.gov/ogc/china/guttman.pdf>.

11. See *id.* (emphasizing how it is necessary to be careful researching Chinese law because of inaccuracies in translation between English and Chinese).

observed some of the worst smog that Houston and Los Angeles have to offer—yet, on their worst days, those cities could not equal the typical poor air quality in a modern Chinese city.

Another way I experienced the environmental challenges that China is facing was in my daily walks along the Pearl River. The Pearl River (“Zhujiang”), just beyond the North Gate of the South Campus of Sun Yat-sen University, is ancient and serene. Here, the river has mostly made the transition from an estuary to a river, but it is still tidally influenced and broad, with many channels through the city. This part of the river is considered to be the upper part of the Pearl River Delta (“Zhujiang Sanjiaozhou”), one of China’s leading manufacturing regions.

Every weekday morning and afternoon, I walked along the tree-lined walkway that has replaced the riverbank as I shepherded my two oldest children to and from the school bus that transported them to their middle and high school. Their bus stop was a thirty minute walk from our apartment. All along my walk, people danced, practiced martial arts, bicycled, sang, strolled, exercised, and did calligraphy. The calligraphy was particularly entrancing—the Chinese characters they painted were exquisite and temporary, since the artists used only water for their ink and it soon evaporated in the heat. Often, there was a pleasant breeze. My walk would have been an entirely peaceful experience except that I knew more than I wanted to about the river’s condition. The Pearl is not a river at peace.

Many afternoons, great thunderstorms came through in bursts of sideways downpours that shredded my cheap umbrellas. Most everyone disappeared from the streets and sidewalks, and the river churned in the gusts of wind. The thrashing trees would warn me that I also needed to look for shelter. I sometimes made it to the bus stop and would squeeze in under the plastic canopy with a cast of many others—business folk, laborers, students, even a few waiting to catch a bus. Such rains are part of the ecology of this region and should be an important contributor to the natural ebb and flow of the river’s life. In a way, the rains did help. After the rain, the dust and smog was washed away and the sidewalks and streets were clean.

The streets were clean, but the river was not. The sewers frequently overflowed during the heavy afternoon rains. It was a disturbing sight to see murky water gushing out of the sewers and I went to some lengths to give flooded streets a wide berth. The river was always full of sediment, but it gained a persistent sheen of oil after the rain where the canals and storm sewers connected. Much of the litter in the streets and sidewalks appeared to make its way into the river. Special city trash collection boats cruised along and collected debris floating in the river, accumulating large piles in

their hulls. The remainder headed out to sea, perhaps to end up in the ever-growing and floating mats of plastic flotsam and jetsam accumulating in the Pacific Ocean.

According to recent news reports, Guangzhou has invested roughly forty-nine billion yuan since 2008 (approximately nine billion U.S. dollars) in building thirty-eight new sewage treatment plants to collect and treat the city's waste.¹² The goal of this effort was to clean the river up before the Asian games in the fall of 2010.¹³ The Mayor of Guangzhou said he wants to return the river to a swimmable condition.¹⁴ He braved the pollution and went for a swim himself in the river while I was there, garnering much local publicity. (I am not certain how much publicity Governor Shumlin would get for swimming in our Vermont rivers, but it might be worth a news clip on the second page of the local news section).

While this investment of money and political capital has not returned the river to levels of quality that folks here recall as recently as the 1970s, this work has somewhat improved the river.¹⁵ On my river walks, I have seen large fish feeding at the surface and I have observed people catching fish from the river—alive, but likely full of toxins. Still, I fear that the city has far to go to make any significant improvement in the ecology of the river.

As quickly as the city is constructing sewage treatment capacity, new construction is adding population and creating more discharges. Some new apartment buildings appear to discharge sewage directly into canals flowing into the river. There is new construction in every direction and no visible effort to reduce or control construction or urban runoff. The people I have met who have lived in Guangzhou over the past three decades say that the city is almost unrecognizable due to its rapid growth. Combined with the additional facts that Guangdong Province is a major manufacturing center with many factory discharges and limited water pollution enforcement

12. Cai Cai, *Guangdong Special: Guangzhou Water and Air Clearing as Games Draw Near*, CHINA DAILY, Oct. 19, 2010, http://www.chinadaily.com.cn/cndy/2010-10/19/content_11426350.htm.

13. *Ritual and Reality*, CHINA DAILY, July 21, 2007, http://www.chinadaily.com.cn/cndy/2008-07/21/content_6861969.htm.

14. Zhan Lisheng, *Guangzhou Preparing for Latest 'Swimathon'*, CHINA DAILY, July 3, 2007, http://www.chinadaily.com.cn/cndy/2007-07/03/content_908361.htm.

15. *See Guangzhou Mayor Leads Mass Swim in Polluted River*, REUTERS, July 15, 2007, <http://reuters.com/article/2007/07/15/idUSHKG90593> (mentioning recent construction of waste water treatment plants on the Pearl River).

resources to apply or compliance incentives to offer, this presents significant challenges for the government in its efforts to recover the river.¹⁶

Still, the river has not stopped flowing, as is its nature, and, as long as it flows, it can begin to heal. In the U.S., we have learned that aquatic ecosystems can begin to return to a more natural state and to recover, at least partially, from even major human insults.¹⁷ I find it hopeful that there appears to be a growing public interest in helping the Pearl River return to a swimmable and fishable state in Guangzhou. I have observed that the river is clearly part of the life and history of this great city and it could become a legacy of modern Chinese leadership if they continue current efforts. My greatest hope is that the Chinese government—national, regional, and local—will recognize both the intrinsic value of resources like the Pearl River, as well as the potential for these ecological resources to provide substantial economic benefits while reducing public health hazards. In Vermont, we have collectively realized the value of resources like Lake Champlain, even as we are arguing about how best to protect it.

III. CABS AND COMPLIANCE

If the pollution problems on the Pearl River, or on any river in China, are to be addressed, then there will have to be some kind of accountability for those companies that do not see that it is in their self-interest to invest in pollution control or reduction. The challenge of creating a system to ensure accountability in China is more difficult to overcome than it might first appear. China has adopted many of the trappings of western environmental law, along with the accompanying regulatory systems, including national, provincial, and local environmental protection agencies.¹⁸

When I first began discussing environmental enforcement with Chinese judges, regulatory agency heads, and prosecutors, I assumed that they had everything they needed for an effective enforcement system except the political will. I remain convinced that the will of the leadership is often lacking due to local economic protectionism, but even where the desire of government agencies to enforce is present, they are up against a culture that

16. Zheng Caixiong, *Pollution Takes Toll on Health in Guangdong*, CHINA DAILY, Dec. 11, 2009, http://www.chinadaily.com.cn/china/2009-11/12/content_8953801.htm.

17. U.S. ENVTL. PROTECTION AGENCY, PUB. NO. EPA 841-F-00-003, *Principles for the Ecological Restoration of Aquatic Resources* (2007), available at <http://www.epa.gov/owow/restore/principles.html>.

18. See Wang Canfa, *Chinese Environmental Law Enforcement: Current Deficiencies and Suggested Reforms*, 8 VT. J. ENVTL. L., 159, 161 (2007) (suggesting reforms for China's environmental regulatory scheme).

views law enforcement differently than we conceive of it in the U.S. The challenge of enforcing environmental laws in China involves more than simply putting a system for enforcement in place. I got a glimpse of this challenge from observing traffic in China.

My son Isaac was almost flattened by a car one day while crossing the street outside of the South Gate of Sun Yat-sen University. The light changed, the pedestrian walk signal came on, the cars stopped at the intersection, and he stepped out into the street. At that moment, a small gray minivan drove around all of the stopped cars and sped through the intersection in the wrong lane at a high rate of speed. I yelled, Isaac stopped, and the minivan zipped past without hitting him. So, we all lived to add another story to our ongoing conversation about traffic in Guangzhou.

It was not just my family that complained about the traffic in China. Most people, Chinese and non-Chinese, with whom I interacted in Guangzhou and Beijing complained about the traffic. You might note that this is true in most cities. Certainly, complaining about traffic has been the norm in U.S. cities I have visited, such as Boston, New York City, Washington, D.C., or Seattle. So, maybe the fact that China's largest cities have traffic congestion and that people complain about it does not qualify as a particularly surprising or insightful observation. Still, some aspects of the traffic in China are unquestionably different. For starters, few drivers here pay any meaningful attention to traffic laws. Chinese taxicabs (*chu zu che*) press the limits of the traffic laws most of all. I found myself wondering why this is so, and what kind of governmental response would cause cab drivers in China to change their behavior.

You may reasonably ask what taxicabs and their compliance with traffic laws might have to do with environmental law. The link for me is simple—understanding whether and why people comply with traffic laws (or do not) could serve as a ready source of information about how people react to governmental restrictions on their behavior in other areas of the law, including environmental regulation.

A popular theory regarding the persistent and growing environmental problems in China is that the government is not enforcing the environmental laws already on the books.¹⁹ Both Chinese and non-Chinese scholars have opined that this is so.²⁰

19. *Id.* at 159.

20. *See e.g.*, Canfa, *supra* note 18 (noting how China's environmental laws already in existence are abundant, but not being properly enforced); *see also e.g.*, *Experts: Elizabeth Economy*, COUNCIL ON FOREIGN RELATIONS, <http://www.cfr.org/experts/japan-china-taiwan/elizabeth-c-economy/b21> (last

I am inclined to agree. Perhaps failure to enforce is the fundamental problem which needs to be addressed by the Chinese government. Perhaps manufacturers in China would stop polluting the air and water in China if the existing pollution laws were enforced. Perhaps the cab drivers in Guangzhou would all stop at red lights, stay within the speed limit, go the proper direction on one-way streets, and stop for pedestrians in crosswalks if the Chinese police enforced the traffic laws. Perhaps the best solution to environmental pollution in China would be for the Chinese government to simply increase the level of enforcement resources committed to regulating polluters. It is hard to imagine that such a strategy would not make an important difference and I shared and will continue to share that perspective in furtherance of that goal.

On the other hand, I have spent my career enforcing environmental laws in the U.S. and I have concluded that compliance with laws is more complicated than a simple equation. It would be ideal if [Law] plus [Enforcement] equaled [Compliance]. However, other significant factors come into play. Does the regulated community understand the law? How easily can the government measure and track compliance with the law? Does compliance with the law actually translate into meaningful environmental benefits? Are the consequences of failing to follow the law clear and are those consequences severe enough to outweigh the benefits of violating the law? Is there any social stigma associated with violating the law? And, perhaps most importantly, what incentives do government officials responsible for enforcing the law have, given that punishing people or companies that provide services, create jobs, and pay taxes inevitably creates a political backlash?

Embedded in many of these questions is the underlying question of whether the law reflects, or has the potential to drive, social norms of behavior. If a law is too far outside the bounds defined by social norms, attempting to enforce it becomes futile. There are many examples of U.S. laws in several jurisdictions that are not enforced. Perhaps too few in China care that taxis ignore red lights and run pedestrians and bicycles off the road. Perhaps too few care that the water, air, and soil are being polluted. If so, Chinese officials would do well to work to raise public awareness of these problems.

Another significant question in China is even more fundamental to the question of how to enforce; namely, what is the law that matters? Is it the

visited Dec. 4, 2011) (positing that China's environmental rule of law is ineffective due to lack of proper enforcement and adherence).

statute prohibiting water pollution, or is it the five-year plan recently handed down by the national government and translated into provincial and local plans? In China, the five-year plans may guide the actions of government officials more than statutes because the likelihood of those officials being promoted depends upon meeting the goals in those plans.²¹ Chinese citizens appear to know the difference between those laws that matter and those that do not. Until traffic law compliance becomes part of the metric by which local traffic officers are judged, keep a firm hand on the wrist of your children when you cross the street in Guangzhou.

IV. LOOKING BACKWARDS TO THE FUTURE

While in China, two experiences caused me to ponder the importance of understanding where we have been—even as we look forward—in my efforts to comprehend possible solutions to China's environmental challenges. The first experience was an article by my former colleague Professor Don Kreis, who took some shots at the organizers of one of Vermont's venerable traditions, the Tunbridge World's Fair.²² In Professor Kreis's opinion, the fair has excessively glorified the past through exhibits involving reenactment of early Vermont life and has failed to confront the fact that life in the early days of Vermont was mostly about surviving tough winters and enduring grinding poverty.²³

Through the miracle of the internet, I came across this article while trying to keep up with the exploits of my colleagues back home. As a long-time customer of the fair, I was affronted by the critique. (How can you criticize any event that offers farm animal exhibits, pie contests, carnival rides, ice cream stands, and a beer tent?) Perhaps more importantly, I was energized to examine what it is about the depictions of historic, rural Vermont life that I find compelling. That examination led me to ask what we may be losing in China's rapid advance into the future that might be a part of the puzzle for solving our shared environmental dilemma.

The second experience was my participation in a series of presentations by U.S. Environmental Protection Agency Administrator Lisa Jackson

21. See John Copland Nagle, *How Much Should China Pollute?*, 12 VT. J. ENVTL. L. 591, 624 (2011) (commenting on the weaknesses of China's environmental enforcement structure).

22. Don M. Kreis, *Personal Essay: A Contrarian View of the Tunbridge World's Fair*, VTDIGGER.ORG, Sept. 24, 2010, <http://vtdigger.org/2010/09/24/personal-essay-a-contrarian-view-of-the-tunbridge-world-s-fair/>.

23. *Id.*

during her visit to Guangzhou.²⁴ The theme of her main presentation highlighted the past “Thirty Years of Cooperation with China.”²⁵ The Administrator’s presentation, upbeat and encouraging, was intended to send the message that the U.S. is hoping to continue to address shared environmental problems in the spirit of cooperation with China’s, government.²⁶ For my part, I could not help but find irony in the theme, given the widespread environmental damage that has occurred in China over the past thirty years. Yet, there can be no question that Administrator Jackson’s choice to spend time in China, and any continued work by the EPA to maintain relationships, is time well spent. We must collectively do better in the next thirty years.

A. In With the Old

Looking backward to find historic lifestyles in China as part of an examination of new solutions is not simple. I was unable to find the Guangzhou version of the Tunbridge World’s Fair exhibits demonstrating older traditions of living. Guangzhou is, like much of China, busily erasing all vestiges of its older neighborhoods and communities, replacing them with gleaming skyscrapers and apartment buildings. One consequence of living in a city of fifteen million people in China, at a time when the rate of technology production—not to mention consumption—was and is increasing at such an astonishing rate, is that I could not help but evaluate the upsides and downsides of all of the new buildings, cars, and the vast array of other fancy new machines and gadgets that surrounded me. Guangdong Province is, as reported in the *China Daily*, a model for the rest of China.²⁷ So, while living in the apparent model city for the rest of China, I found myself wondering if this is the right future to imagine. Or, perhaps, some of what was and is being bulldozed, discontinued, and thrown away should be kept.

24. See 30 Years of Cooperation: EPA Administrator Mission to China, EPA.GOV, available at <http://www.epa.gov/international/regions/Asia/china/mission2010.html#water> (outlining the itinerary of Administrator Jackson’s mission to China).

25. See Lisa P. Jackson, Administrator, Env’tl. Prot. Agency, Remarks at Sun Yat-sen University Town Hall, (Oct. 12, 2010), (transcript available at <http://yosemite.epa.gov/opa/admpress.nsf/0/9483e4d06341659c852577ba0047f39d?OpenDocument>) (official statement of Administrator Jackson’s remarks at Sun Yat-sen University).

26. See *id.* (recognizing a long history of U.S.-China cooperation on environmental issues and the need for the next generation to build on that tradition).

27. See Chen Hong, *President Hails Shenzhen SEZ a World “Miracle,”* *China Daily*, Sept. 7, 2010, at 3 (reporting that Shenzhen SEZ grew from a village to a “city of global clout”).

This concern about whether technological advances are all that they appear to be is an old debate. In full disclosure, I tend to fall into the Luddite end of the spectrum. That does not mean, however, that I do not rely on trains, planes, and automobiles to travel. I have a cellular telephone. I use a computer. I have, nonetheless, chosen to actively engage in resolving the tension between my lifestyle, relying as I do on many modern technological conveniences, and my professed values.

The mere fact that I, most Americans, and a rapidly increasing number of Chinese, drive cars, use electronics, buy mass-produced goods, including food produced in an industrial system of agriculture highly dependent upon petro-chemicals, is not a reason to refrain from engaging in a self-critical analysis of other possible lifestyles or a simpler future. That is, the fact that I have adapted to the world as it is today does not mean that I am stuck living the same way in the future. Part of my interest in spending a year in China was to have the chance to look at myself, my life, and America through a different lens.

Further, and importantly, looking to the past for answers is a perfectly sensible endeavor. Our species lived for many thousands of years without the benefits of the technologies of the past century, and did so without the massive destruction of natural resources and global climate alteration that we are currently experiencing. It is possible, even in dense urban settings, to dramatically change our lifestyles so that we consume far fewer resources. China, for all of its environmental problems, is actually proof of this fact. The average Chinese person consumes far less than the average American.²⁸ I assume that changing our lifestyles will require more work by all of us, and a loss of daily conveniences. More work does not, however, translate into a poorer quality of life.

For example, in Guangzhou, as far as I can tell, nearly every person hangs their clothes out to dry. The balconies of most apartment buildings are festooned with clothes of every color. Hanging clothes out to dry turns out to be the kind of activity that millions of city dwellers in Guangzhou can absorb into their schedule and still find time to contribute to the single-fastest growing economy in the world. We could learn from this in the U.S. and save at least a few watts of electricity by doing without dryers. We could also get around quite easily on bicycles if we adopted the mode of urban living enjoyed by most, if a dwindling number, of Chinese.

28. See Jared Diamond, *What's Your Consumption Factor?*, N.Y. TIMES, Jan. 2, 2008, <http://www.nytimes.com/2008/01/02/opinion/02diamond.html?pagewanted=print> (noting that per capita consumption rates in China were 11 times below American consumption rates in 2008).

Ironically, as China looks to the future, they see these behaviors as the past, and the lifestyles of Americans as the future. Given the number of people in China and elsewhere across the globe who look to the American lifestyle as a model, we have to be willing to rethink whether our model is really all that ideal. I shudder to imagine the number of new coal plants that will be required if the Chinese all shift to drying their clothes in electric dryers. We are just beginning to experience the geopolitical consequences of China's rapidly growing thirst for oil in response to the fact that every person in China now wants to drive a car American style—the bigger the better.

We all naturally look to new technologies, not old ones, as the means to a better future. In his article, Professor Kreis recalls the sparkle of the 1939 New York World's Fair and General Motors' Futurama exhibit as the kind of vision that guided Americans then.²⁹ His article asks us to look to that model of imagining as a better way of building our future because he finds this kind of thinking more hopeful than looking to our past.³⁰ It is instructive, perhaps, that it was a Detroit car company that was defining America's future in the Futurama exhibit, presumably based on a future that would benefit General Motors' shareholders.³¹ That kind of thinking has, in large part, led us to the mess we find ourselves in today. If we have learned anything from Detroit car companies, it is that relying on corporations to define our future with the products they sell is a dicey proposition. We have let large corporations with promises of the good life offered by new technologies describe and limit our future for too long. New, bigger, faster, and shinier is not always better. A careful examination of our past may provide important clues to how we can live in the future.

If we want a livable future in a safe world, then America must work with China (not to mention India and Brazil and other developing nations) to define a new way of living that does not depend upon the General Motors kind of vision, or any vision so heavily dependent upon burning coal and oil, or splitting atoms. To do so, we need not and should not throw away our modern knowledge and all of the benefits that this knowledge has provided. Doing so would raise a host of other moral questions. There are still many millions of women who spend most of their days hauling water and washing clothes by hand, families who heat with wood and breathe the smoke in return for keeping the mosquitoes at bay, and children who suffer

29. Kreis, *supra* note 22.

30. *Id.*

31. *Id.*

from preventable waterborne diseases.³² These circumstances cannot be our vision of the future.

Today, many millions of laborers work under appalling conditions to produce the technologies that Americans use to make our lives more pleasant.³³ These technologies consume dramatic amounts of electricity from the grid created during America's era of modern prosperity.³⁴ Also, most of the people suffering the poor working conditions associated with making all of the new stuff we buy are not living and working in the U.S.³⁵ Many of the workers producing these technologies are right here in Guangdong Province, busily producing the goods you and I use every day.³⁶ The conditions of their workplaces, while improving, are not yet sufficient and cannot serve as our vision of the future any more than the circumstances associated with the deep poverty of rural and undeveloped communities without access to electricity can.

Advocating for an examination of a future that includes the use of technologies and lifestyles from our past does not mean that we are dooming people in developing countries to a life of misery, nor that we are forcing developed nations to return to those conditions. We do not have to

32. See WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation, *Progress on Drinking Water and Sanitation, 2010 Update*, <http://www.unicef.org/media/files/JMP-2010Final.pdf> (citing surveys from 45 developing countries showing that women usually collect the water in households without a drinking water source); see Anette Prüss-Üstün, Robert Bos, Fiona Gore & Jamie Bartram, *Safe Water, Better Health* (2008), http://whqlibdoc.who.int/publications/2008/9789241596435_eng.pdf (stating that most cases of diarrhea worldwide are attributable to unsafe water, inadequate sanitation, or insufficient hygiene); see also WHO, Public Health and Environment Department, *Health in the Green Economy: Co-benefits to health of climate change mitigation*, http://www.who.int/hia/hgebrief_henergy.pdf (asserting that an estimated 3 billion people could gain dramatic health improvements by replacing existing biomass and coal stoves with cleaner fuels) (last visited Dec. 4, 2011).

33. See e.g., David Barboza, *Apple Cited As Adding Pollution to China*, N.Y. TIMES, Sep. 1, 2011, http://www.nytimes.com/2011/09/02/technology/apple-suppliers-causing-environmental-problems-chinese-group-says.html?_r=1&scp=1&sq=working%20conditions&st=cse (noting that Apple admitted that 137 workers in Suzhou were seriously injured from a toxic chemical used in making the iPhone).

34. See U.S. Energy Information Agency, *Share of Energy Used by Appliances and Consumer Electronics Increases in U.S. Homes*, March 28, 2011, <http://205.254.135.24/consumption/residential/reports/electronics.cfm> (stating that the share of residential electricity used by appliances and electronics in U.S. homes has nearly doubled from 17 percent to 31 percent over the past three decades).

35. See Congressional Budget Office, *Factors Underlying the Decline in Manufacturing Employment Since 2000*, (December 23, 2008) <http://www.cbo.gov/ftpdocs/97xx/doc9749/12-23-Manufacturing.pdf> (noting the decades-long decline in American manufacturing).

36. See HONG KONG TRADE DEVELOPMENT COUNCIL, *Market Profiles on Chinese Cities and Provinces*, Nov. 2008, <http://info.hktdc.com/mktprof/china/mpgud.htm> (reviewing Guangdong's high contribution to China's manufacturing of electronic products).

adopt all of the old technologies and ways of living, but some of them may help us achieve our quality of life without destroying the planet and without taking more than our share of the planet's resources. Practices such as using pedal power to run a sharpening stone, operating a hand-turned cider press, growing herbs and vegetables in a kitchen garden, knitting sweaters, building and repairing furniture using simple carpentry tools, all of the wonderful crafts and tools demonstrated at the Tunbridge World's Fair, may offer a vision of the past that, in turn, provides a key to our future.

B. The Next Thirty Years

In October 2010, while I was teaching at Sun Yat-sen University, U.S. Environmental Protection Agency (EPA) Administrator Lisa Jackson held a town meeting in Huashi Hall, a beautiful, old building on campus. It was a fun experience to be surrounded by students with their obvious interest and excitement in engaging with a high-level U.S. official.

The title of Administrator Jackson's presentation was "30 Years of Cooperation with China."³⁷ It is tempting to launch off this title into a reflection regarding whether enough progress sufficient to warrant an anniversary celebration was actually achieved for the environment in China in the past thirty years. It is enough to note simply that, given the state of the environment in China today, whatever has transpired in terms of cooperation between the EPA and Chinese environmental agencies over the past three decades should not serve as the model for addressing China's environmental issues in the future.

Perhaps looking for a better model, and to avoid aggravating the diplomatic tensions that would inevitably be associated with a more backward-looking reflection, Administrator Jackson focused on the future challenges for both countries.³⁸ She did a good job identifying a number of challenges in China including climate change, air and water pollution, toxic pollution, and electronic waste. She also discussed a topic that is the focus of the Vermont Law School program in China: "building strong environmental institutions and legal structures."³⁹

After her presentation, the Administrator took a series of questions from the students and faculty. The questions were tough, with a touch of Chinese pride, and the experience must have seemed to the Administrator a bit more

37. *30 Years of Cooperation*, *supra* note 24.

38. Jackson, *supra* note 25.

39. *International Programs: EPA's International Priorities*, EPA.GOV, <http://www.epa.gov/international/topsix.html#build> (last updated April 4, 2011).

like a press grilling in Washington, D.C. than a diplomatic effort to build relations with China at a far-flung Chinese university. In spite of this, she acquitted herself well. In response to the students' grilling, Administrator Jackson noted with appropriate humility that the U.S. is implicated in many of the environmental problems in China and the world and described EPA's efforts to make a difference.

She declined to engage in a debate about international climate change policy. Instead, the Administrator noted her hope that, by reducing emissions of greenhouse gases in the U.S., EPA can help to lay the groundwork for the U.S. to participate in a multi-lateral, international solution. She also spoke of her commitment to reducing the amount of electronic waste that the U.S. produces by working both to inform U.S. consumers and encouraging manufacturers to develop products that are more readily recycled.⁴⁰ One of the more insightful aspects of the Administrator's presentation was about water. She used a question about the Gulf Oil spill to talk about the problems of water pollution.⁴¹ Administrator Jackson quoted her high school calculus teacher who urged her to "think deeply about simple things" and suggested that we ought to "think deeply about water," particularly because "climate is water manifested through the hydrologic cycle."⁴² She noted that the health of the Pearl River is critical to the health of the people of Guangzhou, the health of the Pearl River Delta ecosystem, and the health of the Guangdong Provincial economy.⁴³

It may be that water was on the Administrator's mind because she had taken a short boat cruise on the Pearl River before the town hall meeting. In fact, she noted the similarities between the Pearl and the Mississippi River as it flows through New Orleans where she grew up.⁴⁴ I was able to join the cruise along with Chinese environmental officials, the Chinese press, and EPA and U.S. Embassy staff. On the boat trip, the Administrator spoke with the director of the Guangdong Environmental Protection Bureau about the government's efforts to restore the river.

I regretted that the tour was on a large, glassed-in tour boat and fear that this boat choice was intentional by the local officials. My experience has been that one gets a more honest appreciation of the Pearl if you can smell it and get close enough to see all of the interesting material in the river.

40. *Id.*

41. *Id.*

42. *Id.*

43. *Id.*

44. *Id.*

Still, I suspect the Administrator understands that the Pearl River is not in good health and, from what I could pick up through the translation of their conversation, the Chinese environmental officials appreciate that they still have much work to do to restore the Pearl.

In general, the Administrator's theme was that the U.S. and China have a shared interest in solving environmental problems and that, by working cooperatively, each country can learn from the other.⁴⁵ I have had few opportunities to hear Administrator Jackson speak, and none in person, so hearing her speak at the town hall here in China was a new experience—I found her to be engaging, thoughtful, and direct. I also agree with her basic conclusion and hope that EPA continues to engage in meaningful efforts to cooperate with China on environmental protection.

All in all, one of the outcomes of Administrator Jackson's visit is that the world grew smaller and more connected for me—that day's events and the Administrator's comments strongly reinforced my sense that solving the world's environmental problems cannot happen without better cooperation between the U.S. and China. I wish Administrator Jackson the best in her agency's work and I hope that the next thirty years of EPA's cooperation with China will give us the kind of environmental progress we can truly celebrate.

V. RELATIVITY, CHINA EXPERTS AND CLIMATE CATASTROPHE

How you see and understand China depends upon your perspective: where you go, who you talk to, and the period of time you were there. This is the same simple concept of relativity foundational to understanding physics—where you stand and when you stand there determines what you observe. An understanding of this basic concept appears, however, to be missing from much of the current discourse about China. A friend recently recited a quote that captures the problem of finding a reliable expert on China. I roughly recall the quote as “you may be an expert on China after spending one month here, or after twenty years, but not any time in between.” I have not found the source of this quote but it captures my sense that the more I learn about China, the less I know. Much of what I have read is either hopelessly outdated (anything written before last week) or written by people who are in the “one-month expert” category.

As I have noted earlier in this essay, China is a complicated place full of contradictions. This country is large, nearly as big and geographically

45. Jackson, *supra* note 25.

45. *Id.*

diverse as the United States. Also (even though the population is largely Han Chinese), people here experience life quite differently depending upon their economic and educational status and whether they live in urban or rural communities. Perhaps most importantly, China is also changing at a rate so rapid that it is difficult to comprehend.

For these reasons, most of the facts provided to me about China have proven to be false or outdated. That includes cultural stereotypes like “the Chinese do not like sweets;” “all Chinese people are small and slender;” and “Chinese women cannot drive.” Many people in China love sweets. The people I have observed on the subway or on the sidewalks of Guangzhou, while generally less rotund than you might see in, say Houston, come in every possible size and shape. Regarding driving ability, many Guangzhou drivers are either exceptionally talented or highly reckless, depending on your point of view, but both men and women have to be good drivers to survive the traffic in this city.

My list of disproven facts also includes some larger errors, such as “Chinese people do not like conflict;” “Chinese people are not creative;” “your Chinese students will not actively participate in your classes;” or “China has a communist form of government.” With regard to conflict, I have witnessed some arguments that would rival those you might see in the Bronx—not as frequently, to be sure, but some great spats by any measure. My students have been as creative, active, and engaged as my U.S. students, even if they have required a bit more encouragement to speak out at times. And the system of government here is different than in the U.S. by a stretch, but the primary, and nearly exclusive, focus on the promotion of economic development by the Communist Party bears little resemblance to what I learned about Marxism in my high school and college government classes.

The list of misleading information you can find is not limited to reports and articles from those who are in the one-month expert category. I have been given inaccurate information by both Chinese and Americans and also by long-time scholars. It may be that the information I have found, or that was told to me, was once true or is true in some other part of China, but it is not true now—at least in the part of Guangzhou where I lived and worked. My friend Andrea Voyer, who spent last year in Guangzhou with her husband and my former Vermont Law School colleague, Jason Czarnezki, cautions anyone who attempts to describe China to avoid blanket statements. She encourages us (mainly Jason and me) to include a “based on my own experience in China” disclaimer in all descriptions of China. I did not fully appreciate why she was so careful to make sure that no one got away with making broad-brush statements about China until after I spent

more time there. I have found that many people, inside and outside of China, are so eager to make sense of this amazing place that they cannot help but try to translate their experience into some kind of deep truth about China.

Stand back just a little, however, and it is clear that the truth of what China is and will become is elusive and uncertain. So, I find myself somewhat bemused by the number of recent China experts, inside and outside of China, who have published articles over the past few years predicting China's future. Depending upon these authors' perspectives, they generally conclude that China is inexorably headed either to the top as a new world superpower, or to some catastrophic collapse as result of internal or external conflicts. I enjoy reading these books and articles, as they offer fascinating perspectives and visions of the future. They could be right. I find, however, that I am more persuaded—and reassured—by the writings of long-time students of China like Elizabeth Economy at Council on Foreign Relations⁴⁶ or Washington Post reporters Steven Mufson and John Pomfret.⁴⁷ This latter category of China observers seem to me better attuned to the complexities and nuances of China.

To repeat myself, I do not claim to be any kind of an expert on China, and I have almost no idea where China's future lies. I have learned enough about China, however, to believe that it would be an astonishing feat if anyone could figure out where this nation of over a billion people will be in five years, and it would require deep magic to know where China will be in ten years.

So, having once again established that you should take all statements from erstwhile China experts with a grain of salt, I will now violate this rule and offer an unconditional opinion: the fate of the world as we know it rests upon China's decisions regarding its energy resources. China's dramatic economic expansion and the large volumes of inexpensive manufactured goods exported to the rest of the world is supported by an equally dramatic increase in energy use.⁴⁸ This energy is supplied in large part by coal.⁴⁹ Even if the rest of the world somehow weans itself off coal, China is

46. Economy, *supra* note 20.

47. See Steven Mufson & John Pomfret, *There's a new Red Scare. But is China really so scary?*, WASH. POST, Feb. 28, 2010, <http://www.washingtonpost.com/wpdyn/content/article/2010/02/26/AR2010022602601.html> (discussing the tendency of American commentators to exaggerate the rate of China's advancement).

48. U.S. ENERGY INFORMATION ADMINISTRATION, U.S. DEP'T OF ENERGY, PUB. NO. 0484, INTERNATIONAL ENERGY OUTLOOK 2 (2010).

49. *Id.* at 3.

headed in the opposite direction—taking all of us towards the precipice of catastrophic climate change at an accelerating rate.

No matter that China is making a major investment in green sources of energy—this is an important contribution, but China’s coal consumption continues to rise so fast as to make its green energy development efforts seem trivial. The rest of the world is not innocent of this expansion. Not only do developed countries in the western hemisphere consume much of what China produces, but we are also now facilitating China’s addiction to coal.

Elisabeth Rosenthal wrote a startling article in the New York Times last year about the fact that coal producing countries like the U.S. and Australia are rapidly stepping up coal shipments to China even as policies in their own countries are forcing a slow-down in the development of coal-fired power.⁵⁰ For example, Rosenthal cites the U.S. Energy Information Administration, noting that U.S. shipments of coal to China have jumped from a couple of thousand tons in 2009 to nearly three million tons in the first six months of 2010.⁵¹ For longer-term, but equally depressing analyses, you can look to a website created by the World Resources Institute that evaluates China’s contributions to greenhouse gas emissions.⁵² The line on the graph predicting China’s greenhouse gas emissions slopes steeply upward.⁵³

The carbon emission trends associated with China’s economic expansion, which has been accelerating over the past decade, provide the underlying factual underpinnings of Vanderbilt Law School Professor Michael Vandenberg’s article entitled *Climate Change: The China Problem*.⁵⁴ He notes that the efforts of the United States and European Union, even if successful in dramatically reducing carbon emissions under the Kyoto Protocol, will not be enough because China will emit five times more carbon over the next twenty-five years than will be saved under Kyoto.⁵⁵

50. Elisabeth Rosenthal, *Nations That Debate Coal Export It to Feed China’s Need*, N.Y. TIMES, Nov. 21, 2010, <http://www.nytimes.com/2010/11/22/science/earth/22fossil.html>.

51. *Id.*

52. World Resources Institute, *China & Climate: An Overview*, CHINAFAQS, Oct. 6, 2009, <http://www.chinafaqs.org/library/chinafaqs-china-climate-overview>.

53. World Resources Institute, *China’s Energy and Carbon Emissions Outlook to 2050*, May 12, 2011, <http://www.chinafaqs.org/library/chinafaqs-chinas-energy-and-carbon-emissions-outlook-2050>.

54. Michael P. Vandenberg, *Climate Change: The China Problem*, 81 S. CAL. L. REV. 905, 907–8 (2008) (noting that the projected growth in China’s emissions is the greatest threat to climate change).

55. *Id.* at 915.

So, what do we do? A dialogue among Chinese and U.S. leaders at the highest levels is critical to making real progress. China and the U.S. are Bad Guys Number One and Two in the ongoing and potentially catastrophic climate disruption we are experiencing. Our current leaders appear determined to stay locked in a contest of blame avoidance and economic one-upmanship and, for this reason, are making limited, if any, progress. This shortsighted approach may be because both nations are relying upon bad information and a poor understanding of each other's systems of governments, cultures, and peoples. Both nations are pursuing economic development as the latest version of the race to global dominance without appreciating the increasing interdependence of all of the world's economies and the absolute interdependence of our shared global ecosystem.

In order for us to achieve a true dialogue, we need a new generation of leaders and problem-solvers who are fluent in both languages and cultures. Otherwise, we will continue to pretend that we can each proceed separately, missing the point that our economic and ecological futures are inextricably linked. This new generation must include economists, ecologists, lawyers, sociologists, engineers, and others who can communicate freely without misunderstandings resulting from speaking across a significant language and culture divide. This new generation of experts must be willing to take the time to listen to each other, to learn, and to work together to sort out these issues. I cannot count myself among this new generation of experts, but I feel proud to have had the opportunity to work with academic institutions in China, the United States, and elsewhere who are investing in the students who must step up to deal with this amazing mess we have created for them.

A new generation of leaders and experts can bring a different perspective. They will need to be less interested in prognosticating about whether the U.S. or China or some other country will rule the world, and more interested in working together to develop a stable, just, and global carbon-free economy. From working with my former students in the U.S. and in China, it is my impression that a new generation is on the way.

CONCLUSION

Given the breadth and scope of the environmental challenges facing the world, I sometimes find myself wondering whether working on environmental issues in Vermont really makes a difference. At the same time, given the breadth and scope of the environmental challenges facing the world, I can persuade myself that Vermont is exactly the right place to be. Perhaps, in Vermont, we can establish the model of a sustainable

economy, in which our citizens have a good quality of life because we have preserved our natural and working landscape, and maintained the quality of our water, air, and soil. We can, once we have honed our model, offer it to China as an alternative approach to providing a high quality of life for its citizens.

Translating the decisions that work here, in a small-scale, intensely pluralistic, and democratic state, into the kinds of actions that will work under the different kind of governance model currently present in China will not be easy work. Even assuming we have the model right in Vermont (and we still have some work to do), Chinese leaders may balk at a system that relies so heavily on citizen involvement. Further, as I have acknowledged above, China can make a reasonable case that the U.S. quality of life has come with a legacy of environmental damage, and we need to be prepared to acknowledge that fact before touting our approach as the solution. Chinese citizens are, however, beginning to understand what is being lost in their country's myopic pursuit of economic development at the expense of all else. In hopes that China's leaders will acknowledge this understanding, we in Vermont and the U.S. should be prepared to participate in a dialogue that involves both of our nations as well as the rest of the globe.

