MADE IN CHINA NOTEBOOKS

SHADES OF GREEN

Notes on China's Eco-civilisation

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TABLE OF CONTENTS

ANOTHER KIND OF INTERVENTION

Discussing the Anthropocene in China

Luigi TOMBA and Olivier KRISCHER

This is a different kind of intervention, unpretentious and open. It is an attempt at expanding the debate on China's new ideology of 'ecological civilisation' (生态文明) beyond the issues of policy that have attracted so much attention and that often lead to a black and white view. Is China the new champion of environmentalism? Are democratic institutional models becoming obsolete? Is efficiency what we need to pursue in order to tackle an environmental crisis? These questions are flattening the debate on issues of efficiency and policy, and are hiding more than they reveal.

In January 2019, the China Studies Centre and the Planetary Health Platform of the University of Sydney invited 40 young and senior scholars from all disciplines of the humanities and the natural and social sciences from all over the world to discuss in which direction these questions should be expanded. The younger scholars, doctoral candidates, and early career researchers were selected from more than 400 who had applied, and all had something compelling to say about sustainability and China. We gave ourselves a week to listen to lectures and discuss specific topics, trying to challenge the established role of the scholar, by asking diverse questions, including sometimes irreverent ones. The resulting conversation was one that reconciled with academic life; it suggested that there are more avenues to knowledge than any individual can conceive, and tentatively considered possible solutions to the environmental crisis. At times it led to the depressing awareness of how colossal the task in front of us is.

We came out of the discussion with only a few solid convictions. *First*: that our own knowledge, as well as anyone else's, only becomes relevant when it is challenged in unexpected ways. We refrain from suggesting that multidisciplinarity is always a fruitful way to solve all problems (we do not want to simply create new silos or

new ideologies while we are in the process of challenging disciplinary habits). Certainly, listening to unforeseen points of view is a rare opportunity to expand the conversation, to introduce or attend to the unexpected. *Second*: when we talk about China, we are always talking about the world. Everyone at the workshop was a scholar focussed on China in some way and yet the conversation was almost never about the country in isolation, as if geography only made sense once we managed to overcome it, to accept the specificities of China while we look at its global connections. *Third*: even the most developed and bona fide attempt at solving the contemporary problems of the world risks being subsumed by the nature of the capitalist regime. Is the discussion of a democratic versus an authoritarian green world reproducing in a modern way the discussion between autocracy and liberal regimes? Or should we accept that the solution may have to be the radical critique of the underlying rules of global capitalism that are common to both? And *fourth*: that we are in desperate need for a new language. Not one that is only understandable to a different expertise, or that translates the natural sciences to the non-expert without losing its power. This new language would be a different way of communicating, that may result from more than an updated alphabet, to accept the power of symbolic and artistic creation, the experimental and the forensic or archeological, the simplifying power of technology and the ethical concerns of philosophy, the spiritual and the divine.

None of these lessons are strictly Chinese, but all can be seen in and from the Chinese example.

At the beginning of the week, we asked all participants to make the workshop a safe place, not to pull punches, but to build a conversation in which everyone and all opinions were welcome. We also asked participants to address global issues: about indigeneity, about justice in the city, a multi-species world, the ethics of technology, gendered knowledge, our lifestyles as part of the problems and the solutions, and about the quibbles of sustainability.

Here we present a selection of the short essays that participants presented as a reflection on their contributions within that conversation. Together, they question the concept of ecological civilisation and its cognate ideas, from intentionally diverse perspectives that may not always appear to be discussing the same thing—but that is an important part of the equation. Despite their distinct concerns and approaches, they each reframe the questions, representing a call to action. ■

SHADES OF GREEN

Notes on China's Eco-civilisation

ILLUSTRATION: ANNA FORMILAN

RECLAIMING THE CRISIS

What is an Ecological Narrative of Radical Possibility?

Samuel KAY

We are living in an age of environmental crisis. This is something that every human and living being on Earth faces together, but in deeply uneven ways. Nonetheless, the idea of 'environmental crisis' demands action. It is self-evident that *someone* needs to do *something* in response to the situation. This urgency for action has mobilised millions of activists worldwide to build coalitions, take on powerful corporations and states, raise a ruckus, and risk retribution. But it has also created an opening for states to mobilise. Therefore, those who concern themselves with making sure that the coming ecological transition is just and egalitarian need to think about how to strategically use—and if necessary, how to outmanoeuvre—states.

There is a lot of room under the banner of environmental improvement for other kinds of state projects to slip in. This is exemplified by China's push for 'ecological civilisation'. To be sure, the crisis to which 'ecological civilisation' responds is real, the government really does want to achieve environmental improvement, and its commitment to that improvement is clear. The state has declared a 'war on pollution', reorganised and upgraded the status of its environmental bureaucracy, and spent billions of yuan on clean energy projects. The Chinese state is earnest and serious in its drive to achieve environmental gains, but it has also sought to use its governance of the environment as a vehicle for its governance of society. State responses to crises of any kind are usually not politically neutral; in cases like this, responding to environmental crisis also affords the opportunity for states to reconfigure citizenship, reorganise space, and reshape society.

A demolition site in Beijing's Daxing district that was previously home to migrant workers has been planted over as part of an effort to green the city. PC: Samuel Kay.

What Does Ecological Civilisation Look Like?

To understand what ecological civilisation looks like, and what it means for the promise of and challenges to environmental justice in China, I have been investigating how it is unfolding in the policy sphere, cultural landscape, and built environment of Beijing. Since at least 2014, when the issue of air pollution received widespread attention, anyone reading the news, walking down the street, watching television, or riding the subway has been bombarded with messages promising a greener, cleaner, ecologically civilised future. Beijing's authorities have relentlessly pushed a narrative that ecological civilisation will make Beijing green and therefore modern and cosmopolitan. Those of us consuming this message are asked to leave the 'how' of that transition to the experts. We are asked to think of ecological civilisation in technocratic terms. We are told that 'the city' will experience environmental improvements, that 'the city' will benefit from cleaner water and more trees, that 'the city' will enjoy better ecosystem services. Framed collectively under the umbrella of 'the city', there is an implication that our fate is shared, that we will sink or swim together.

However, while thousands of square kilometres of forest are being planted around the city, hundreds of thousands of migrant workers—who are often blamed by authorities for various urban 'sicknesses'—are being pushed out, victims of a large-scale campaign of urban demolition and environmental 'restoration'. While the city government touts the campaign as creating new greenspace, demolition sites are turned into condominiums at least as often as they are turned into urban forests, showing that construction is still welcome in areas set aside for greening as long as it serves the 'right' interests.

Asserting a Collective Right to the Green City

This process is already delivering an evidently greener city, if 'city' is only taken to mean a certain location, and if 'greener' means merely the presence of more trees—or, often, green-coloured cloths spread on the ground to control dust from demolition and construction debris. But if, following scholars such as Amin and Thrift (2017), we define the city more holistically and infrastructurally—as organisms, layered machines from which one part cannot be singled out as solely responsible for urban prosperity—then the removal of certain people in the name of urban greening makes much less sense.

What new strategies arise if we reframe environmental improvement as something that happens *to people* instead of *in places*? Following Doshi (2016), our analysis would shift to the way that people get by amid environmental crisis, the challenges they navigate in doing so, and the resulting drain on their wellness and wellbeing. Our attention would be drawn not just to average concentrations of air pollutants, but to the uneven accumulation of those pollutants in certain peoples' bodies as a result of their lack of access to masks and air filters—a situation that is itself connected to their devalued labour and daily precarity.

This people-centred orientation toward the environment would beg the question: can something really be called urban environmental improvement—or 'ecological civilisation'— if a substantial portion of a city's population will not get to stick around to enjoy it?

If environmental crisis can be used by states to advance civilising, authoritarian projects, why can't it be used by non-state actors to fight for a more just, egalitarian

environmentalism? A crisis is a potent justification for a state to do things for us, or at least in our name. But isn't it at least as equally good a justification for us to get together and do some things for ourselves?

This suburban housing development is adjacent to two villages that were demolished as part of a wetland restoration project. The sign reads: 'Vigorously develop patriotic hygiene activities. Make the sky bluer, the water clearer, and the earth greener.' PC: Samuel Kay.

What would a state-proof environmental narrative look like? Or how can a state-led environmental narrative be exploited to achieve just, egalitarian aims? If 'ecological civilisation' shows that states take on the mantle of environmental problem-solver to carry out sweeping social policy changes, how might the rest of us use the mandate of ecological emergency to reassert some narrative control? How can we insist on environmental improvements that could make good on the proposition that we really are 'all in this together'?∎

SUSTAINABILITY AS ENVIRONMENTAL JUSTICE
Uneven Inclusion in China's Ecological Cities

Jesse RODENBIKER

Since the rise of Xi Jinping, China's approach to making cities sustainable has been articulated as 'ecological civilisation-building' (生态文明建设), a vision for socialist sustainability written into the Constitution of the Chinese Communist Party in 2012. Urban environmental protection zoning has become a key feature of this post-socialist urban greening. Central state mandates require 20 percent of municipal areas to be zoned for environmental protection (CCP 2016). In Chengdu, Kunming, and Dali, where I conducted my research, the majority of urban ecological zoning takes place across the peri-urban fringe. City-level practices of environmental protection unevenly incorporate the land and housing of peri-urban villagers and shape their socioeconomic transitions, with many losing their homes and access to agricultural land.

My research involved 15 months of fieldwork in China between 2014 and 2017, during which I conducted interviews with peri-urban villagers, resettlement complex migrants, ecologists, and government officials. I found that as city governments zone land for conservation, peri-urban village land, including agricultural land and rural housing land, are unevenly valued and compensated, which leads to a wide variety of socioeconomic outcomes. The ways in which village land and housing are measured and compensated become key factors in shaping villagers' transitions. Since there are no national standards, each instance of incorporation into urban ecological protection sites exhibits different outcomes for peri-urban villagers. These range from moving into high-rise resettlement complexes, remaining in original homes (but without access to their farm land); becoming migrant workers, working in newly

made conservation zones, or leasing agricultural land elsewhere to continue farming (Rodenbiker 2019).

Unintended Consequences

A major finding from my research is that social and environmental engineering underlying ecological civilisation building deepens social inequalities. The process of creating urban ecological protection zones—an undertaking that is envisioned as a solution to environmental degradation—sharpens inequalities and differentially shapes access to cities (Rodenbiker 2020). While some villagers grow wealthy through this transitional process, many others move into conditions of poverty with little compensation for their village land and housing. After zoning their village land for conservation, the city government moved villagers in many of my fieldwork sites into resettlement compounds. Villagers became residents in poorly built high-rise resettlement compounds and were compensated for land and housing with payments far below their housing and land's market value. Their compensation was much closer to the national low-income subsidy (低保). These former villagers struggle to find new economic opportunities in the city. They do so in high-rise apartments of dubious quality with sporadic gas and electricity services, and elevators that remain broken for months at a time (Rodenbiker 2019).

This brief account provides a sense of how uneven inclusion into projects of urban conservation introduces social differentiation and conditions the ways villagers navigate transitions. It is clear that, at the very least, equitable compensation based on market prices for land and housing should be universalised within these practices. However, in addition to these metrics, psychological violence stemming from the total transformation of ways of life must be part of the discussion and policymaking process surrounding ecological protection zoning. Villagers experience severe psychological stress when leaving the security of their land and home. Many have lived in their homes and worked the land for generations. Forced migration into high-rise resettlement complexes completely transforms villagers' daily lives, as well as their underlying material and socioeconomic conditions. Removing villagers from their land and housing, in many cases, constitutes environmental injustice. It is also a practice that is already normalised and largely

overlooked in the policy- and practice-oriented conversations surrounding how to make China's cities sustainable.

Rediscovering Social and Environmental Justice

The case of urban ecological protection zoning in China—only a small part of which I was able to illustrate here—provides important lessons for considering sustainable city development in any context. First, sustainability projects need to be situated in the settings within which they take on meaning and shape lives. Second, the experiences of people affected by sustainability projects offer important insights into divergent social trajectories resulting from such projects. This point speaks to the importance of researching sustainability not only from the top down, but also from the ground up. Detailed interviews with villagers at different stages of inclusion revealed how land and housing valuation and compensation shapes their socioeconomic trajectories. Triangulating between their different experiences also illustrated the lack of uniformity across localised valuation and compensation practices, as well as a host of potent anxieties surrounding social dislocation.

Third, and most importantly, sustainable city projects need to have environmental justice at their core. This advocation builds on the work of scholars, such as Julian Agyemen (2013), who argue for greater attention to justice and equity in sustainability. For too long, environmental justice has been a peripheral concern or an afterthought to sustainability. It is clear that a new understanding of sustainability is needed, one that holds environmental justice as integral. It is not enough to approach sustainable cities through technical adjustments and infrastructural upgrades. The social outcomes of such approaches are often dire insofar as they ignore existing inequalities and often produce new ones. A new conceptualisation of sustainability is required: sustainability as environmental justice. This simple maxim is a starting point towards fundamentally reconfiguring socioenvironmental relations and the practices of building sustainable cities. It entails holding social justice across racial, classed, and gendered inequities as inseparable from projects of environmental stewardship: urban planning, managerial practices, infrastructural provisioning, and public policies. ∎

Zhengzhou city plan.

THE 'HEALTHY CITY' MODEL
A New Hygienist Utopia?

Georgina ANDRÉ

The concept of the 'healthy city' (健康城市) is increasingly promoted in China as the latest urban model, superseding that of the smart, ecological (i.e. 'garden'), low-carbon, or sponge city. The healthy city model was first initiated by the World Health Organisation in the mid-1990s (WHO 1995), and a pilot experiment was undertaken in Beijing's Dongcheng district in 1994. In China, the initiative was further extended following the SARS epidemic of 2003, and in early 2020, 19 Chinese cities were actively engaged in a demonstrative project to build healthy cities (National Health Commission 2020). The promotion of healthy cities certainly responds to what are commonly perceived as 'urban diseases' (城市病), ranging from environmental pollution (especially air pollution) and traffic congestion to a scarcity of resources available to urban dwellers, such as employment, housing, education, and health services.

Historical Precedents

However, the perception of cities as being a body and, as such, prone to suffer from various illnesses that need treatment is neither new nor specific to China. Indeed, as analysed by Françoise Choay (1974) in the 1970s, the Italian Renaissance architecture movement embodied by theoreticians such as Giovan Battista Alberti already considered built environments from a bodily perspective. The city as a body was not only an analogy that led to the adoption of rules of proportion for the built environment and architecture based on the shape of the human body, but also a call

to reconsider the city as an actual functioning organism which needed a dedicated scientific approach.

By the mid-nineteenth century, this way of thinking was being adopted in urban and architectural applications of hygienist ideology. Drawing from the Dickensian depiction of the industrial city and the groundbreaking medical discoveries of that century, medical and public authorities came together to consider the city as a clinical case. Excessive population density and uncontrolled growth led to overcrowded cities, with widespread litter, pollution, poverty, and crime. Responses ranged from the pragmatic establishment of urban management services to a more utopian advocacy of alternative patterns of urban development. Urban management services include sewage systems, water treatment, and waste collection. Conversely, an example of a utopian urban model was that of Howard's 'garden city', which denied the benefits of urban growth altogether (Howard 1898). The garden city relied on the idea of capping the size of an urban settlement to approximately 30,000 people in order to ensure 'slumless and smokeless cities', in which each community would be supposedly self-sufficient and linked to others by road and rail networks.

The Chinese government has also long promoted the control of city development. From the 1950s to 1980s, this control relied on an economic and political rationale: wary of the urban environment, the socialist government favoured industrial development in rural areas over urban tertiary economic development. So, can the Chinese 'healthy city' model of today be considered as another manifestation of discontent with city growth, and of promoting urban population control?

Ambitious Targets

Strict control of city development would seem unrealistic today. Since 2007, the majority of the global population has been living in urban centres, a benchmark that China reached in 2011. Moreover, in the Chinese case, the United Nation forecasts the formation of one more mega-city of more than ten million inhabitants, and six big cities of between five and ten million inhabitants before 2030. This shows that big cities are not a phenomenon that is going to disappear soon, especially in countries that are developing rapidly like China. Indeed, a global consensus between international actors such as the World Bank and individual national interests is

emerging concerning the opportunity to invest in city growth in order to leverage local economic development.

So, if the 'urban diseases' once regarded as illnesses to be cured by controlling the size of cities have now themselves become unavoidable consequences of urban growth that need to be accounted for and managed, how can the functional parts of the city—e.g. public facilities, residential units, waste or water management, and transportation networks—be reassembled to ensure a better urban environment and more equitable access to urban resources?

The 'healthy city' model still taps into traditional hygienist ideas: since 1994, this label has been promoted in China to reward cities with efficient public health management, i.e. exemplary waste management and water treatment. However, one key new element of this model is improvement in the liveability of cities. This target covers not only the quality of the urban environment, for instance by assessing strategies to reduce air pollution, but also the lifestyles of urban dwellers. In fact, it has been reported that public health issues in Chinese cities have increasingly come to encompass mental health, as well as non-communicable diseases such as cancer, pulmonary or heart diseases. The rise of non-communicable disease is clearly linked to changes in urban lifestyles, including a decrease in physical activity, widespread smoking, and new dietary habits. From this perspective, so-called 'co-benefit' solutions to public health issues are increasingly popular: lifestyle changes improve the general quality of the urban environment and vice versa. For example, encouraging cycling instead of driving both benefits health and helps relieve urban traffic congestion and pollution.

Towards Further Biopolitics?

Combining the individual and collective dimensions of urban life in one encompassing 'healthy city' model entails better urban management as well as individual and social improvement. The question remains as to whether this will only lead to further 'biopolitics' by singling out individuals according to their lifestyles, or to improved living conditions for a greater number of urban dwellers. ■

YET ANOTHER 'LAND REVOLUTION'

Ettore SANTI

A great revival of the countryside, interpreted as a material place and ideological construct, is an important facet of China's 'eco-civilisation'. Narratives promoting rural life can be found all across the country in official pamphlets, newspaper articles, Xinhua editorials, advertising ephemera, and social media posts. At the Central Conference on Rural Labour in 2013, Xi Jinping declared: 'If China is to be strong, then agriculture must be strong, if China has to be rich, then farmers must be rich ... . In order to build a beautiful China, we must build a Beautiful Countryside (美丽乡村)' (Changsha County Government 2017). Why, after four decades of relentless urbanisation propaganda, has the official narrative shifted to rurality as 'excellent Chinese traditional culture' (中华优秀传统文化) (CCTV 2018)?

A tourist taking photos of a village woman picking tealeaves in a tea-themed tourist park in rural Hunan. PC: Ettore Santi.

The Three Revolutions of Rural China

The current discursive shift towards rural nationalism only makes sense if considered in relation to the ongoing political and economic restructuring of China's agrarian environments. This national rural development project involves a complete spatial reorganisation of villages to host new scientific farms, rural ecotourism parks, soil science hubs, and other high-tech infrastructures. Most importantly, it provides the legal bases for the formal disposal of the household responsibility system (家庭联产承包责任制) of collective agriculture, in favour of large-scale corporate agrarian production. A new national agrarian development campaign, officially dubbed the 'Third Land Revolution' (第三个土地革命), is currently being trialled in many rural villages. Through a revision of the regulations around rural land property, this campaign has authorised village and township governments to transfer collective land use rights to private agribusiness and ecotourism corporations to extract profits, while pushing local farmers to abandon household agriculture and work their land under a wage. This process is changing the physical and social landscapes of rural China at a staggering pace.

Construction of a corporate-owned modern grape farm on collective land in rural Hunan. PC: Ettore Santi.

Governing the rural population through land ownership and food systems is not a new practice in China. During the Maoist period, the Party directed peasant movements against the landlords to seize their land and collectivise agrarian production. This constituted the First Land Revolution. After 1979, the household responsibility system assigned land plots to individual farmers. While this system fragmented collective production, the government enabled the peasantry to move to cities to support the expanding industrial economy. This was the Second Land Revolution. Today, after the New Socialist Countryside (社会主义新农村) campaign of 2006, China's agrarian environments have turned into new assets for national development. In 2014, with the aim of regulating the many land transfers already occurring informally in rural areas, the Ministry of Agriculture formally enabled the exchange, transfer, and lease of 'rural land management rights' (农田经营权) to third parties outside of the village collective to allow development. This Third Land Revolution has opened up opportunities for village and township governments to profit from collective land by leasing it to private investors, while enabling private agribusiness corporations to acquire the de facto management rights of entire villages and rebuild them according to their business plans.

The Spatial Restructuring of Tongshan Village

In Tongshan[1] village, 30 miles southwest of Changsha, Hunan province, the Third Land Revolution arrived in 2015. During a year-long campaign, the village committee persuaded villagers to change the institutional status of the collective to become a cooperative corporation, with shares distributed among the village members and managed by the village leaders. After the township government found two agrarian and tourism corporations to acquire the land management rights from the cooperative, two important changes occurred: first, the government and private companies almost completely demolished Tongshan and rebuilt it as an efficient apparatus for intensive farming and ecotourism; second, Tongshan villagers abandoned household farming. Around 60 villagers were hired by these companies to work in the tourism business or cultivating their own land under a wage. All the others had to find a job elsewhere.

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[1] The village name was altered for anonymity.

Tongshan's redevelopment plan located tourist leisure activities on what had been village housing land, while keeping intensive production on peripheral agrarian land. The old main road now connects the villagers' new modern facilities, including resettlement housing, a brand new clinic for the elderly, and a soil science research hub, with agricultural gardens for tourists, hotels, and water parks known as 'leisure farms' (休闲农庄). The agricultural fields in these tourist zones are not meant to produce significant quantities of crop. Rather, they serve as simulacra of agrarian production, allowing urban tourists to experience rural activities such as picking blueberries—the local product for which Tongshan is famous. In these spaces, tourist corporations employ women from the village to perform traditional agrarian production techniques, to entertain urban tourists. The most profitable agricultural fields are located outside the tourist area, invisible to visitors. Considered inappropriate for the representation of Tongshan's rural idyll, these spaces of high-tech production are the domain of the village's men, who cultivate staple crops, especially rice, using agricultural machines and hybrid seed technologies.

A New Rural Order

The spatial restructuring of Tongshan village follows a paradigm applied to many village redevelopment plans in several provinces across China. Its principles reflect the canons of high-modernist 'urban' planning models readapted to China's rural environment, in which a new spatial order is imposed over an agrarian *tabula rasa*. The new rationalised scheme promotes efficiency through the creation of zoning binaries to separate male and female work, production and consumption, labour and everyday life. China's rural past, so sharply promoted in official propaganda, fuels techno-utopian dreams of spatially simplified, socially efficient rural futures.

At a broader scale, the Third Land Revolution, together with its reconceptualisation of rural land property and concomitant socio-spatial ordering, is also reinforcing the urban–rural spatial binary. Materially, towns and villages are becoming increasingly connected, held together by new highway systems and communication networks. At the same time, state narratives of the rural myth depict villages as places *other* than the city, mysterious spaces to be explored, reorganised, and, ultimately, civilised. In order to support the needs of today's urban China, the state is increasingly conceiving

rural space as an internal colony, in which the local population and the environment ought to be subjected and reorganised for the extraction of food, resources, land, and capital. These emerging spatial hegemonies epitomise the great paradoxes of eco-civilisation in China's Urban Age, a time in which the development imperative clashes against rising fears of an uncertain ecological future.■

A BED AND A JOB IN THE BIG CITY

Julia Gabriele HARTEN

As urbanisation progresses at an unprecedented rate and scale, growing cities around the world are drawing attention to not only the issue of urban sprawl but also *density*. With post-industrialisation, jobs are increasingly concentrated in urban areas, intensifying the 'urban pull'. Cities are centres of services and employment. But the benefits of being in the city are priced into urban land, making cities increasingly unaffordable. Still, media reports of people finding ever new ways to be part of the most successful urban economies span the entire globe: never has it been so difficult, yet also so crucial for life opportunities, to live and work in the city.

When cities are growing rapidly, housing markets are under great pressure to catch up. If housing shortages are not addressed, informal markets emerge to fill in the gap. Accessory dwelling units in Los Angeles, 'Hacker Hostels' in the Bay Area, and illegal boarding houses in Sydney, are all examples of people—not planners—reconfiguring scarce urban space to suit their needs. But if we want cities to continue to be centres of economic prosperity and curb sprawl for the sake of mitigating climate change, planners need to come to terms with the crowded realities of growing megacities. For a sustainable urban future, planning must become an active part of the solution, to reimagine spatial models of urban living that are denser and less private. Existing informal solutions are already testing spatial limits and preferences but often pose risks for residents and their neighbours.

View of a residential tower fron Ya'nan elevated road,
Shanghai. PC: Lars Plougmann (CC)

Group Rentals in Shanghai

China's urbanisation has been high speed and high impact. Through its transformation from a largely rural, agrarian nation to an industrialised, urban one, China has achieved rapid economic growth, lifting millions of people out of poverty. Crucial to this historic transformation has been the migration of 247 million people. Migrants quite literally helped build China's immense economic success. Yet, because they do not hold local household registration (户口), they are marginalised in the very places they constructed. Ignored by policymakers, they have been eking out living spaces in interstices: underground, on rooftops, and behind closed doors. Planning literature has engaged with the migrant housing issue but lacks nuance with regard to the multiplicity of migrant demographics, life-cycle situations, and actual, demonstrated housing needs.

My research has focussed on the case of bed space rentals in Shanghai, arguably China's largest, most highly planned megacity. I focus on what are known as 'group rentals' (群租房), in which ordinary commercial and residential units are illegally turned into densely crowded dormitories. Violating housing occupancy regulations, but maximising rent extraction, landlords typically pack these units with bunk beds, placing beds even in kitchens and pantries. From the exterior, migrant tenants live in the formal built environment, but they rent individual beds in rooms full of strangers, sharing bathing and toilet facilities with typically dozens of people. To this day, migrants are mainly imagined as labourers, but contemporary urbanisation is widening the bounds of marginalisation to include other demographics as well: these rentals predominantly house recently arrived migrants who are highly educated yet come from second-tier cities and lesser known universities.

Researching group rentals in Shanghai, I discovered a market in which tenants make difficult choices and trade off minimal personal space for excellent access to transport, employment, and urban amenities.

Trade-offs

I found that bed space rentals typically cluster at the edge of the inner city. A three-bedroom apartment will house an average of 24 tenants, with renters trading off personal space for prime location. As newcomers to the city and the labour market they need to be close to their jobs, but for many, starting salaries do not allow them to pay the high downtown rents. Long hours prevent them from 'paying' for more personal space with their time.

For these high-skill, low-income migrants, a job in the big city is a human capital investment; a bid for a higher paying, white-collar career. Since the late 1990s, China's policy of pushing mass higher education has resulted in a drastic increase in highly educated workers. Yet, more intense competition, horizontal quality stratification, and 'credential inflation' have since translated into less certain and delayed returns to education. For many of the second-tier college graduates starting out in their first job while renting merely a bed, earning levels are comparatively low, but promise to increase over time, as group renters aim to work their way up to white-collar careers. Aspiring to upward mobility, most group renters see their poor

living situation as a stepping-stone within a longer-term strategy to gain a foothold in Shanghai's competitive urban labour market. The housing poverty of the group renter demographic is therefore only transitional.

A New Stage in Life

While the socio-political and historical context of group renting is specific to large, growing cities in China, the current forces that drive talent, wealth, and people into big metropolitan areas operate globally. As long as jobs and opportunities are concentrated in cities, urban areas everywhere are going to get larger, denser, and more expensive.

My interviewees manage the transitional phase between higher education graduation and secure, long-term employment with the help of group renting. 'Emergent adulthood', however, has been recognised in other parts of the world as a new and significant stage in people's life and housing careers. By drawing the connections between bed space rentals as a housing phenomenon and shifting preferences of a 'new renter demographic', my research is a call for planners to take life-course housing seriously. Moreover, learning from the way in which urban newcomers carve out space for themselves in the city challenges us to reconsider conventional notions of privacy and space, to imagine the future of sustainable urban living in the context of demand for density. ∎

Worker on a pile of burning garbage. Huaibei, Anhui,
PC: Philip McMaster (CC).

THE IRONY OF CHINA'S 'ECOLOGICAL CIVILISATION'

Christopher K. TONG

What is irony, and what does it do? More than simply saying one thing and meaning its opposite, irony exploits discrepancies between different interpretations to produce new instances of meaning-making. In Mandarin Chinese, irony is often translated as *fanhua* (反话) or *fengci* (讽刺), but these words capture merely one aspect of irony, namely what we call sarcasm. While irony is often deployed as a form of humour or critique in everyday conversations, it proves to be a productive rhetorical device in political contexts. As J. G. A. Pocock observes in 'Languages and Their Implications' (1971), political speech often performs multiple linguistic functions simultaneously. Political rhetoric—of which irony is the example par excellence—'is designed to reconcile ... different activities and a diversity of goals and values' (ibid., 17). In other words, irony allows various intentions and interests to be expressed in the same utterance.

In the People's Republic of China (PRC), 'ecological civilisation' (生态文明) (see Parr and Henry 2016; Geall and Ely 2018; Wang-Kaeding 2018) has emerged as an expression that generates meaning on multiple levels. First introduced in 2007 at the Seventeenth Party Congress, it has become an umbrella term for the type of comprehensive development that China's political leadership envisions for the country. In 2018, 'ecological civilisation' was incorporated into the PRC Constitution, joining a list of key terms that have guided China's development in the post-Mao era, such as 'material civilisation' (物质文明), 'spiritual civilisation' (精神文明), 'political civilisation' (政治文明), and 'social civilisation' (社会文明). However, despite its resonances with Western understandings of sustainable development and

environmental protection, 'ecological civilisation' serves ideological purposes as well: it refers to a broad set of strategies advanced by the Chinese authorities to address environmental issues, while maintaining the rhetorical flexibility with which to interpret, adapt, and implement state policies.

Three Thousand Years of Unsustainable Growth?

While 'ecological civilisation' continues to accrue substance as a policy framework in contemporary China, it appears to be a contradictory term from a historical standpoint. China's claim to being one of the world's oldest civilisations—if we do not question the premise of continuity between ancient, imperial, and modern China—seems ironic given its long history of environmental degradation. My essay 'The Paradox of China's Sustainability' (Tong 2019) poses the question: if a civilisation thrives by modifying, exploiting, and damaging its ecosystems—and has done so for several millennia—does it make sense to call it a 'sustainable' one? China is well known for traditions that show respect toward the land and nature. At the same time, China's record of environmental degradation can be traced back to ancient times. As Mark Elvin argues in *The Retreat of the Elephants* (2004), the millennia-long expansion of human settlements has thoroughly altered the terrains and waterways of the lands we now call 'China'. Chinese populations hunted or domesticated nonhuman species and destroyed their natural habitats in the process: the 'retreat' of Asian elephants to ecological niches in the southwest is a metaphor for China's longstanding practice of environmental transformation. Elsewhere, in an eponymous essay (1993), Elvin calls it China's 'three thousand years of unsustainable growth'.

The irony is greater still. As Elvin (2004) claims, China's literary and philosophical traditions praised Nature as an ideal to be respected, while communities and governments destroyed the environment in practice. 'A paradox thus lay at the heart of Chinese attitudes to the landscape,' Elvin concludes (2004, 323). His assessment is not an isolated one: for example, it resonates with the views of Rhoads Murphey, Vaclav Smil, Gary Snyder, and Karen Thornber, of which Thornber's *Ecoambiguity: Environmental Crises and East Asian Literatures* (2012) offers the most developed critical framework. On the other hand, scholars such as Roger T. Ames, Cheng Chung-ying, Graham Parkes, Tu Wei-ming, and Mary Evelyn Tucker generally regard

Chinese thought as being more sympathetic with environmental concerns. Edited volumes such as *Confucianism and Ecology* (1998), *Daoism and Ecology* (2001), and *Buddhism and Ecology* (1997) interpret these philosophical and spiritual traditions from a spectrum of ecologically conscious perspectives. To be sure, the discrepancy between stated attitudes and actual behaviours toward the environment is neither new to humankind nor unique to the Chinese people. Nonetheless, to understand China's so-called 'ecological civilisation', we must first come to terms with the paradoxical nature of Chinese interactions with the environment.

'Ecological Civilisation': Stated Attitudes versus Actual Behaviours

Irony cannot function without the participation of an audience. The power and influence of a construct such as 'ecological civilisation' reside in the fact that audiences in the PRC and elsewhere tend to have different interpretations of its ideological dimensions. As we allocate intellectual and material resources to studying China's 'ecological civilisation', it is our responsibility to reflect on how such engagement may legitimise this enterprise. As Pocock (1971, 18) reminds us, 'speech is a political operant'. And we have the duty to speak up. It is crucial that we ask how 'ecological civilisation' is being promoted at universities, think tanks, and international institutions such as the United Nations and the World Bank. While 'ecological civilisation' promises a beautiful future for China and the world, we should also be aware of how our engagements in academic inquiry, enhanced mutual understanding, and so-called 'win-win' cooperation may condone or endorse a different set of actual behaviours. ∎

SUSTAINABILITY IN A BROKEN WORLD

Ying Jia TAN

The word 'sustainability' evokes romantic visions of humans coexisting in harmony with an idealised 'nature'. In her book *Fantasy Islands*, Julie Sze describes her visit to Chongming Island, Shanghai, to see the world's first great eco-city. The city was 'supposed to be here but was never built,' and Sze saw in its absence 'what eco-dreams and fantasies are made of, in an age of emergent global climate crisis' (Sze 2015, 1). Further north, the Sino-Singapore Tianjin Eco-city development projects the image of humans living happily ever after in a geo-engineered landscape. Its 'environmental sustainability' exhibition features images of electric vehicle charging stations, wind- and solar-powered lights, pneumatic waste treatment stations, and residents writing messages of support for World Environment Day. The blue skies and sparkling bodies of water in the images suggest that innovation has offered humanity a developmental model that generates no air or water pollution. The pitfalls of these romantic sustainability narratives become clear once we examine them through the lens of 'broken world thinking'. Coined by Steven Jackson, this term calls on media studies scholars and historians of technology to decentre narratives of innovation, and to focus instead on key aspects of repair and maintenance. (Jackson 2014) 'Broken world thinking' develops 'an appreciation of the real limits and fragility of the worlds we inhabit' and imbues 'a deep wonder and appreciation for the ongoing activities by which stability (such as it is) is maintained' (ibid., 221–22). After all, eco-cities and the like are built on the ruins of civilisation.

There are three ways in which 'broken world thinking' forces us to rethink how we tell stories about sustainability. First, it critiques the existing visual tropes that

Chongming Island Space Forest. PC: John Pasden (CC)

articulate sustainability and its challenges and exposes the simplistic nature of their implicit narratives. Second, it directs our attention to maintenance and repair, and to the need to be cognisant about the immense effort and resources needed to keep sustainable societies functional. Finally, it cautions policymakers against seeking shortcuts in dealing with environmental issues, imploring them to place 'ethics of care and responsibility' at the centre of environmental policy.

Scepticism

As a member of the 'Sustainability Across the Curriculum' initiative at Wesleyan University, I have heard colleagues voice their scepticism about the term 'sustainability'. Some have asked whether its wholesome connotations conceal some kind of agenda. In the spring of 2018, I taught a course titled 'Anthropocene as Modern Grand Narrative'. During our first class I asked students what words come to mind when they hear 'the Anthropocene'. Although I had anticipated 'sustainability' or 'unsustainable' would be among their keywords, to my surprise, not only did the students not mention either of them—they found the idea of reaching a point of ecological balance without compromising our way of life to be unrealistic. The programme was later renamed the 'Sustainability and Environmental Justice Pedagogical Initiative' to better highlight its objective of exploring the relationship between power and social inequities in the creation of sustainable communities.

Visions of sustainability typically fail to address the question of 'how and for whom?' The 'sustainability doughnut', which encircles twelve dimensions of the social foundation within the nine planetary boundaries, as defined by Jonas Rockstrom et al. (2009), is one such example. The universal nature of sustainability claims requires the socioeconomic measures supporting them to be calculated on a global scale. How does one set a universally acceptable amount of energy output, for instance? How might we disaggregate the data for energy output to address the uneven distribution of the benefits of energy consumption? Our reliance on aggregate data causes us to lose sight of the human cost of environmental crisis.

Neither is this the only problem. There is also a potential for what Jackson calls the 'twin analytic dangers of nostalgia and heroism' (Jackson 2014, 223). The sustainability doughnut evokes an ahistorical past, in which man and nature lived

in apparent harmony, by suggesting the possibility of restoring socioeconomic dimensions from the current state of overshoot to levels which are within the ecological ceiling. After all, what does it mean to be sustainable? In his essay 'Three Thousand Years of Unsustainable Growth', Mark Elvin (1993) offers a paradoxical interpretation of 'sustainability'. He points out that the 'ecologically self-conscious restraint of the first period (before 500BCE) may have been sustainable in a steady form, especially given the apparent tendency for the population not only to grow, but to grow at an ever-increasing rate' (Elvin 1993, 10). More recent scholarship on China's agrarian past shows that 'the harmony between man and heaven' was an aspirational ideal rather than an actual goal of governance (Lai 2014; Marks 2017). We need an alternative to the 'sustainability doughnut' model, one that highlights the consequences of our actions on the environment.

The Case of China's Electrical Industries

Our focus on repair and maintenance should heighten our awareness of the limitations of the world that we have inherited. The terms that have come to define 'sustainability' are rooted in the language of infrastructure development. For instance, China's electrical industries in the 1950s offer a site of 'repair' that 'confers special epistemic advantage', in Jackson's terms, to think about the challenges of sustainability and resilience. Instead of chasing the elusive sustainability doughnut, in this example we should turn our attention towards the map of the power network and to the daily load curve, in order to really understand the fragility of the technologies that sustain our daily existence.

Shanghai in the 1950s was a city on the warfront. The Communists had taken over a patchwork of electrical power networks built by foreign capitalists, local underworld bosses, and urban administrators from the previous regime. After the Nationalist air force bombed power stations in the lower Yangtze delta in February 1950, the Communists had to stitch a broken world back together again. The electrical industry across China was asked to unleash the full potential of existing generating capacity, as the new nation lacked the capital to invest in new electrical equipment. China did not experience a fuel shortage, but it needed to spread out power consumption evenly between day and night. Peak-load management is analogous to modes of

sustainability that call for overloading the system without breaking it.

Resilience, which in the age of climate change has been framed as a venture in risk-management, comes with its inherent dangers. In 1955, midway through the First Five-Year Plan, China's electrical industries transitioned from trying to ensure 'sustainability' to building 'resilience'. With existing equipment falling apart from overuse, the power bureau realised the need to expand its generating capacity to meet power demand. Concurrent with this wave of expansion, the construction of small hydropower stations in rural areas began to take off. This continued into the Great Leap Forward (1958–62). Citing Robert Carin's studies, Vaclav Smil notes that between October 1957 and September 1958, 4,334 small plants with an aggregate capacity of 131.5 megawatts were put into operation, though their capacity fell short of the one-gigawatt target (Smil 2004, 44). As Chi-jen Yang (2017, 69) points out, small hydropower projects were considered to be environmentally harmful, as they were built with 'no (documented) plan, no review (on environmental impacts, safety etc.), no supervision, and no inspection'. While small hydropower plants provided electricity for rural communities without generating large amounts of carbon emissions, they contributed to problems of soil erosion and deforestation. The lessons from China's energy infrastructure development remind us of the need to consider the winners and losers of defensive mechanisms. Put simply, one also needs to ask the question: 'Resilience: how and for whom?'

Overcoming Green Delusions

To be clear, I am not advocating inaction in the face of climate crisis. Rather, this essay calls for a critical examination of narratives of environmental sustainability. Do societies maintain clean air and water only by transferring the pollution burden to others? Julia Adeney Thomas (2019) has recently pointed to the dangers of reducing the totality of environmental issues down to the single problem of carbon emissions. She has also criticised techno-optimists for their blind faith in innovation. In a way, focussing on repair and maintenance offers a counterbalance to techno-optimism and addresses the inadequacies of our 'sustainability' and 'resilience' paradigms.

By thinking about the men and women who keep the system functioning, we begin to direct our attention to 'an ethics of mutual care and responsibility' (Jackson 2014, 231). The challenges of China's eco-civilisation cannot be addressed simply

by reducing them to the issue of carbon emissions and levels of PM2.5. Repair and maintenance moves us away from the abstractions of the 'sustainability doughnut' and puts humanity back into our discussion of sustainability and resilience. Awareness of the complexity of human nature inoculates us against shortcut solutions that lead us towards green delusions. ∎

TAKING INDIGENEITY SERIOUSLY IN THE AGE OF 'ECO-CIVILISATION'?

Tomonori SUGIMOTO

Having thought about indigeneity primarily in a Taiwanese context, I find it quite difficult to translate lively conversations about that concept into a mainland Chinese context.

Since the mid-1980s, the indigenous rights movement in Taiwan has gained significant momentum. Under slogans such as 'Return Our Land' (還我土地), Taiwan's Austronesian minority began to mobilise as the island's indigenous people (原住民 or *yuanzhumin*), just as Kuomintang authoritarianism was crumbling. Since the official end of Kuomintang martial law in 1987, and especially from the early 1990s, indigeneity has become a part of state discourse. Previously called 'mountain compatriots' (山地同胞) by the government, indigenous people were formally renamed as *yuanzhumin* in the Republic of China Constitution of 1994, and later renamed again to *yuanzhu minzu* (原住民族, literally 'Indigenous Peoples')[1]. In 2005, the government passed the Indigenous Peoples Basic Law (原住民族基本法), a comprehensive law covering a range of issues that continue to affect the indigenous community, from land to environmental protection, employment to housing. In 2016, Tsai Ing-wen, as the newly-elected President of the Republic of China, apologised to *yuanzhumin* for various wrongs committed by previous colonialist regimes, declaring that the state and indigenous peoples need to seek reconciliation (和解)—not unlike similar calls in countries such as Australia and Canada (Povinelli 2002; Coulthard 2014).

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[1] This renaming was done to further recognise the independence of Austronesians as peoples. However, colloquially people in Taiwan, indigenous or nonindigenous, continue to refer to Austronesian people as *yuanzhumin*, which is the name I will use in this essay.

This is in stark contrast to mainland China. The government of the People's Republic of China (PRC) does not recognise the category of 'indigeneity'. To this day, ethnic minorities in China need to mobilise under the category of *minzu*, which can be translated as 'nationality' or 'ethnicity' (Schein 2000). As Emily Yeh (2007, 87) illustrates with regard to Tibetans, '*minzu* is currently the only available frame for talking about cultural difference' in the PRC. In the PRC state rhetoric of 'ethnic unity' (民族团结), diverse ethnic groups have been coexisting peacefully since the nation's founding in 1949. Hence, in the PRC state's understanding, 'Tibetans are grateful for liberation, not suffering from the effects of colonization' (ibid, 87). Recognising indigeneity would require the PRC state to acknowledge that there exists a 'historical debt or deficit after conquest' (ibid, 87). This explains why in mainland China the concept of indigeneity has not gained currency outside academia and environmental groups (Hathaway 2010), despite the fact that some communities may readily fit that definition under, for instance, criteria set by the United Nations. During a recent visit to mainland China, in 2018, my use of the word *yuanzhumin* often elicited confused looks from Chinese scholars and students. To refer to my research regarding *yuanzhumin* in Taiwan, I found myself reluctantly reverting to the term 'high mountain people' (高山族), which is widely considered derogatory and offensive in Taiwan today yet retains wide currency in mainland China, since 'high mountain people' are one of 56 officially-recognised ethnic minority groups in the PRC.

A Statist Approach to Environmental Protection

At the global level, indigenous groups have been at the forefront of efforts to protect the environment, curtail excessive development, and stop unsustainable growth (Braun 2002; Neale 2017). While the Chinese authorities have begun to promote environmentalism, what is distinct about China is the state's almost complete indifference to 'indigenous'—or, more broadly speaking, non-statist—ways of speaking about, relating to, and protecting the environment. Since the early 2010s the PRC government has invoked the concept of 'eco-civilisation' (生态文明), under which it has begun to promote agendas such as the building of harmony between humans and the environment, sustainable development, and environmental protection. But the invocation of 'indigenous people' is almost completely absent from this discourse.

On the contrary, the building of eco-civilisation has first and foremost been a state agenda, tied to the consolidation of state power rather than to developing partnerships with non-state actors pursuing similar goals or indigenous groups whose relationships with nature differ from the agrarian Han Chinese majority and the state. In recent years, pastoralists and their human–land relations in regions such as Inner Mongolia have been unfairly blamed for causing desertification and dust storms (Zee 2020). In addition, the PRC state often views non-Han environmentalists who are working outside of the state system with suspicion, as powerfully shown in Emily Yeh's 2018 film *Shielding the Mountains*, a documentary about Tibetan environmental activists. Therefore, it is not unreasonable to imagine that the building of an 'eco-civilisation' in China may come with enormous human costs—marginalising distinct human-environment relations in places such as Tibet (Yeh 2013).

No Perfect Model

Of course, this does not mean that forming partnerships with indigenous people resolves all problems. Even where indigenous participation has been crucial to environmental discourse, the state continues to grossly mistreat indigenous subjects and does not 'take indigeneity seriously', despite claiming to do so. In places like Canada and Australia, indigenous territories are still subjected to commodification, extraction, and exploitation both by the state and capital (Coulthard 2014; Neale 2017). In Taiwan too, recent sleep-in protests by three prominent indigenous activists in central Taipei—Mayaw Biho, Banay, and Nabu—revealed the ongoing tension between *yuanzhumin* and the state over land and the environment.

Biho, Banay, and Nabu began to occupy Ketagalan Boulevard located in front of the Presidential Office Building in response to new guidelines passed by the Council of Indigenous Peoples in February 2017, the so-called 'Measures for the Delimitation of Indigenous Land or Indigenous Communities' Territories' (原住民族土地或部落范围土地划设办法). The guideline limited 'traditional territories' (传统领域)—which *yuanzhumin* are supposed to be able to claim as their community-owned land—to 'public land' (公有土地) (Council of Indigenous People 2017). The three native protesters challenged the exclusion of privately-held land from the state definition of 'traditional territories'. Research that the Council of Indigenous Peoples

had conducted between 2002 and 2007 did include privately-held land in their calculation of 'traditional territories' and concluded that 1.8 million hectares of land—nearly half of Taiwan's entire land—belonged to *yuanzhumin*. However, by excluding private land, the 2017 guidelines reduced traditional territories to 800,000 hectares (Yisihahanbude 2017). Biho, Banay, and Nabu questioned the sudden disappearance of one million hectares of traditional territories in the new guidelines. After the police evicted them from Ketagalan Boulevard in June 2017, they swiftly moved their encampment to the 228 Peace Memorial Park—known as the symbol of Taiwan's democratisation—and continued their protest into 2019, when they faced eviction from the park, too (Hioe 2017; Lin 2019).

Tense encounters between these three activists and the Taiwanese state showed that invoking official reconciliation with indigenous groups may remain no more than

President Tsai apologizes to the indigenous peoples on behalf of the government. (2016/08/01).
PC: Office of the President, Republic of China (Taiwan) (CC).

lip service. Despite the rise of the reconciliation rhetoric since Tsai Ing-wen assumed office in 2016, the settler-dominated state continues to colonise indigenous land and the environment in Taiwan.

Therefore, no single model is perfect. What we can do in the context of China is to closely monitor the likely outcomes as policies arising from the eco-civilisation project continue to develop and take effect. In particular, we need to investigate their impact on marginalised groups in China and their human-environmental relations. ∎

WHAT ROOM FOR AN ECOLOGICAL SPIRITUALITY?

Tuukka KAIKKONEN

'Ecological civilisation' (生态文明) has become a prominent catchphrase in Chinese official policy discourse. Following the Seventeenth and Eighteenth Party Congresses in 2007 and 2012 and Xi Jinping's subsequent promotion of the concept, ecological civilisation has been promulgated through initiatives such as the 'war on pollution' (向污染宣战), 'beautiful China' (美丽中国), and 'clear waters and green mountains' (绿水青山) (Geall 2017). Besides the civilising mission, a core principle of this idea is to grow the Chinese economy while simultaneously protecting the environment. China's eco-civilisation envisions technocratic solutions as a means to combine these seemingly contradictory aims. However, apart from the nebulous character of the concept itself, there remain significant questions as to how it could be implemented in practice.

A Top-down Vision

One critical question is, how can the government mobilise popular support for ecological civilisation? It is, after all, a top-down vision imposed on society from above. And while the vocabulary and imagery of the discourse has entered into public consciousness, there remains the challenge of turning policy rhetoric into concrete and sustained action (Hansen and Liu 2018). How might this happen?

Donovan Conley (2017) has argued that for such a change to take place, it is essential to engage society at the grassroots level. However, given the constraints on freedom of speech and organisation, opportunities for such engagement are limited.

Ecological spirits? Advertising local wine cultivation for green development at Hada Village, northern Yunnan, November 2019. PC: Tuukka Kaikkonen.

And then there is also the question of policy priorities. Anna Lora-Wainwright (2013) has noted how, especially in rural and remote regions, the dual stresses of poverty and environmental degradation make it difficult to reconcile economic growth with the ecological civilisation vision of sustainable development. Given such realities on the ground, policy and propaganda alone seem insufficient for ideas to be converted into action.

So, what is China's government to do in order to turn its vision of ecological civilisation into reality? Discussion about the desirability, scope, and character of the vision are unlikely to be on the public agenda anytime soon, while the paradox of economic development and ecological harmony is a major obstacle in itself. Yet, assuming that measures such as clean technology and circular economy solve at least some of these practical problems, what else does China need to do for the dream of an ecological civilisation to come true?

People praying at Jade Buddha Temple, Shanghai. PC: Alika Seu (CC).

Engaging Hearts and Minds

If the Party wishes to see its vision of ecological civilisation become a reality, technocratic rhetoric may not be enough; what is also needed is to engage people's hearts and minds—including their sense of spirituality. Here I am not referring to the notion of a 'spiritual civilisation' (精神文明) coined during the Deng era. Instead, this means an engagement with a deeply felt connection to the world, which is lacking from the kind of modernist discourse that the current official rhetoric espouses.

What would this kind of eco-spiritual engagement look like? It is all well and good to evoke notions of harmony, civility, and ecological coexistence, but it's another thing to have them resonate with people's lived experiences. To what extent might the government be prepared to engage with such grounded ways of thinking and feeling?

Policymakers would not have to start from scratch. China has a long tradition, in poetry, art, and philosophy, of asking and answering questions about people's place in the world. Notions of civility and nature are entwined, sometimes in tension, at other times in harmony, in China's landscape art, geomancy, poetry, and beliefs. As Mark Elvin (2004) notes, these notions have been neither homogenous nor static; they have

emerged from feelings, experiences, and thoughts as people have reflected on and reacted to their changing world. This points to the historical importance of engaging the environment on visceral, emotional, intellectual, and spiritual levels. Such ways of feeling and knowing seem to be lacking in the official ecological civilisation discourse, and addressing this deficit seems to be crucially important if the ideology is to be turned into legitimate practice.

A Spiritual Renaissance

The revival of spiritual practices in China in recent decades indicates that there remain needs and desires that economic development alone cannot fulfil. To what extent does the discourse about 'beautiful China' and 'clear waters and green mountains' acknowledge the need for deeper connections between people and their surroundings? And, if the government were serious about such needs, to what extent would it be prepared to allow people of various ethnicities and backgrounds to practice their beliefs and ways of life in pursuit of spiritual, social, and emotional fulfilment? What room, if any, is there in an ecological civilisation for an ecological spirituality? ▪

THE ENVIRONMENTAL AGE, SOCIAL CIVILITY, AND SELF-IMPROVEMENT IN URBAN CHINA

Gil HIZI

In recent years, the environment has become a major concern among citizens and policymakers in China. Through agendas of 'greener' development and citizen experiences of severe pollution, Chinese residents have come to view the environment as both a key aspect in emerging 'lifestyles' and as a hindrance to basic human survival. Considering these multilayered implications, how do citizens' personal aspirations, economic development, and the environment interact in the prominent ideologies and moral concerns of Chinese society?

Self-transformation and the Environment

My work for the past nine years has focused on self-improvement activities in China, where the desire for a better environment intertwine with aspirations of self-transformation. Along with economic changes, Chinese citizens feel an encroaching imperative to work on themselves to become more socioeconomically competent. Self-improvement can consist of training in specific professional or technical skills to maximise employment possibilities. But more and more people are also committed

A state poster in Jiaxiang, Jining, Shandong. PC: Gil Hizi.

to *changing their personalities*: becoming more innovative, creative, emotionally competent, and charismatic. In the past 15–20 years, new interactive educational programmes, psychotherapeutic workshops, and training in interpersonal skills have provided platforms for citizens to pursue these goals. These activities have become quite accessible throughout urban China, no longer limited to the most economically developed cities or the privileged middle classes.

Through my participation in workshops for emotional and interpersonal skills, I encountered intriguing relationships between self-improvement, social development, and environmental protection. Most 'self-improvers' are concerned about their own future in terms of career advancements and social mobility, but also regard self-improvement as a channel for social change. They associate self-improvement with person-centred values, which for them are fundamental for the constitution of a 'moral' society. They believe that by virtue of becoming more 'individualistic' and emotionally expressive, they will show greater respect to other people and to their natural environment. While holding a teleological view by which these values must accompany future 'development' and 'modernisation', they identify the crucial role of these values in promoting such outcomes.


Hundred Flowers Park in Jinan at springtime. PC: Gil Hizi.

Between Individual and Collective

In Imperial China, following ideologies associated with Confucian thought, the individual was recognised as a building block for a moral social order. By fulfilling responsibilities within one's family unit, people were also seen as actively constituting a better society. Later, in the twentieth century, this pattern extended to more revolutionary agendas. Chinese reformers sought to transform traditional and feudal practices that were allegedly limiting China's development. This ideology was accentuated after the communist revolution of 1949. Citizens had to change their consciousness and perceive their existence in terms of class struggle. Despite the extensive impositions enforced on citizens, the revolutionary ethos also framed individuals as active participants in social transformation. Daily acts pertaining to developing class consciousness and to realising state campaigns through labour were hence conceived as a meaningful contribution to a collective advancement towards a utopian future.

In recent years, while economic reforms have produced imperatives of self-reliance and self-interest among citizens, this link between transforming the self
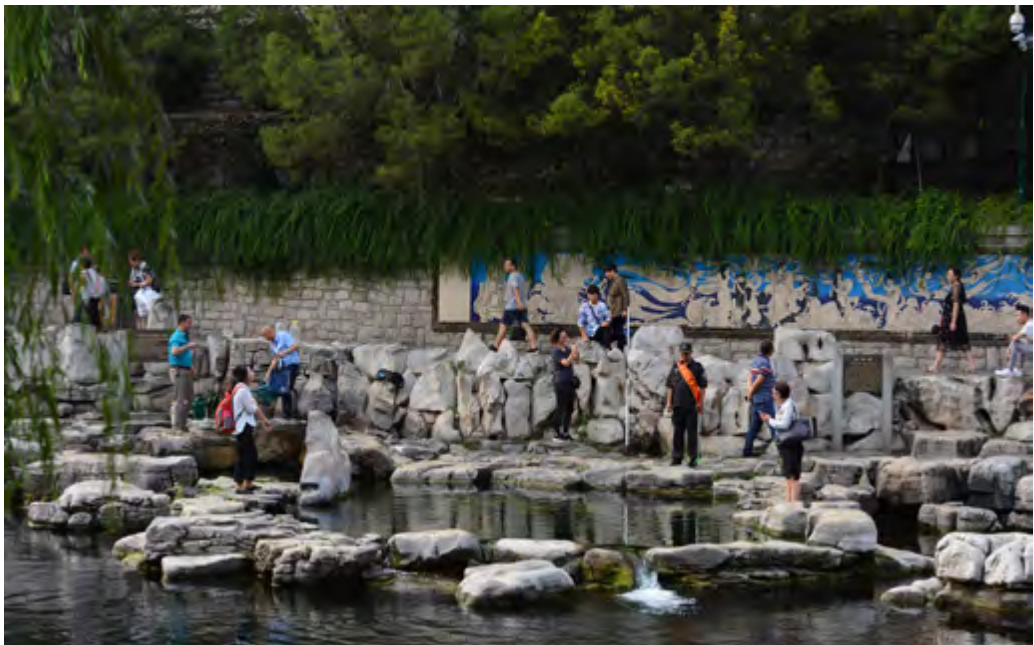
Black Tiger Spring Park in Jinan. PC: Gil Hizi.

and society has not faded away. Citizens recognise that by making themselves more 'moral' through new knowledge and training programmes, they are also, in practice, promoting new agendas. For example, individuals who study psychology regard themselves as agents who contribute to the expansion of psychotherapeutic knowledge in their cities. The same is true for public speaking clubs, pedagogical programmes that foster creativity and imagination, and so forth. Many self-improvers also have future plans to run their own workshops for interpersonal skills, even if they are already pursuing other career paths.

Civility and Human Quality

Interestingly, the values of individual autonomy and self-realisation, which might signify a retreat from social awareness, represent, for the self-improvers I met, the most important contribution to social development. Since they aspire for China to become more 'modern' and cosmopolitan, they seek to adopt ideologies that they identify with the foreign, Western world. Clearly this pursuit also follows the vision of China's economic reforms. While the state continues to employ socialist symbols and delimits individual freedom in some social settings, it has also promoted an expanding market economy and industries responsible for improving the wellbeing and personal development of society at large. These practices are not only opening up new opportunities but also informing what it means to be a competent citizen. Over the past three decades or more, Chinese leaders have consistently used terms such as 'civility' (文明) and '[human] quality' (素质) to evaluate social groups that are more economically self-reliant, more 'productive', and more conforming to state policies. The values of self-improvement tap into this understanding even for individuals who do not see themselves as overly patriotic. The notion of 'civility' therefore successfully conflates political ideology with widespread social perceptions of what it means to be a 'good' person.

'Civility' in China today is a symbolic umbrella term that can allude to wealth, talent, and ethical conduct. In a globalised world, civility is understood not only through spoken ideologies, but also images of urban development, charismatic personas, or beautiful scenery. Green spaces, clean water, and blue skies fit this image well. In Chinese cities that can be covered for weeks by smog, a healthy environment is not something that citizens can take for granted. Although individuals

arguably have less influence on their environment than they do on their education or career, a better environment is nonetheless at the centre of citizens' aspirations of self-improvement. In workshops, where participants deliver speeches, share their 'dreams', and pronounce their visions of their future society, they describe a post-industrial technocratic world rich in natural resources. They do not wish to return to a seemingly more 'natural' past, but rather sustain the conviction that economic development and environmentalism can and should go hand in hand.

At What Price?

The fact that the environment is accommodated in China's agenda for economic reform is good news for Chinese and global citizens. Yet, since the environment complements—rather than contests—ideologies of development, economic growth, urbanisation, and hence social stratification, we may ask what price Chinese citizens are yet to pay before they might realise their personal aspirations and their greener 'China Dream'? ∎

Shenzhen. PC: Ken Shimoda (CC).

AN ELECTRIC PANACEA?

Oscar GALEEV

The first plug-in electric vehicle in China was introduced in 2008 by BYD, a company that back then was known only as a cellphone battery manufacturer. Now, just over a decade later, China produces and sells more electric cars then the rest of the world combined, dwarfing the European and North American markets. Made possible by massive subsidies and support from its central government, China's boom in electric vehicles is intended to counter the infamous air pollution which has come to dominate the image of Chinese cities in the global

media. Of course, environmental pollution has been on the rise in China for a long time, including the coal- and steel-driven industrialisation championed in the Maoist era. But it has increased exponentially since the launch of Deng Xiaoping's reforms from the late 1970s, and the more recent growth of the urban middle class. By 2008, the same year when the country was celebrating the 30th anniversary of the 'Reform and Opening Up' policies and rolling out its first plug-in electric vehicle, China already had around 63 million gasoline vehicles driving through its smog-choked cities.

The Case of Shenzhen

How exactly did China become the world leader in 'green vehicles' in just a decade? Consider the example of Shenzhen, China's first special economic zone. In 2009 Shenzhen was included in the central government's pilot 'Ten Cities, Thousand Vehicles' programme (十城千辆工程), which provided state subsidies to produce private electric cars as well as to expand the urban use of electric taxis and buses (today the city boasts a 100 percent electric bus fleet). The local government first allocated most of the funding to consumer subsidies and anticipated a 'trickle-up' effect on the supply chain. And this worked out just as expected in a city which, in line with its reputation as the 'world factory', was producing about 90 percent of consumer electronics globally and had a clear competitive advantage in the battery industry. By the time of the ratification of the Paris Climate Agreement in 2016, Shenzhen's success in developing electric transportation was used to demonstrate China's new 'green' face and its willingness to lead the international community in mitigating global warming and climate change. However, while this indeed helped improve the public image of China's ecological management, in what sense has the expansion of the electric cars market really been a 'green' or 'ecological' development?

Beyond the Façade

In the past few years, electric cars have come to be viewed almost as a panacea for the fossil fuel dependence and air pollution of cities. Interestingly, the success

of marketing by major manufacturers in China and the United States—most notably Elon Musk's Tesla—has given rise to a belief that the shift to hybrid and electric vehicles is not only necessary, but also inevitable. Why? Because it is perceived as healthier, and more sustainable. But what makes something sustainable locally and globally? How is responsibility for environmental protection distributed across the planet? If you ask these questions about the electric vehicle industry in China, two key structural problems come to the fore: the mining of rare earth minerals for battery manufacture, and the production of energy to power these vehicles.

First, while China has a vast domestic supply of rare earth minerals, it currently depends on imports of the minerals and metals necessary for energy storage systems in electric vehicles and consumer electronics. Some of these materials come from places like Australia, where China gets over 70 percent of its spodumene mineral, from which lithium is extracted; others, such as cobalt, are almost exclusively extracted in the Democratic Republic of Congo, whose economy is based on mining exports. As UNICEF and several human rights organisations have recently reported, cobalt mining involves severe health risks and child labour (Amnesty International 2016). But, in spite of the attention, little ever changes in the industry as cobalt supply remains essential to high-tech achievements in developed countries and, now, to China's 'green transition'.

Second, when the batteries are manufactured and used in an electric vehicle, electricity is still needed to power them, and even a cursory glance at the Chinese energy market shows just how problematic the notion of 'green transportation' is. In fact, with most of the electricity in China coming from coal, if you buy an electric vehicle in China today, you are actually doing nothing to reduce the use of fossil fuels: you are simply switching from a gasoline-powered car to a coal-powered one. As a result, Chinese electric vehicles are estimated to be the least clean in the world by net emissions.

Outsource Pollution and Health Risks

The situation, of course, is not as catastrophic as it sounds. Switching to renewable energy sources would allow electric vehicles to fulfil their potential of reducing net emissions. And there are actions being taken to gradually decrease the use of cobalt

in car batteries in China, and elsewhere. However, as is the case with many other advanced modern technologies, electric vehicle technology is ultimately rooted in the material supply of natural resources — a supply chain that is an integral part of the global inequality, corporate interests, and geopolitical tensions of our fossil fuel economies. Hopefully, electric vehicles will make Chinese cities less polluted and more liveable in the long term. But this might come at a cost of simply outsourcing pollution and health risks to areas along the chains of supply and production. So, whether this will have a positive or negative overall impact on planetary health and sustainability remains to be seen. ∎

Demolition site in Yuhe New Village Bao'an Shenzhen China.
PC: DCMaster (CC).

CAN THE MARKET PROVIDE A MORE JUST CITY IN CHINA?

Xiang LI

My research addresses the issue of the just city in China, from the point of view of equity and resource allocation in the market-oriented urban redevelopment process. Since the institutionalisation of agricultural land protection and the introduction of strict limits on rural land acquisition from the mid-2000s, the question of urban redevelopment has become even more urgent, especially in mega-cities facing acute land scarcity. In recent years, the Chinese government launched an institutional reform—the so-called 'urban consolidation' (存量规划)—which aims to address land use inefficiency, environment deterioration, increasing local government debt, and other detrimental outcomes of rapid urbanisation. Through urban consolidation efforts, the government aims to encourage higher-density development in existing urban areas and constrain low-density expansion on the urban periphery.

The Case of Shenzhen

However, in the traditional redevelopment mechanism, the land value increment was monopolized by the growth coalition formed between the local government and developers whilst the affected residents were excluded from the interest-sharing process. The unfair redistribution of interest triggered fierce social resistance and created substantial barriers to policy implementation. To address this problem, in 2009, the central government began to experiment with the 'Three Old Transformation' (三旧改造) policy—referring to the transformation of old

factories, old villages, old towns)—in Guangdong province in order to stimulate urban redevelopment. This policy incentivized the property owners to directly participate in the redevelopment decision-making process and urged local governments to focus their role as a regulating authority. In line with the experimental policies, Shenzhen initiated its own policy experiment of market-oriented urban redevelopment in the same year. Developers were incentivised to directly negotiate with property owners for land use transfer with minimal state intervention. That way, redevelopment was transformed into a mixed process of public and private transactions, led by the developer-owner negotiations. While the local government charged the developer a fee for land use that was far below the market rate, the rest of the profit generated from the redevelopment process was to be shared, by negotiation, between the two contracting parties (i.e. the developers and affected residents).

Through this interest-sharing mechanism, the local government intended to deploy greater market power to redistribute resources, while improving equity among the stakeholders. However, this experimental policy yielded unexpectedly poor results in all the pilot residential redevelopment cases in Shenzhen.

My research investigated the institutional arrangement as well as the redistribution of interest in these experimental cases. Through these case studies, I identified institutional obstacles from the perspective of formal institutional arrangements and informal institutional constraints. From the formal perspective, the poor design of institutional arrangements and the lack of complementary policies to curb opportunism has led to a vacuum in land use policy, causing severe project delays. From the informal perspective, the local government's authoritarian approach to urban governance, developers' reliance on close guanxi (i.e. 'personal networks') with the government, and residents' conflicting beliefs towards market-oriented mechanism, hampered the redevelopment.

All these key stakeholders showed a failure to adapt adequately to the market mechanism. The local government, as the market regulator, consistently shirked its responsibility to monitor the conduct of developers; developers, meanwhile, failed to transform from a partner of the local government to a service provider for the affected residents. The policy of needing 100 percent agreement from residents for land assembly resulted in a power asymmetry between residents and developers; many residents in turn were opportunistic in their attempts to maximise their individual profits by strategically refusing to cooperate in negotiations.

Thus, institutional obstacles from both formal and informal constraints distorted the operation of the market and increased transaction costs.

An Unequitable Mechanism

Another key finding was that the resource reallocation mechanism essentially contradicted the principle of equity, by which those who drive greater benefits are expected to pay more. Developers expect to obtain huge economic returns despite the massive investment they need to make in the initial stages of a project. After the original dilapidated housing was demolished, the sitting owners, without any capital input, obtained new, larger apartments for resettlement in the same location, thus offering substantially improved living conditions and property value. Despite playing merely a regulatory role in principle, the local government effectively obtained more than 15 percent of the land from the redevelopment, free of charge, for the construction of public facilities and infrastructure, greatly enhancing the urban environment it is tasked to manage. This interest distribution goes against the equity principle, and as such, the equitable reallocation of interest among stakeholders cannot be fulfilled.

One must therefore conclude that the current market-oriented institutional reforms have not positively contributed to social equality or the establishment of a more just city. Indeed, facing such poor outcomes, the Shenzhen government has backed away from this market-based policy experiment and returned to a government-led approach. It thus appears that these market-oriented efforts were merely intended to address a crisis created by the contradictions of rapid urbanisation, rather than proactively striving to establish a more just process for urban development. This research suggests that in China, even proactively market-oriented efforts can ultimately contribute to maintaining and enforcing the power of the state. ■

SOIL POLLUTION CONTROL IN CHINA: A PROSPECT

Kai YANG

I began to work as a university researcher on soil pollution prevention and remediation in China in May 2016. In the same month, the State Council released a nationwide Action Plan for Prevention and Control of Soil Pollution, known as 'Soil Ten Chapters' (土十条) (State Council 2016). Although soil contamination is a serious problem—in 2014 it was reported that 16 percent of the soil in China was polluted (Ministry of Environmental Protection 2014)—this was the first time that nationwide soil pollution prevention and control goals were proposed. After the Action Plan was announced, a market for soil remediation promptly emerged, and to fill the legal void, in August 2018 the National People's Congress passed a new Law on Soil Pollution Prevention and Control. Despite this regulatory mechanism the new market faces a range of challenges, two of which I will discuss here.

Applicability of Standards

The first challenge is to establish environmental quality standards for soils, i.e. upper limits for acceptable soil contamination or, alternatively, targets for soil cleanup at contaminated sites. In August 2018, two new soil environmental quality standards, i.e. standard GB 15618–2018 for soil contamination of agricultural land and standard GB 36600–2018 for soil contamination of development land (e.g. build-up areas), known as the 'risk control standards' were implemented. Compared to the previous standard (GB 15618–1995), issued in July 1995, the new standards use a more sophisticated risk-based land management approach, which accords with the
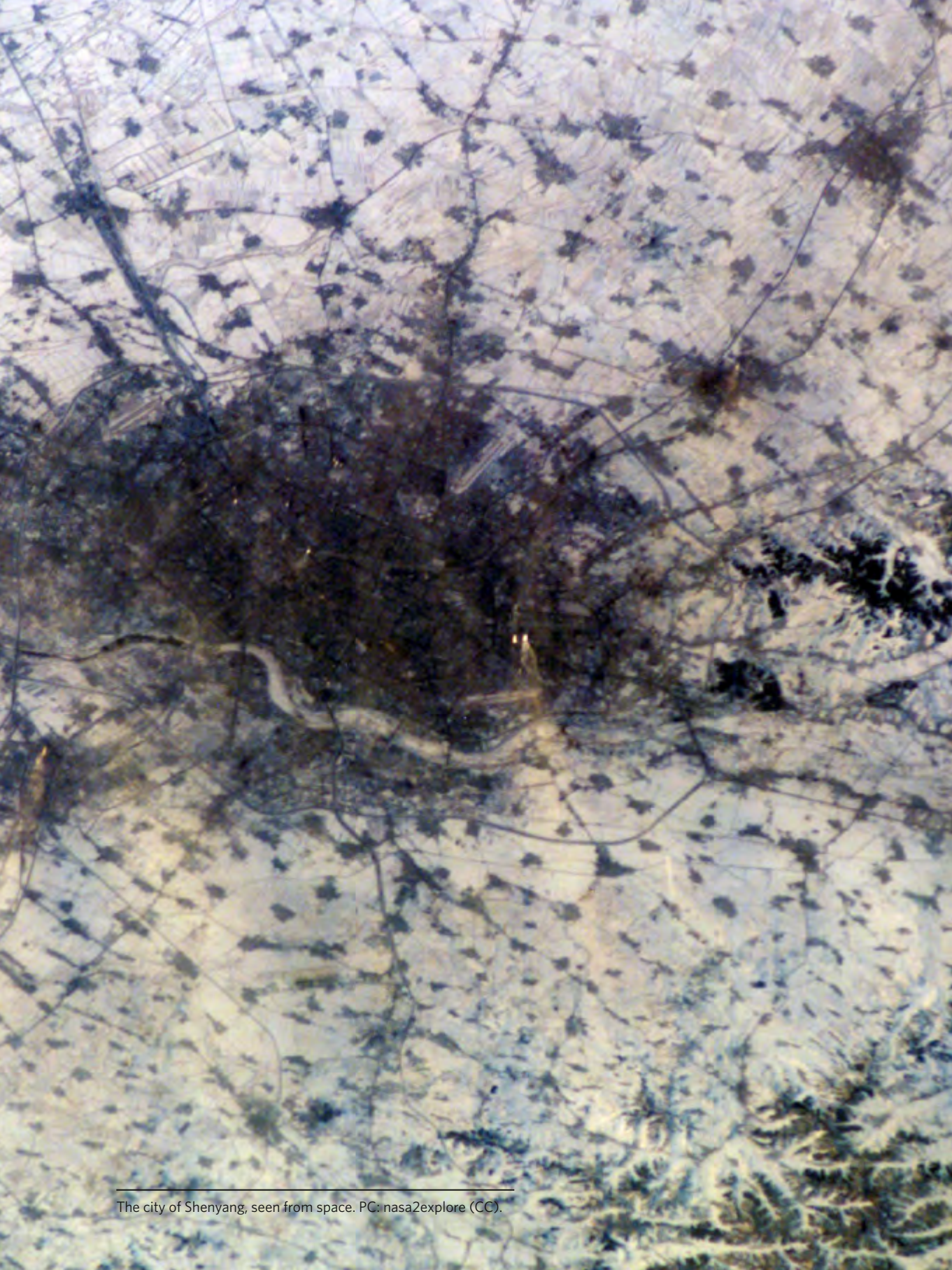
The city of Shenyang, seen from space. PC: nasa2explore (CC).

principle of prevention first, protection priority and risk management required by the Soil Ten Chapters action plan. Risk screening values and risk invention values for soil contamination are established in the standard. The concentrations of contaminants in the soil can be compared with the screening/invention values to assess the risk of exceeding the standard for agricultural products in agricultural land or the risk of exceeding the acceptable limit for human health in development land.

In contrast, according to the old 1995 standard, the threshold values for soil contaminants were based on the total amounts of such substances and classified the soil into different quality categories. That classification method failed to meet the principle of risk management and control for soil contamination of agricultural land, neither was it applicable to development land. However, can the new standard cater for all contaminated sites? One controversial case is the remediation of contaminated sites in areas rich in heavy metals, such as in Guangxi and Hunan provinces. One possible solution would be to establish provincial standards that take into account the high background concentrations of heavy metals in the local natural soils.

Towards a New Model?

The second challenge is who bears responsibility for the contaminated sites, which also partly determines where the capital for remediation comes from. In 2017, the Chinese authorities established the legal principle of 'those who cause pollution are responsible for cleaning it up'. However, while it might be easy to identify polluting enterprises as the direct sources of pollution, it is harder to quantify the relative responsibility (e.g. planning and enforcing regulations) of local governments, particularly in regions with a legacy of contamination. With respect to the remediation capital, the polluting enterprises are of course required to pay for the remediation. But this is usually far less than is necessary to deal with the remediation. So where else can the capital be sourced? The national government already allocates significant amounts of money every year to contaminated site remediation. But in addition to this, the Soil Ten Chapters plan proposed that a public-private partnership model should be introduced to attract private capital (e.g. real estate developers) for soil pollution control. For example, the government could select eligible private investors through competitive procedures, and then pay the private investor a fee after the achievement of remediation goals. The government

might then cooperate with the private investor in developing the restored land into business projects, such as parks and tourist attractions, sharing the profits and potentially using part of this to offset some of the remediation costs. The other option for financing the soil remediation, as proposed by the Soil Ten Chapters plan, is to develop green finance, which refers to financial services provided for economic activities that are supportive of environmental improvement, climate change mitigation and more efficient resource utilisation (People's Bank of China 2016). For over a decade, China has thus played a leading role worldwide in establishing a sound green financing mechanism, and the Chinese authorities are currently scaling up their efforts in this area.

In conclusion, soil pollution control and remediation is an emerging market in China. While China has been learning from foreign countries such as the United States and Australia, at the same time it has been steadily developing a unique model of contaminated site remediation that can potentially set an example for the world in future. ∎

BRIDGING INDIGENOUS KNOWLEDGE WITH CONTEMPORARY WATER MANAGEMENT

Ting WANG

Two main approaches have emerged in current debates about water management: a bottom-up approach emphasing 'indigenous' knowledge, and a top-down, 'scientific' approach, typically led by the authorities. In China, indigenous knowledge, accumulated and practiced at the local level across generations, might be summarised in the idiom 'living with nature' (天人合一). As this type of practice is relatively moderate and non-interventionist on the local landscape, it was seen as inefficient by those advocating modern water management practices based on 'hard science', especially since the onset of the reforms in the 1980s. As a consequence, much indigenous knowledge has been lost, or is preserved only disparately at local sites across China. How might we recover such indigenous knowledge and apply it to contemporary urban contexts? This essay uses recent developments in water management practices in the Lake Tai region of southern Jiangsu province as a case study on how indigenous knowledge might be incorporated into contemporary water management, with reference to the current state policy known as 'eco-civilisation' (生态文明).

'Soft' Approaches to Water Management

Under the influence of the discourse on eco-civilisation advanced by China's central government since 2007, the Suzhou municipal government constructed a series of artificial wetlands in the Lake Tai region with the aim of restoring local ecosystems. This is not a unique practice, as many artificial wetlands and parks are emerging across the country as part of a 'soft approach' trend in water management. The Lake Tai case is of particular interest, however, as local authorities have enriched these artificial wetlands with plants and reeds carefully selected on the basis of traditional fishing and water management practices. Reeds used to dominate the local landscape: fisherman used them as roofing material and as tinder for their cooking stoves. Meanwhile, the reeds were also known to be beneficial for the local water habitat, providing nutrients and protection for local fish and shrimp, stabilising the waterfront soil, and catching pollutants brought in by the tide.

[Figure 1] A group of workers hired by the district government to bundle reeds on the shore of Lake Tai during the winter. PC: Suzhou Wuzhong District Tai Lake Tourist Area management team, 2018.

Despite the Suzhou government's enthusiasm for engaging with indigenous water management practices, the local population was sceptical of this new 'soft' approach. Most of the local fisherman reacted with resignation, some even objected to the newly constructed wetlands because of the cost involved and the fact that some villages needed to be relocated as a result. Moreover, as the life of local fisherman has gradually become disassociated from the reeds since the 1980s, when gas cooking first became popular, the proposed methods for their maintenance have become contested. Villagers recall that in the past the shafts of reeds used to be stronger, because the plants were regularly harvested for cooking and other purposes. Traditionally, fisherman from different households would regularly cut and bundle reeds along the waterfront and then transport them to the village to use for cooking, house building, and boat making. Nowadays, most fishermen have already ceased this custom. Only every winter, the tourist administration hires workers to cut the reeds and burn them later (Figure 1).

It is clear that reeds have come to serve only a decorative function and are treated as a public good, as a part of the wetlands national park. In other words, a lack of traditional knowledge and incentives among local fisherman regarding the maintenance of the reeds has caused the plants to grow thinner and more sparse, undermining their ability to purify the water and restore the shoreline ecology, which were the original objectives of the municipal government. More importantly, even though the local wetlands landscape seems to have been physically revitalised and integrated into contemporary water management, the underlying relationships between the local landscape and everyday life remain detached.

Potential Adaptations

Although the practices promoted in the Lake Tai region have proved somewhat controversial, they indicate the potential of adapting indigenous knowledge to contemporary environmental management. First, the case highlights how the facilitation of such indigenous knowledge is not only the domain of government agencies but should mobilise a range of actors, such as local communities, civil society organisations, environmental NGOs, and professionals. All these stakeholders hold specific knowledge and maintain particular interests in the local context, which

forms a particular 'ecosystem'. Second, further research is needed in order to broaden the perception of water management from exclusively 'hard' engineering to 'soft' cultural landscape practices reflecting particular social relationships and shaped by broader political and economic contexts. By doing that, the collective memories and values of local landscapes can be leveraged to mediate between different stakeholders, whose underlying interests and knowledge on water may diverge, so as to form more sustainable water management practices in the future. ∎

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