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Photo Essay: Deng Xiaoping's Failed Reform in
1975-1976

Michael T. Rock and Michael A. Toman, *China's Technological Catch-Up Strategy: Industrial Development, Energy Efficiency, and CO₂ Emissions*,

New York, Oxford, Oxford University Press, 2015, 274 pp.

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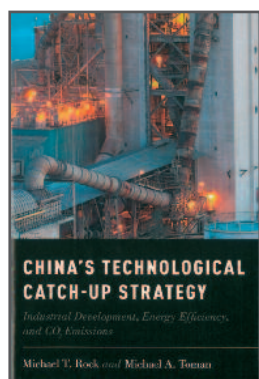
among women in contemporary Chinese society. No longer raised on the pronouncements of the symbolic father figure as they were during the Mao era, they must seek fulfilment through their sons and against their own instincts.

The book's conclusion examines the specificity of relationships between the Party-state and the market, and between the latter and the ethical question expressed in the "grassroots" demands of citizens. This analysis situates the Chinese experience within a broader framework and poses questions about the structural integrity of the two conflicting sides that comprise our new historicity: a globalised financial economy on one side, and the demands and rights of the human subject on the other, signalling the tensions, practices, and nature of the conflicts, where, paradoxically, the subject of rights is both market commodity and ethical subject.

The groups, social categories, and collective movements presented in this publication make frequent reference to an ethic of conviction and responsibility. These citizens and volunteers are the salt of the earth, building the civil society of the future. Monique Selim's anthropological approach has the unique benefit of showing us, at close quarters, their ability to observe and analyse, allowing them to express what they feel the threats are, and the multitude of ways to ensure that their rights are recognised.

■ Translated by David Buchanan.

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Michael T. Rock and Michael A. Toman, China's Technological Catch-Up Strategy: Industrial Development, Energy Efficiency, and CO₂ Emissions, New York, Oxford, Oxford University Press, 2015, 274 pp.

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In the first decade of the twenty-first century, China acquired the world's second largest economy and became the top carbon dioxide emitter as well as the leading consumer of energy. The future of the planet's climate is thus bound up with the Chinese economy's evolution.

Therein lies the interest in the work of Michael T. Rock and Michael A. Toman, who take stock of evolution in four industries – aluminium, cement, iron and steel, and paper – that have contributed substantially (at least the first three) to the country's transformation and are among the highest CO₂ emitters in China. While industry as a whole accounts for 60% of China's CO₂ emissions, the four sectors cited represent nearly 60% of industrial emissions. *China's Technological Catch-Up Strategy* seeks to understand – by examining these four high-energy consuming industries – the impact of technological upgrading on the Chinese economy's energy efficiency and CO₂ intensity.

It is clear from the outset that the Chinese economy's energy efficiency has been increasing over the past three decades. This can be seen from the fact that between 1980 and 2010, the Chinese economy's CO₂ intensity fell from nine kg to three kg of CO₂ per dollar of GDP created, while that of industry slid from 18 kg to a little more than three kg.

Such an evolution was possible because of deliberate public policies. Right from the early 1980s, the authorities put in place energy efficiency criteria in a certain number of industrial sectors and included adherence to these criteria in the checklist for evaluating cadres. China inaugurated an industrial restructuring policy that took the form of a vast programme of mergers and acquisitions with the slogan "grasp the large, let go the small." Despite some difficulties in implementation, this modernisation strategy deeply transformed the four industrial sectors studied in this book.

Between 1985 and 2010, CO₂ intensity in cement production fell by 36% (p. 69), that of iron and steel by 64% (p. 105), of aluminium by 49% (p. 145), and of paper by 57% (p. 182). The differences between the levels of emissions obtained and what would have corresponded to the reference scenario were considerable. Thus in 2010, cement factories prevented the emission of 904 million tonnes of CO₂ into the atmosphere (p. 70), iron and steel factories about 2.5 billion tonnes (p. 106), aluminium firms nearly 175 million tonnes (p. 135), and paper mills about 185 million tonnes (p. 179).

What the authors say regarding cement production holds almost word for word for the chapters on the three other sectors and summarises the book's conclusions. Rock and Toman note that "none of this would have been possible without a strong central government committed to a pragmatic approach to industrial development and high-speed technological learning in energy intensive industries" (p. 73).

The results obtained through detailed study of the four branches are confirmed by statistical studies presented by the authors. They show that higher energy prices combined with investment in new technologies and formation of larger companies led to diminution of energy intensity (p. 208).

Of course, this does not mean CO₂ emissions have fallen in absolute value, but simply that there is now a decoupling between growth in GDP and that in greenhouse gas emissions. Between 1971 and 2011, China's GDP rose 33-fold, from US\$127 billion to US\$4,195 billion, with an average annual growth rate of a little over 9.2%, while during the same period, energy consumption rose from 392 million tonnes oil equivalent to 2.727 billion tonnes, a 6.9-fold increase, with a growth rate of almost 5%. Given these conditions, it is possible to better understand why in climate negotiations, China systematically stresses the need to take into account intensity indicators. The 12th Five-Year Plan (2011-2015), for instance, aimed to reduce CO₂ emissions by 11% per unit of GDP.⁽¹⁾

China is by far the planet's top CO₂ emitter and will remain so for a very long time. With 10.3 billion tonnes of emissions, it accounts for nearly a third of global emissions (35.3 billion tonnes). Besides, China's per capita emissions are nearly eight tonnes, equivalent to the level of the EU's 28 countries (France being a bit lower at five tonnes).

Of course, some of these figures need to be regarded with caution: in early November 2015, it was learned that Beijing had massively underestimated

1. For more details on these figures, see Jean-Paul Maréchal, "La Chine et le climat. Mur de l'environnement et bras de fer sino-américain" (China and Climate: The Environment Wall and Sino-US Tussle), in Pierre Alary and Elsa Lafaye de Micheaux (eds), *Capitalismes asiatiques et puissance chinoise* (Asian Capitalisms and Chinese Might), Paris, Presses de Sciences Po, 2015, pp. 95 and 107.

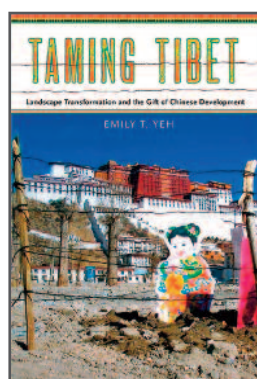
coal consumption in the 2000–2012 period. The result: in 2012, Chinese CO₂ emissions had to be reassessed at one billion tonnes,⁽²⁾ or nearly thrice the total French emissions! Nothing too surprising in this discovery, given that an article published in 2012 showed that based on data supplied by local statistics departments, China in 2010 emitted 1.4 billion tonnes of CO₂ more than it was declaring.⁽³⁾

The book by Rock and Toman containing meticulous analyses, several graphs, tables, and concrete examples constitutes an interesting contribution to a debate that is far from over.

■ Translated by N. Jayaram.

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2. Chris Buckley, "China Burns Much More Coal Than Reported, Complicating Climate Talks," *The New York Times*, 3 November 2015.
3. Dabo Guan, Zhu Liu, Yong Geng, Sören Lindner, and Klaus Hubacek, "The Gigatonne Gap in China's Carbon Dioxide Inventories," *Nature Climate Change*, No. 2, 2012, pp. 672–675.



Emily T. Yeh,
Taming Tibet: Landscape Transformation and the Gift of Chinese Development,
 Ithaca, London, Cornell University Press,
 2013, 344 pp.

VALENTINA PUNZI

Studies about the economic development of China's western regions have mainly focused on the central government-driven plans carried out since the post-1980 reform period and intensified during the last decade. However, without a much-needed historical assessment of earlier development projects started in the 1950s, the China Western Development (*Xibu da kaifa*) program launched in 2000 and the most recent One Belt One Road (*Yi dai yi lu*) initiative promoted last year have often been mistakenly presented as sudden sprouts without seeds.

In her insightful work, *Taming Tibet: Landscape Transformation and the Gift of Chinese Development*, Emily Yeh contributes to filling this gap with an excellent monographic study that explores the topic of development in the circumscribed location of Lhasa City and its environs over the long stretch from the 1950s to the 2000s. Through a detailed account of Chinese policy changes during this period, she analyses the interconnections among physical, economic, and social transformations that affected the historical and religious capital of Tibet.

The main argument of the book is that from the beginning, the Chinese state enterprise's coercive development strategies were conceived as acts of benevolence and that development itself was "offered" to Tibetans as an irrefutable gift to establish effective national rule in Tibet. Drawing on the Maussian theory of the gift, the author maintains that through the disguised act of disinterested giving, Chinese development is given to Tibetans as a

gift that generates obligation and indebtedness, while bringing with it a high expectation of being reciprocated with gratitude and loyalty.

Based upon historical sources, policymaking analysis, and ethnographic fieldwork, Yeh effectively shows how development has been deployed by the Chinese state as both a theoretical principle and an applied strategy aimed at the territorial incorporation of the Tibetan land and its inhabitants. In this sense, the purpose of any Chinese development project carried on since the 1950s ultimately entails a hegemonic discourse that – beyond its merely economic purpose – assumes and in fact demands that Tibetans should appreciate the gift.

The book exposes the consequences of different development projects and outlines the social and economic dynamics involving Tibetans, the state, the land, and Han newcomers over the course of 60 years. The author identifies three phases of government intervention in Tibet, and more specifically in Lhasa, each characterised by a single development focus, respectively: state farms, greenhouses, and house building. This long narrative is arranged around these three thematic and chronological nuclei, poignantly named soil, plastic, and concrete, which over time have reconfigured Lhasa from originally being the very centre of Tibet to its present status as a geographic, cultural, and economic periphery in need of development.

The first part, "Soil," deals with the earliest phase of development (1950s–1980s) and the first transformations of the Tibetan landscape through the institution of state farms, with the introduction of new modes of production and the initial cultivation of the land that involved the joint efforts of the Chinese army and the local people. In terms of centre-periphery relations, the first years witnessed the best period in the history of the region: the enthusiasm animating both the Han soldiers and the local Tibetans working in the state farms sustained relatively good ethnic relations that rapidly deteriorated afterwards, following the increasing symbolic and effective conquering of the land.

This part of the book sheds light on many pieces of diversified memories from that time that have been often silenced in the Tibetan exile communities, including, for example, the improvement of gender equality thanks to the inclusion of women in farming work. Extracts from interviews and memories vivify and contextualise the historical reconstruction of this and the next two parts of the book: the constant shifting between concrete micro-examples of biographical experiences and broader political issues offers a complex and complete narrative to the reader, and this alternating macro-micro lens authenticates the accuracy of the historical and political analysis.

In the second part, "Plastic," the chronological focus is on the 1990s, a critical phase of transition from state economy to market economy at the national level that had a direct impact on development strategies in Tibet. State farms were progressively abandoned, and a growing number of Han migrant workers from Sichuan Province took over the emerging market of greenhouses that spread through the suburban villages around Lhasa.

The author provides an insightful analysis of the interdependence of multiple political, economic, and cultural levels of discourses and practices that, following the introduction of greenhouses, marked Tibetans' overdetermined condition of marginalisation in vegetable farming and markets (p. 121). For Tibetans, the decollectivisation of agriculture essentially entailed not only nonparticipation but also a progressive exclusion from the new lines of market-led development.

With Han immigrants replacing the previous direct intervention of the state, the issue of Tibetan development became further connected to ethnic tensions, and the naturalisation of the increasing presence of Han workers