

**Tao Xu 徐涛, *Zisingche yu jindai Zhongguo* 自行车与近代中国
[*Bicycles and Modern China*]**

**Shanghai: Shanghai renmin chubanshe 上海人民出版社, 2015.
406 pp. RMB ¥65, paperback.**

**Valentina Fava, *The Socialist People's Car: Automobiles,
Shortages, and Consent in the Czechoslovak Road
to Mass Production***

**Amsterdam: Amsterdam University Press, 2013. 196 pp. € 29.95,
paperback.**

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The study of artifacts ranging from trains, ships, artillery, automobiles, small cameras, and phonographs to aircraft is a welcome addition to academia in recent years. Scholars are interested in the cross-cultural exchange of artifacts and their influence on different societies. The introduction of new types of transport, in particular, tends to bring about systemic, society-wide change. This review examines two types of intercultural communication about technological artifacts in two books. The first book, *Bicycles and Modern China*, authored by young Chinese historian Tao Xu, discusses the history of bicycles and their role in shaping China during its transition from a semicolonial, semifeudal state to a modern country. The second book, *The Socialist People's Car*, written by Valentina Fava, takes a close look at automobiles in Czechoslovakia from 1918 to 1964, a period in which the country was emerging as an industrial power in Eastern Europe. Both works are explorations of the history of transportation and of technology's impact on society. Both authors, while focused on different time periods, research methods, and geographical areas, are interested in the ways in which imported foreign artifacts have affected and transformed society and everyday lives in their respective countries.

While automobiles have become more prevalent than bicycles, which are no longer as eye-catching, China has never really lost its crowning title of “bicycle kingdom.” Despite this, the history of bicycles is almost unknown among Chinese people.

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Tao Xu's *Bicycles and Modern China* offers an in-depth study of the history of this two-wheeled mode of transportation. Xu considers bicycles as imported goods from the West and delineates how their entry changed Chinese society through "the western culture communication to China." To do this, he adopts the research methodology advocated by Wiebe E. Bijker called the social construction of technology (SCOT) approach. Xu's book covers eighty-one years of history, throughout the late Qing Dynasty to the Republic of China and modern China. During those years, China experienced unprecedented changes. China launched the self-strengthening movement (1861–94) after the Opium Wars in 1840, and bicycles were introduced to China from the West in 1868. The introduction of bicycles led to profound and extensive changes within Chinese society.

Xu's book discusses the development of bicycles at a technical level, covering topics such as the status of bicycle imports, the bicycle industry, bicycle riders, the bicycle business group, and the various uses and applications of bicycles including military, travel, adventure, and entertainment. It also meticulously demonstrates how the image of the bicycle transitioned from a diabolical and wicked contraption to a sign of Westernization and civilized device and then to a daily means of transportation. He carefully examines the ways in which bicycles clashed with Chinese culture and specific domestic conditions and how they continued to grow and become more accepted by people until they were fully integrated into the daily life of Chinese society. In doing so, he reflects on the evolution of modernity in China by looking into people's aesthetic tastes, social psychology, habits, and concepts of consumption.

In his in-depth analysis of how imported Western objects transformed modern China, Xu is specifically concerned about the bicycle's function, and he emphasizes that the application of a technology in society depends not only on the technology itself but also on the deep interaction between technology and its users as well as their cultural context. In addition to the general public, he focuses on global travel adventurers and cyclists among the bicycle users in order to present the versatility of bicycles in modern society. In addition, he also turns his attention to various groups, including those who buy, sell, manufacture, repair, rent, and even steal bicycles for their livelihoods.

The introduction of a new mode of transportation tends to bring systemic changes to local regimes. One of the more interesting aspects of Xu's study is that he goes beyond simply the users of bicycles. He further explores how the public reacted to the challenges posed by urban traffic and then reshaped a new sociopolitical order when the nation was in the midst of a rapid transition from the late Qing dynasty to the Republic of China within the framework of traffic management, license consumption, and security. Among these new social orders, the traffic police department and traffic laws were important characteristics of modern traffic management. Of course the history of automobiles and aircraft also affected the history of the bicycle in the sense that it shared these new traffic management strategies. Taking modern Shanghai as the center of his study, Xu successfully reconstructs a holistic process in which China became a "kingdom of bicycles" alongside the rise of urban modernization and modern consumption.

Overall, with material from a large number of original archives and rich details, Xu's thorough analysis of the cultural images of bicycles illustrates—on various levels—the progress of modern industry in China, the conflicts between Eastern and Western cultures, power struggles and nationalism, and their effect on ordinary

people's lives. However, I would point out a number of areas in which the author might have done more. First, regarding geographical reach, the author might have considered incorporating research beyond the limits of Shanghai. Second, one cannot help but feel that the author missed an opportunity to consider how the bicycle case might have played out in comparison with the history of other artifacts in China. Finally, there could have been more continuity between chapters. The first seven chapters of the book appear to be independent research, and because of how the various actors such as bureaucracies, bicycle associations, ordinary citizens, and municipal manager were intertwined, it is difficult to see the traces. It similarly weakens the book's analysis and limits the book's readability.

The automobile and the bicycle are two kinds of transportation tools that compete with each other in many societies. Compared to the mechanical, delicate, one-man riding bicycle as artifact, automobiles are not only often considered to be the symbol of a nation's technological and economic modernization but are also thought of as deeply affecting people's daily lives.

In Valentina Fava's *The Socialist People's Car*, the automobile is considered as a "product" and an "object of desire" in Czechoslovakia during the twentieth century, embedded in various economic and managerial implications. Fava's *The Socialist People's Car: Automobiles, Shortages, and Consent in the Czechoslovak Road to Mass Production* takes Škoda Auto, the leading Czechoslovak car manufacturer, as a case study and explores the role of automobiles in socialist Czechoslovakia. She focuses on the historiographical debate surrounding the circulation of technology and organizational knowledge such as the knowledge of how to manage the technological developmental activities of engineers, how to manufacture and assemble automobile components, and how to assign an employee's salary and bonus in one automobile company.

The industrialization of Czechoslovakia was influenced by three different countries. Germany influenced Czechoslovakia's initial industrialization up to 1918. Then during the First Republic (1918–38), the American model of mass production on display in the European automobile industry had a strong effect on Central and Eastern Europe and was considered the new "gospel of productivity." Later, from 1938 to 1945, Germany occupied the whole territory of Czechoslovakia. Volkswagen's mass production mode and concept of the people's car were also introduced during this time. The people's car used to refer to an inexpensive, mass-manufactured car that the working class could afford. In Czechoslovakia's first few years after the end of World War II (1945–48), the Fordist production model was transferred from the United States to automobile companies in East Central Europe, which then reimplemented the American model of mass production. In this way the people's car was brought into this model through technological innovation, improved organizational management, and increased productivity allied with the concept of production and consumption in a capitalist society for the purpose of boosting the private consumption of cars.

The Soviet Union's standardized production model then assumed the central role in Czechoslovakia's automotive industry from 1949 to 1964. Starting in 1948, the Czechoslovak economy gradually transformed into a miniature version of the Soviet planned economy model, and the automobile industry attempted to create a specific socialist technology and socialist artifact in line with the "Soviet system of economic management." The concept of a "people's car and a people's technology for a people's

democracy” prevailed in the automobile industry. In the late 1950s, investments were generating diminishing returns and required larger investments to sustain economic growth, which led to stagnant industrial production in the early 1960s.

The heated debate over differences in American and Soviet approaches to mass production from the standpoint of organization, management, and the form of production practices never stopped in Czechoslovak factories. Eventually, the application of the Soviet model of economic management led the Czechoslovak industry to disastrous results in the 1960s, which a later reform attempted to rectify. Subsequently, the government formulated a reform plan to prepare for the emergence of a new economic model to correct the negative effects of the Soviet economic model on the Czechoslovak economy. In October 1964, the party issued a series of major economic reform principles, which also marks the point in time at which the book reaches its conclusion.

However, it seems that the rapid decline in investment returns within the industry and the lack of investment itself in the 1960s accelerated the end of socialism on the surface. The informal practices meant to conquer the bottlenecks resulting from the planning process and the industry’s accumulated advanced technology capability were not enough to save this country’s automobile production.

In terms of methodology, Fava’s study reviews the factors that affected the Czechoslovak automotive sectors based on materials available in company records and national archives. Fava successfully reconstructs the development of the Škoda company structure and changes in production technology. She describes the historical process in which the Czechoslovak automobile industry adopted the organizational work methods first from the United States and later from the former Soviet Union. She also discusses how the adoption of the decision-making process and the automobile production level influenced all hierarchical levels of the industry. By analyzing the technical and travel reports written by engineers working at various levels of bureaucracy, the book examines the limitation of technicians—even their expertise and know-how could not fully influence the production of a technology or decide on a factory’s development strategy. Because of the fact that most of the automobile factories in Czechoslovakia, under the veil of the planned economy, were short of decision-making powers regarding production, distribution, and structures, the existing legacy of the experts’ technical and organizational knowledge did not immediately translate into the Chandlerian organizational capabilities essential to the efficiency and innovative capacity of enterprises. On the contrary, from 1960 to 1964, Dubček became the first secretary of Czechoslovakia and began a series of reforms to improve the technology and organizational model of the automobile industry in order to rectify the default modes implemented by the former Soviet Union. The investments to the automobile industry helped modernize vehicles but failed to bridge the gap between the promise of socialist ideology and the reality of the factories.

Fava’s book offers a grand perspective (macro-level view) of transnational history. Fava shows special interest in the influence of the former Soviet Union’s socialist ideology on the endogenous industrial development of affected countries. The above context of her emphasis on the Czechoslovak technical experts’ adherence to the glory of the American model of mass production is fascinating. It temporarily ends with the expert’s participation in the process of de-Stalinization in Czechoslovakia in the 1960s, after Khrushchev’s report against Stalin in 1956 was released to the world by the United States. Even though discussing the American automobile in depth, Fava mainly

proposes that the ideas of a socialist organization and technology are the product of the dictates of Soviet organization and the limitations imposed by a shortage economy, so automobile production for private consumption in Czechoslovakia was restricted and characterized by low production volumes, sparse investment, and gave priority to military and strategic production. At the same time, however, Czechoslovak experts kept continual, uninterrupted comparisons of the management mode with the American “one best way” and the latest development in the worldwide automobile industry. It turned out that the “socialist” automobile was not simply dominated by Soviet ideology. Readers will be surprised to learn that that commercial and technological relations existed and were exchanged across the Iron Curtain, even as the Cold War raged.

It must be pointed out that it would have been better had the author given a brief overview of the development of Škoda Auto and the relationship between Volkswagen and Škoda at the beginning of the book. It is a pity that this book did not provide clear background knowledge to help readers understand the history of social change in Czechoslovakia from 1918 to 1964 as well as the political, diplomatic, and economic relationship between Czechoslovakia and the Soviet Union. As a result, readers are forced to rely on supplementary materials to gain a deep understanding of the meaning of this book.

Nowadays, automobiles dominate the majority of city streets in communist China and capitalist Czech Republic, and riding colorful shared bicycles has become fashionable street culture in Shanghai. Capitalist Czech Republic and communist China have quite different cultures and tradition, as well as opposing ideologies. Taking the automobile industry during Czechoslovakia's socialist period and bicycles during China's semicolonial, semifeudal period as cultural symbols, the two books meticulously reveal the modern evolution of different types of practical technologies that closely relate to citizens' lives. However, what will stand out for many readers is the common thread that both Czechoslovakia and China have been strongly influenced by the Soviet socialist system. A comparative reading of the two books can well deepen scholars' understanding of the relationship between technology and culture. Teachers can challenge their students to examine the following conclusions: The application of an exotic technology to local cultures is never easy. These technologies evolved and eventually became fully integrated into the local social life only after a series of clashes and continuous self-adjustment. Technicians and engineers accumulated fantastic technological knowledge and organizational skill that were vital for the industry's development, but their roles were bound by the social system. The two books show that technological evolution is constantly influenced by various factors such as social ideology, economic models, and heterogeneous cultures. By a comparative reading, students will gain a deeper understanding of the meaning of technology for human existence.

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