State and Crafts in the Qing Dynasty (1644-1911)

Christine Moll-Murata
State and Crafts in the Qing Dynasty (1644-1911)
Social Histories of Work in Asia

For centuries Asian workers provided their own societies and the world with manufactures, spices, rice and many other items. Recruitment, organization and control of sufficient amounts of labour have been essential to keep the Asian economies and societies going. This series aims at looking into these dynamics in depth, acknowledging the wide-ranging variety of social trajectories including labour values and cultural connotations, ecological constraints and different degrees of market orientations. The series aims to be a meeting place between experts from a variety of disciplines; from linguistics to history and social sciences. The core ambition of the series is to explain different types of labour (share cropping, wage labour, slavery, casual or precarious labour) within a wider cultural, economic and ecological context. Topics such as guilds, circulation of labour, gender stratifications, religious and ethnic identities or modes of labour control are all relevant to this approach. Other topics may be balancing these more structural considerations by departing from the workers’ perspectives and their actions: ranging from collective action and daily resistance to life cycles and their relationship to labour. Geographically the series will cover the space from East Asia to West Asia; from Japan to Egypt.

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# Table of Contents

Conventions for the notation of time, weights, and measures 11

Acknowledgements 15

Introduction 21

1. State Engagement in the Handicraft Sector 47

2. The Qing Central Government Institutions in Control of the Handicrafts 69

3. The Rise, Decline, and Reinforcement of the Crafts in the Service of the State 109

4. Government Shipbuilding 123

5. Private Shipbuilding, Private and Government Cooperation, and Procurement Prices 157

6. The Shipbuilding Workforce Employed by the State and Private Workshops and Enterprises 183

7. Printing in the Service of the State 213

8. Private Printing, Private and Government Cooperation, and the Printing Workforce 245


10. Merchant and Craft Guilds 321

Conclusion 349

References 359

Index 391
List of Tables and Illustrations

Tables
Table 1  Artisans and workers in the Song dynasty state workshops, manufactories, and mines  65
Table 2  Yuan dynasty artisans and workers in state workshops, manufactories, and mines  66
Table 3  Ming dynasty work obligation shifts of builders according to the 1393 regulations  67
Table 4  Registered artisans in the Ming dynasty  67
Table 5  Ming dynasty Peking resident artisan positions in 1567  68
Table 6  Estimated Chinese population figures, 960 to 1640  69
Table 7  A variant estimate for population figures in the Ming and the early Qing (million persons)  70
Table 8  Handicraft regulations compiled by the Ministry of Public Works  91
Table 9  Government craft and industry schools in Peking and the provinces, 1901-1909  102
Table 10  Official positions in the Ministry of Public Works and the other ministries of the central government  107
Table 11  The Workforce at the Office of Palace Construction of the Imperial Household Department  yingzao si 营造司 in 1677  108
Table 12  Artisan workforce at the Grand Storage Office of the Imperial Household Department  guangchu si 廣儲司 in 1677  109
Table 13  Artisan workforce at the Court of Imperial Armaments of the Imperial Household Department  wubei yuan 武備院 109
Table 14  Government artisan positions in Peking  110
Table 15  Estimate of artisans in government manufactories outside Peking, eighteenth century  112
Table 16  The norm quotas of looms and artisans at the Three Silk Weavers in the early and mid-Qing  118
Table 17  Volume of tribute grain shipment in the early nineteenth century  128
Table 18  Quotas for the number of grain transport ships in the grain-providing provinces  130
Table 19  Grain ship sizes  131
Table 20  Quotas for coastal and fluvial guard and patrol ships of all sizes  136
Table 21  List of documented state shipyards  153
Table 22  Arsenals established in China, 1860-1895  156
Table 23  Ships built at the Jiangnan Arsenal  161
Table 24  Government price quotas for shipbuilding  183
Table 25  Government procurement costs for ships built in Fujian  188
Table 26  Number of workers in the Jiangnan Arsenal in 1905  201
Table 27  Daily wage rates at the Jiangnan Arsenal in 1904  204
Table 28  Regular positions in the imperial Dragon River Shipyard, Nanjing, 1553  213
Table 29  Labour force required for the construction of a Big Imperial Ship On Permanent Duty Yubei da huangchuan 預備大黃船, 1503  214
Table 30  Shipping tonnage of the China Merchants' Steam Navigation Company and the China Navigation Company (founded in 1872 by Butterfield and Swire)  215
Table 31  Output of palace edition printings, in numbers of titles, since the foundation of the Wuying dian printery in 1680  226
Table 32  Estimate of the mass of cash coins to be retrieved from 250,000 copper types used in the printing project for the imperial encyclopedia Gujin tushu jicheng (1726-1728)  249
Table 33  Provincial printing offices established in the second half of the nineteenth century  250
Table 34  Statistics of handicraft sectors in Qingdao city, Shandong, 1931-1932  287
Table 35  Position of handicraft printing and character carving among all craft trades in Qingdao, 1931-32  291
Table 36  Government wage rates for block printing and binding, 1705  292
Table 37  Government wage rates for the production and setting of copper characters for the Imperial Encyclopedia Gujin tushu jicheng, 1726 and 1728  293
Table 38  Government wage rates for block printing, binding, and ornamentation of books and covers at the printeries for the emperor's personal writings, yushu chu, 1768  293
Table 39  Government wage rates for printing with wooden movable type for reprinting rare books of the 'Four Treasuries' project in the collectanea Wuying dian juzhenban [cong]shu, 1774  294
Table 40  Wage rates for block printing in the provincial printery of Zhili, 1807
Table 41  Government wage rates for copyists at the yushu chu, 1751 and 1795
Table 42  External, hired artisans’ wages for block printing in the Wuying dian, 1861
Table 43  Wage rates for Wuying dian block printing projects of the 1870s/1880s
Table 44  Carving fees paid to the external printery Zhuanyun zhai in Peking, 1884
Table 45  Synopsis: Wages for copying 100 characters at the Wuying dian
Table 46  Synopsis: Wages for carving 100 characters (government wage rates)
Table 47  Synopsis: Wages for printing 1,000 sheets (government wage rates)
Table 48  Wage rates in commercial printing for carving 100 characters
Table 49  Collections of statecraft writings, 1826-1902

Illustrations
Map 1  The territory of the Qing dynasty, ca. 1820: Provinces
Figure 1  Grain transport ship, Caofang chuan
Figure 2  Sand ship, Shachuan
Figure 3  Big Fujian ship, Da Fuchuan
Figure 4  Guangdong ship, Guangdong chuan
Figure 5  Waterways in the Qing dynasty
Figure 6  Centres of shipbuilding in the Qing dynasty
Figure 7  Construction of wooden sailing ships in the 1970s, Hong Kong
Figure 8  Compartments within the hull construction
Figure 9  The caulking procedure
Figure 10 Number of sailing ships entered and cleared in Shanghai, 1902-1941
Figure 11 Number of steamships in Chinese possession, 1882-1921
Figure 12 Tonnage of steamships in Chinese possession, 1882-1921
Figure 13 Numbers of steamships and sailing ships on the Yangzi in Sichuan, 1891-1932
Figure 14 Tonnage of steamships and sailing ships on the Yangzi in Sichuan, 1891-1932
Figure 15  Number of steamships and sailing ships on the Yu River in Guangxi, 1922-1931  218
Figure 16  Tonnage of steamships and sailing ships on the Yu River in Guangxi, 1922-1931  219
Figure 17  Position of the Wuying dian Printery within the Imperial Palace in Peking  223
Figure 18  Entrance of the Main Hall of Wuying dian  224
Figure 19  Entrance to the Wuying dian compound  224
Figure 20  Sawing the wooden types  233
Figure 21  Carving the types  234
Figure 22  Type setting. This process includes selection of the types from the type cases, placing them on trays, arranging them in the right sequence, and proofing the set forms.  235
Figure 23  Individual wooden movable types in different sizes at the Gutenberg Museum, Mainz, dating about 1860  236
Figures 24 and 25  Types on the tray, Gutenberg Museum  238
Figure 26  Design of the Printing Office of the Ministry of Finance Duzhi bu yinshua ju  247
Figure 27  Toothpick cover, collected at the ‘All-Shanxi huiguan’ (Quan Jin huiguan) in Taiyuan, April 2006  355
Conventions for the notation of time, weights, and measures

Chronology of dynasties and political rule

Shang ca. 16th-11th century B.C.
Zhou 1045(?)-256 B.C.
Western Zhou 1045(?)-771 B.C.
Eastern Zhou 771-256 B.C.
Warring States 403-221 B.C.
Qin 221-206 B.C.
Han 206 B.C.-220 A.D.
Three Kingdoms 220-265
Western Jin 265-316
Eastern Jin 317-420
Sixteen Kingdoms 304-439
North-South Division 386-588
Sui 581-617
Tang 618-907
Five Dynasties 907-960
Song Dynasty 960-1276
Northern Song 960-1126 Liao (Khitan) 907-1125
Southern Song 1127-1276 Jin (Jurchen) 1126-1234
Yuan (Mongol) 1276-1368
Ming Dynasty 1368-1644
Qing Dynasty 1644-1911

Republic of China 1912-1949
People's Republic of China 1949-
Republic of China (Taiwan) 1949-

Qing dynasty era names

Reign name of emperor Date
Shunzhi 1644-1661
Kangxi 1662-1722
Yongzheng 1723-1735
Qianlong 1736-1795
Jiajing 1796-1820
Daoguang 1821-1850
Xianfeng 1851-1861
Tongzhi (regent and de facto ruler: Empress Dowager Cixi) 1862-1874
Guangxu (regent and de facto ruler: Empress Dowager Cixi) 1875-1908
Xuantong (Child emperor Puyi, regent: Zaifeng) 1909-1911

Weights and volume

1 ge 合 0.1035 l in the Qing, 0.0987 l in the Ming, 0.0836 l in the Yuan, 0.0585 l in the Song
1 sheng 升 (peck) 10 ge 合, 1.035 l (Qing), 0.987 l (Ming), 0.836 l (Yuan), 0.585 l (Song)
1 dou 斗 (pint) 10 sheng 升, 10.35 l (Qing), 9.87 l (Ming), 8.36 l (Yuan), 5.85 l (Song)
1 qian 錢 (mace) 3.73 g
1 liang 兩 (ounce) 10 qian, 37.3 g
1 jin 斤 (catty) 16 liang (in most, not all regions), 596.8 g (Qing), 590 g (Ming), 633 g (Yuan and Song)

shi 石 as a measure of volume
1 shi of rice = 138.75 catties (jin 斤) = 82.8 kg
shi 石 as a measure of weight
1 shi = 120 catties = 157.896 pounds = 71.5 kg [1 pound = 0.453 kg]
1 catty = 1.3158 pounds (kuping 庫平 or imperial standard)
1 ton = 2240 pounds = 1702.3863 catties
shi 石 as a measure for ship capacity, according to its quality as measure of weight
250 shi = 30,000 catties = 17.5 tons
500 shi = 60,000 catties = 35 tons
1,000 shi = 120,000 catties = 70 tons
1,500 shi = 180,000 catties = 105 tons
2,000 shi = 240,000 catties = 140 tons
3,000 shi = 360,000 catties = 210 tons
4,000 shi = 480,000 catties = 280 tons
5,000 shi = 600,000 catties = 350 tons
6,000 shi = 720,000 catties = 420 tons
7,000 shi = 840,000 catties = 490 tons
8,000 shi = 960,000 catties = 560 tons

Currencies

**tael**: *liang* (ounce) of unminted silver, 100 percent purity (unless otherwise stated): 10 *qian* (mace)

*Kuping liang* 庫平兩: 37.31 grams, imperial standard set by the Board of Revenue, used for official accounts. Many other regional *liang* weights exist, such as the Customs ounce (*haiguan liang* 海關兩): 37.68 grams, adopted after the Maritime Customs was established in 1858, used for tariff.

*Canton weight ounce* (*Guangping liang* 廣平兩): 37.57 grams

*Transport weight ounce* (*caoping liang* 漕平兩): 36.54 grams, the standard for commuting tax in rice

**cash**: *wen* 文, brass coin, copper-lead-zinc-tin alloy, with standard exchange rate 1000 cash to one tael of silver. Many regional and local variances of conversion rates existed legally and illegally. The cash was bound in ten strings of hundred and is sometimes accounted in strings of thousands (吊).

*yuan* 圆 (Chinese dollar): 10 *mao*. Exchange rate 0.75 yuan to one tael of silver.

*British pound*: Before 1871, fixed at 1 £ per 3 tael *haiguan liang*, or 6 shillings 7 pence per *haiguan liang*.²

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² Peng Xinwei, *A Monetary History of China*, p. 762. For the exchange rates after 1891, see p. 763.
Acknowledgements

This book has been developed over a span of time and at several academic institutions where I had the opportunity to pursue my research. The idea originated from a DFG (German Research Council) project that I coordinated under the direction of Professor Hans Ulrich Vogel at the Institute of Chinese and Korean Studies of Tübingen University between 2000 and 2003. Our research focused on handicraft regulations (jiangzuo zeli 匠作則例), a type of source defined by the art historian and connoisseur Wang Shixiang 王世襄 (1914-2009). These regulations are made up of texts and lists of the parts of buildings and the products for official use, often with specifications and prices, sometimes with norms on the working times for objects or services. The project ended in a large workshop and the publication of a collected volume of articles that explored handicraft regulations for the issues of technical, monetary, administrative, and financial history, with comparative perspectives on the history of European craft production.1 Personally, this was a most inspiring initiation into the world of technical administration from the seventeenth through the early twentieth centuries and into the scholarly company of technical and craft historians within China and abroad. In the course of that project, I was lucky enough to be introduced to the important Beijing groups of the Qinghua University Institute for Ancient Technical Texts (Qinghua daxue Kejishi ji gu wenxian yanjiusuo 清华大学科技史暨古文献研究所, ‘Kegusuo’) and to the Institute for the History of Natural Sciences of the Chinese Academy of Sciences, the (Zhongguo kexueyuan Ziran kexueshi yanjiusuo 中国科学院自然科学史研究所 ‘Keshisuo’). I learned a lot from the members of these groups of scholars, who also attended the Tübingen workshop in 2003.

Yet, as instructive as the explorations of handicraft regulations were, these sources require great effort to draw out a historical narrative. As tools for contemporary Qing administrators and technical supervisors of building or production projects, they were more often lists of ingredients rather than recipes, intended to serve the purposes of informed people and therefore rarely opening up a wider frame of knowledge on the objects they describe. What was their purpose? Who constructed or produced them, and under what conditions? Together with Song Jianze and Liu Qiang from the Qinghua University Kegusuo, and on the basis of Wang Shixiang’s first

1 Moll-Murata, Song Jianze, Hans Ulrich Vogel (eds.), Chinese Handicraft Regulations of the Qing Dynasty.
survey, I collected the titles of some two hundred handicraft regulations. I used some of them for my research on imperial building projects and became curious about the larger frameworks, the institutions that employed the craftspeople, and about the craftspeople themselves.

My next research appointment led me to Utrecht University in the Netherlands, where Jan Luiten van Zanden and members of the Research Group Economic and Social History within the History Department are conducting global comparative research on issues of economic and social history. This unfolded a new academic field for me and enabled me to place Chinese craft history in a wider context. Not only were the regulations and precedents put to good use, since information on wage levels and the cost of transportation and materials could be gleaned from them, but I also had the chance to explore the field of private craft production from the perspective of the Chinese guilds in comparison to their European counterparts. My stay at Utrecht consisted of two years full of intellectual stimulation and challenges which initiated my turn towards comparative Eurasian history. Together with Jan Luiten van Zanden, I visited the eminent economic historian Li Bozhong 李伯重 at Qinghua University and the Department of Economics at the Chinese Academy of Social Sciences 中国社会科学院经济研究所, where I had the chance to meet Xu Jianqing 徐建青, to whose research on Chinese crafts in the Qing dynasty this study owes much inspiration and insight.

This study was thereafter accepted as a habilitation thesis by the Faculty of Cultural Studies at the Eberhard Karls University of Tübingen. Meanwhile, a further engagement in the Netherlands had opened the doors of the International Institute of Social History (IISH) for me, where I coordinated its newly founded research group known as the Global Collaboratory on the History of Labour Relations, 1500-2000 (the ‘Collab’) for one year. The then research director of the IISH, Marcel van der Linden, kindly suggested including this thesis in one of the Institute’s series, Social Histories of Work in Asia, and I found a sharp-sighted and circumspect editor in Ulbe Bosma, who patiently steered me through the rewriting process. Harriet Zurndorfer from Leiden University read the entire manuscript and gave valuable advice on how to polish the arguments and restructure the presentation. My research at the IISH, in the framework of the methodical approach of the Collab, made me recalibrate and take a wider perspective on work and labour in the Ming and Qing, the Republic, and the People’s Republic of China. From the Collab’s steering group – which consists of Jan Lucassen, Marcel van der Linden,

2 ‘Union List of Handicraft Regulations of the Qing Dynasty’.
and Karin Hofmeester – and from its many participants, I learned much about the world of labour in space and time.3

Heiner Roetz gave me the opportunity to take up the position of Academic Reader at the Faculty of East Asian Studies at Ruhr-Universität Bochum. A period of intensive teaching ensued, with an interruption of a three-month respite for research in the summer of 2016 which enabled me to work on the manuscript in a concentrated manner. For this opportunity, I am grateful to the IISH’s present research director, Leo Lucassen, and the vice research director, Karin Hofmeester, and for the support in Bochum by Jörn-Carsten Gottwald and Andrea Halbmeyer. At last, this book can be presented to the general public, edited under the guidance of Saskia Gieling from Amsterdam University Press.

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3 See the list of participants, as of 2012: https://collab.iisg.nl/c/document_library/get_file?p_l_id =273223&folderId=277142&name=DLFE-144108.pdf
for introducing me to Wang Shixiang and his wife Yuan Quanyou 袁荃猷 (1920-2003) in their Beijing home. I greatly cherish the discussions with these fine scholars, both in Beijing and in Germany.

Among the several occasions I had for presenting aspects of my research, I would like to point out in particular the 2010 workshop at the Max Planck Institute for the History of Science in Berlin conducted by Dagmar Schäfer in her Workshop Discussion Series ‘Technological Cultures: Themes and Methods in the History of Technology’. In a more intimate setting, I had a long and enlightening conversation with the technical and social historians of Japan, Erich Pauer and Regine Mathias, about the Japanese government shipyards at Yokosuka in the Meiji period and the feasibility and usefulness of China-Japan comparisons. Moreover, Wolfgang Behr’s erudite explanations about the etymology of terms relating to crafts and craftspeople were extremely useful to me.

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Cheers and praise to all my companions in research and in life who saw the growth of this study and accompanied me for parts – or the entire process – of its development. Any errors that might remain in the book are my own.
Map 1  The territory of the Qing dynasty, ca. 1820: Provinces

Design: Bettina Dilger
Introduction

Since the People's Republic of China joined the World Trade Organization in 2001, its exports of manufactured goods have soared to a degree that earned it the label of the ‘workbench of the world’.¹ This study offers a retrospective view from the early modern situation of handicraft manufacturing in China to the beginnings of industrialization, spanning the period from the seventeenth through the early twentieth centuries when China was ruled by the Qing dynasty. The perspective is on the interior organization and the efficiency of the state administration relevant to the sector of craft production.

Regarding internal social, political, and economic processes, some scholars argue that until about 1800, China stood on an equal level with those overseas powers that came to rise in the era of industrialization and imperialism. However, forty years later, the Chinese state was forced to cede absolute legal power over import and export decisions in subsequent warfare and treaties. Thus, the centuries between 1700 and 1900, when the Manchu Qing dynasty ruled China, witnessed decisive changes and turning points. This concerns the state economic policies as well as economic activities in the private sector. How did the government accomplish craft production, and what were the reactions of the private producers and distributors? How did industrialization set in, and how did it change government decisions and household strategies?

The author first studied the impact of the Qing state on handicrafts, with a special focus on public construction, in a research project on ‘Staat, Handwerk und Gewerbe in Peking, 1700-1900’.² The main source materials for this project consisted of the so-called jiangzuo zeli or ‘handicraft regulations’, official documents and compilations that previously received little scholarly

¹ In 2009, China ranked first in world merchandise exports, and in 2015 its manufactures made up 94.3 percent of its total exports. See World Trade Organization (ed.), International Trade Statistics 2015, p. 25, World Trade Statistical Review 2016, p. 44 ff., and ‘Trade Profiles: China’ for the 2015 data. Recently, some observers argue that Chinese manufacturing has already passed the stage of being a mere ‘workbench’. See for instance Jennifer Hudson, 1000 New Designs, p. 8 [2006]; Lin Chaoyi et al., ‘Die 100 innovativsten Unternehmen aus China’, p. 149 [2014]; Martin Wocher, ‘Explaining China’s Buying Binge’ (16 March 2016). The assertion is that Chinese producers not only execute given designs but also develop their own ones (Hudson), that their focus shifts to innovation and improvement of quality (Lin), and that Chinese investors increasingly acquire high-end production plants abroad (Wocher).

² ‘State and Handicrafts in Peking, 1700-1900’, DFG project VO 472/10, Tübingen University, Institute for Chinese and Korean Studies.
attention but are now being increasingly appreciated. Between 1997 and 2007, these sources were reproduced in several large reprint series. Together with colleagues from Qinghua University, the author established an inventory of all known handicraft regulations.³ Up until the present, these administrative references, account books, and cost estimates have proved to be a valuable source of information, for instance in the hands of architects and historians of architecture who analyze and rebuild historical buildings in the course of initiatives for the preservation of Chinese cultural heritage. Handicraft regulations also contain information relevant to socioeconomic history concerning wage norms and structures of cooperation and supervision together with the rules of conduct within the palace precincts.

If seen as an integral group of texts, these handicraft regulations clearly show which productive sectors were of concern to the state administration, and they convey insights into the norms of accountability and quality control. Although similar compendia are known from periods prior to the Qing, their number and broad coverage of craft sectors are unique. However, so far they have not been widely taken into account. Before outlining the issues of relevance for the pertinence of state administration to craft production, it is necessary to consider the state of the field as regards the economic and technical history of the late imperial era.

Current Approaches to Chinese Economic History

Three influential paradigms have shaped the reception of the economic history of late imperial China since the foundation of the People’s Republic in 1949.

In the first three decades of the People’s Republic of China, Chinese Marxist economic historians concentrated on the question of why an indigenous industrial capitalism did not develop in China in the course of the period of commercialization of the sixteenth century, whereas in Western Europe similar developments prepared the ground for the emergence of capitalism. The theory of the so-called ‘sprouts of capitalism’ has engendered a great amount of valuable empirical research on Chinese craft production as well as the only overviews of craft history in Chinese up to this date. However, the question as to why full-fledged industrial capitalism had not set in before the advent of Western imperialism remains inconclusive. In view of the actual developmental path of the Chinese

³ ‘Union List of Handicraft Regulations of the Qing Dynasty’.
economy that includes moderate development under socialism and a subsequent trend to world market integration, the approach of identifying the characteristics of ‘sprouts of capitalism’ has subsided. As Timothy Brook observed in 1999, since the 1980s, ‘incorporation [of capitalism] rather than transcendence [is] the current concern’ for Chinese scholarly research in the social sciences. ⁴

As economic reforms reopened Chinese markets to the capitalist world, and in consideration of the economic success of China’s neighbouring countries Japan and the four ‘small dragons’ South Korea, Taiwan, Hong Kong, and Singapore, certain traits of economic behaviour and social ethics of the merchant or entrepreneur class were ascribed to the common ‘Confucian’ heritage of these nations and polities. ⁵ The theses of ‘New Confucianism’ or ‘Post-Confucianism’, formulated by the Chinese American-based scholars Yü Ying-shih and Tu Wei-ming, quite astonished researchers in the West, who were aware that throughout the twentieth century, Marxist and non-Marxist scholarship had blamed Confucianism, and especially its family values, as a hindrance to capitalism and modernity. The New Confucian about-turn away from the negative image of Confucianism to a positive and dynamic set of values (from the perspective of a capitalist and industrialized society), with a paradigmatic figure such as the ‘Confucian merchant’, gave a more optimistic view of Chinese history, especially for the nineteenth century, which according to the Marxist Party orthodoxy had merely been an era of stagnation. ⁶ Now Confucianism was seen as a stimulus for capitalism similar to the Protestant ethic that Max Weber had identified as the driving force behind the rise of Western capitalism. Weber’s explanation of the question of why China had not developed an indigenous capitalism, which was attributed to a ‘religious inner-worldliness’ and the despotic power of Chinese officialdom, was thus ‘turned on its head’ (Zurndorfer) by Yu and Tu’s focus on the impact of Confucian merchant ethics for the commercialization that started in the sixteenth century. ⁷

A third, historically revisionist theory on the position of China in the eighteenth-century global economy has been developed by the so-called ‘California School’, especially its representatives Roy Bin Wong and Kenneth

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⁴ Timothy Brook, *Capitalism*, p. 156. Nevertheless, the concept is still being discussed and applied by certain researchers, such as for instance Ma Yong, ‘Xiandaihua qidian’ (2015) and or Wang Haiming ‘Zibenzhuyi mengya gainian fenxi’ (2016).

⁵ For a perceptive analysis of the revision of the role of ‘Confucianism’ in Chinese politics, society, and economy, see Harriet Zurndorfer, ‘Confusing Confucianism with Capitalism’.

⁶ Brook, *Capitalism*, p. 154.

Pomeranz. This school comes to the conclusion that with regard to a variety of crucial economic factors, such as demography, capital accumulation, labour systems, markets, rural production, consumption, and even technology, China and Europe were on a more or less equal level before a transitional phase of 1750-1800. According to this line of thought, until the mid-eighteenth century, Western Europe was not uniquely productive or economically efficient from a global perspective, and it seems most likely that until the middle of the eighteenth century, no part of the world was headed for an industrial breakthrough. It was more or less contingency, namely the convenient location of coal in England as well as the products of overseas colonies, especially American cotton, that enabled Great Britain to launch its industrial revolution. This view (as a whole or in its components) has caused much controversy in Europe, the U.S.A., and China. It has, for instance, triggered a debate between the representatives of the California School and those who see the traditional Chinese state as being inherently inefficient in promoting technological advances and responsible for continuous involution of the economy since the mid-eighteenth century. This opposition to the California School has found its most prominent representative in Philip C.C. Huang, who considers the situation in China during the eighteenth century as the beginning of an economic disaster that was overcome only in the last two decades or perhaps even continues to this day. Experts of European economic and social history remain sceptical as to whether European and Chinese incomes and standards of living around 1800 in the most advanced Chinese and Western European regions were actually on a par. Other historians not related to the California School have nuanced the idea that the imperial state acted as an impediment to economic development, claiming that it made positive or at least reasonable contributions in particular phases of the Qing dynasty.

8 Pomeranz, The Great Divergence; Wong, China Transformed; Rosenthal and Wong, Before and Beyond Divergence.
13 See, for instance, Helen Dunstan’s arguments for the basically good conditions for policymaking during the Qianlong period, despite the emperor’s autocratic propensities, in her State or Merchant, p. 468 ff., or Jane Kate Leonard’s study on the handling of the Grand Canal Crisis in the 1820s, Controlling from Afar, p. 251 ff.
The above three paradigms focus on agriculture, commerce, and manufacturing to varying degrees. Early Marxist historiography emphasized the rise of commercial capitalism; the study of Confucian merchants by itself sees commerce and merchants as the most important driving forces of the economy. The paradigm of the Great Divergence takes the entire economy into focus but in the case of manufacturing it stresses the rural and predominantly textile handicrafts, which constituted the biggest segment of craft production during the Qing dynasty. Yet the state interfered relatively little in that field. Consequently, economic history writing, especially that of the California School, hardly takes into account the state regulations on urban craft production from which the present study sets out.

In their overview of the economic situation in the early Qing, Wang Yeh-chien and Ramon Myers define three distinct fields of the economy: the state sector or ‘command economy’; the subsistence sector or the ‘natural’, ‘customary’ economy; and a small, urban ‘private’ or ‘commercial’ sector that produced for the market. In quantitative terms, they estimate that about three-quarters of the production of China’s ca. 272 million rural population in the mid-1780s was bound for the self-supplying or ‘customary’ economy, and the remainder for the market economy. These two sectors were closely interrelated and expanded together. According to Myers and Wang, the early Qing state intervened in the market economy in order ‘to win the allegiance of the people, prevent local power holders from becoming too wealthy and influential, and ensure social order.’

Approaching the situation from the perspective of the Qing government, its economic policies were aimed at keeping an increasing population fed and were occupied by methods that were labour and yield-intensive but not capital-intensive. The state promoted agriculture in combination with handicraft production in a system of small-sized, independent producers, where the household farm formed the principal unit for taxation. The most basic pattern was that of the tilling man and the weaving woman, respectively producing grains and textiles. Protoindustrial household production for the market was deemed tolerable for the representatives of the state, yet specialization in artisan activities was regarded as undesirable,

16 Ibid., p. 643, 644. According to these authors (p. 536, with reference to John Hicks, *An Outline of Economic History*), the customary economy relates to traditionally established practices and conventions, as opposed to the market economy and the command economy.
17 Ibid., p. 591.
especially if the gendered division of labour eroded in the process. The Confucian state doctrine in general also expressed a disdain for commerce. However, merchants held an important position as distributors and brokers, and the importance of their cooperation with the state and its officials was perfectly clear to the central government. In the expanding commercialization of the sixteenth century, merchants gained increasing political and social influence. The most successful among them could afford to have their children schooled in the Confucian scriptures, and to have them participate in the official examinations with the possibility of entering officialdom. This might allow their descendants to rise to higher social positions and cross the demarcation between the two opposing social and functional groups.\(^9\)

In Western historical research, state and merchant elites are often pitted against each other. This is clearly expressed in the title of Helen Dunstan’s study on the eighteenth-century Chinese grain trade, *State or Merchant?* (2006). The same dichotomy can be found in Susan Mann’s *Local Merchants and the Chinese Bureaucracy, 1750-1950* (1987), which focuses on tax farming, a ‘liturgical’ service in Max Weber’s sense that the merchants provided the government, and Wellington Chan’s *Merchants, Mandarins and Modern Enterprise in Late Ch’ing China* (1977). The study field that aimed at defining the ‘Confucian merchant ethics’ in the 1980s and 1990s focused on the role of the merchants in the Chinese state and society. Much less research is available on manufacture, handicrafts, and the position of artisans. Thus, the present study intends to provide insights into why the social status of the crafts and craftspeople remained lower than that of commerce and merchants throughout the Qing dynasty.

**The Perspective of Technical History**

Chinese craft history pertains not only to the socio-economic field but also to technical history. In the framework of the history of science and technology, the main impulse for a huge, comparative overview came from the West and must be credited to Joseph Needham (1900-1995). Many of the volumes of the series *Science and Civilisation in China*, which he commenced in 1954, deal with craft technologies such as construction in wood, earth, and

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\(^9\) Esherick and Rankin in *Chinese Local Elites and Patterns of Dominance*, p. 12, include merchants as an important element of their ‘elite’ concept next to the gentry, who are defined by examination degrees and potential access to positions in the bureaucracy.
stone;\textsuperscript{20} shipbuilding;\textsuperscript{21} paper making and printing;\textsuperscript{22} military technologies;\textsuperscript{23} textile technologies;\textsuperscript{24} the processing of food and beverages;\textsuperscript{25} and ceramic production.\textsuperscript{26} Volumes on mining and salt production have appeared recently or are in preparation.\textsuperscript{27} In Japan, a chronological series on the history of Chinese science and technology has been edited by Yabuuchi Kiyoshi at the Research Institute for Humanities (Jim bun kagaku kenkyūjo 人文科学研究所) of Kyōto University. After some of the volumes of \textit{Science and Civilisation in China} were translated into Chinese, a comparable Chinese project was launched and is nearing its completion.\textsuperscript{28} The volumes of another series recently edited by Lu Yongxiang are more focused on handicrafts and traditional arts and crafts.\textsuperscript{29}

Some of the contributions to \textit{Science and Civilisation in China} contain information on the living and working conditions of the artisans and also distinguish between their work in the service of the state and their private production for the market.\textsuperscript{30} In the volume on Mechanical Engineering, for instance, Joseph Needham gave a concise historical overview of the social

\textsuperscript{21} Ibid., ‘Nautical Technology’, pp. 379-699.
\textsuperscript{28} \textit{Zhongguo ke xue jishu shi} (History of Science and Technology in China), general editors Lu Jiaxi (1915-2001), Guo Shuchun, and Li Jiaming. Beijing: Kexue chubanshe, since 1991. 30 volumes are planned, of which 27 were recorded in the electronic catalogue of the National Library of China (Beijing) as of September 2017. The volumes that pertain to technical subjects concern Mechanics, Architecture, Bridge-building, Mining, Textile Technology, Ceramics, Paper and Printing, Traffic, Military Technology, and Metrology.
\textsuperscript{29} \textit{Zhongguo chuantong gongyi quanjī}, with volumes on folk handicrafts (2007); research on traditional machines (2006); papermaking and printing (2006); carving (2005); silk weaving and dyeing (2005); gold, silver, and fine gold crafts and cloisonné (2004-2005); ceramics (2004); Chinese \textit{materia medica}; and fireworks (2004).
backgrounds of engineers and artisans in the imperial workshops and in household or small-scale family workshop production up until the Ming dynasty.\textsuperscript{31} Thus, although the main concern of the works in this series is not primarily on social or economic issues, they nevertheless serve as indispensable guides to technical questions and Western and Chinese comparative perspectives.

Recently, studies that combine technical, cultural, and socio-economic approaches have shown in ever greater depth and detail the wide range of Chinese material culture and work organization during the late imperial era.\textsuperscript{32} In addition to the series \textit{Science and Civilisation in China} mentioned above, Schäfer (1998), Piontek-Ma (1999), and Kuhn and Schäfer (2002) have published studies on the imperial manufactories for silk processing, while Harriet Zurndorfer researched the cotton sector (2009 and 2011). Francesca Bray has examined more broadly women’s work and handicraft in her work \textit{Technology and Gender: Fabrics of Power in Late Imperial China}. For building, next to Ruitenbeek’s classical study on carpentry (1993) and Knapp’s multiple volumes on popular housing (1986, 1993, 1994), Bodolec’s work on the architecture of cave dwellings and vault construction constitutes outstanding and original research. Money casting technologies are one of the aspects of the Tübingen research group ‘Monies, Markets, and Finance in China and East Asia’ based at the Tübingen University Institute for Chinese and Korean Studies, and have been researched by Burger (1976, 2005), Vogel (1983, 2005), and Hartill (2003). Publications on the printing sector have become a most prolific field in recent years. Important contributions that combine technical, sociological, and economic aspects have been brought forth by Brokaw (2007), McDermott (2006), Reed (2004), Chow (2004), and Chia (2002).

\textbf{Chinese Craft History}

Research on Chinese craft history in the framework of social and economic history is from a fairly recent date. After early studies from the 1920s and 1930s, notably the investigations on artisans in the service of the state by Ju Qingyuan,\textsuperscript{33} or the pioneering work on the Chinese guilds by Quan

\begin{itemize}
\item \textsuperscript{32} The social history of craftspeople in early imperial China has been researched in the masterful book by Anthony J. Barbieri-Low, \textit{Artisans in Early Imperial China} (2007).
\item \textsuperscript{33} Ju Qingyuan, ‘Handai de guanfu gongye’ (1934), \textit{Tang Song guan si gongye} (1934), ‘Yuandai xiguan jianghu yanjiu’, ‘Yuandai xiguan jianghu yanjiu buyi’ (1935).
\end{itemize}
Hansheng,\textsuperscript{34} which could also draw on early American social survey approaches by John Stewart Burgess and Sidney Gamble, a lapse in scholarship ensued due to war and revolution.

Book-length analyses of Chinese handicrafts from the first decade of the People’s Republic of China are rare. One notable exception is Chen Shiqi’s study on the Ming dynasty crafts.\textsuperscript{35} The early 1950s were a time of collecting and editing source materials, such as the series on the transition to mechanized production by Yan Zhongping and Peng Zeyi. In the next phase of research, starting around 1955, economic and social historians arranged research on the crafts within the framework of the five-stage model of development from the slaveholder society to communism that had been formulated by Guo Moruo and slightly altered by Lü Zhenyu on the basis of Marx and Stalin’s historical periodizations.\textsuperscript{36} The discussion on the beginnings of capitalism was an attempt to justify the existence of socialism in China, which according to the five-stage model should have been preceded by a phase of capitalism. Because an indigenous industrial capitalism did not arise in China without the intervention of the imperialist powers, Chinese researchers explored the phenomena of commercialization and commercial capital since the sixteenth century. They concentrated on the marketing structures in the commercial sector and also on labour relations and the issue of free wage labour as an indicator of proletarization and thus capitalism. The combined research efforts in this line of thought appeared in essay collections on crafts, commerce, and social relations from the Song to the Ming and Qing periods.\textsuperscript{37} The last of these, \textit{Zhongguo zibenzhuyi de mengya} (The sprouts of Chinese capitalism), was edited by Xu Dixin and Wu Chengming and published in 1985, at a time when the debate had once more gained momentum and then slowly faded out.\textsuperscript{38} It has been translated into English and constitutes to date the most detailed craft history of Ming and Qing China in that language, even if its main research interest was not crafts but capitalism.

The Cultural Revolution caused a standstill in academic pursuits in the field that lasted more than a decade. Since the 1980s, in the process of the

\textsuperscript{34} Zhongguo hanghui zhidu shi (1934).
\textsuperscript{35} Chen Shiqi, Mingdai guan shougongye de yanjiu (1955).
\textsuperscript{36} Brook Capitalism, pp. 134, 150.
\textsuperscript{37} Zhongguo ziben zhuyi mengya wenti taolun ji (1957), Zhongguo ziben zhuyi mengya wenti taolunji xubian (1960), Zhongguo ziben zhuyi mengya wenti lunwen ji (1983).
\textsuperscript{38} Although the model is nowadays frequently criticized for the inherent expection that China should have developed a European type of capitalism, variant opinions that do not downrightly reject this paradigm can be found also in the more recent discourse, for instance Cao Shouliang, ‘Zhongguo zibenzhuyi mengya yanjiu lilun jichu bianxi’ (2011), p. 255.
shift from the socialist command economy to a ‘socialist market economy’, the field of economic studies and economic history has broadened and the number of scholars increased. Since the beginnings of academic research in economic history in the People’s Republic of China, the focus had been on agricultural production and landownership. Currently, more and more scholars have extended their research to topics in the commercial and financial sectors like markets, commodity circulation, banking, and credit in the past and present.

The research on handicrafts since the 1980s has brought forth monographs and theses that have specialized on the craft landscape of particular regions such as Jiangnan, Suzhou, and Huizhou in Anhui and on particular eras such as the Yuan dynasty, or on particular craft branches such as cotton spinning and weaving. Topical issues such as the transition from ‘traditional’ to ‘modern’ artisans and crafts have been addressed in the theses and monographs by Kong Jingyuan, who also reflects upon the role of handicrafts and manufacturing in socialist China; by Yu Tongyuan, who stresses the transformation of the artisans’ skills; and by Peng Nansheng, one of the most important and productive craft historians who takes particular interest in socio-economic change, having published a comprehensive study on the Chinese guilds of the late nineteenth and early twentieth century. At present, research is increasingly concentrating on the modern social, economic, and technical history related to traditional craft production in the twentieth century, on craft production by the different ethnic groups in China, and on the skills of contemporary craftspeople who have preserved the knowledge of traditional techniques. This is connected to the activities to safeguard the Intangible Cultural Heritage, which, as defined by the UNESCO, includes ‘traditional craftsmanship’ (chuantong shougongyi).

39 Li Bozhong, Jiangnan de zaoqi gongyehua (2000); Yu Haiping, Songdai Jiangnan shougongye fazhan yanjiu, Ph.D. Diss. (2005).
40 Duan Benluo and Zhang Qifu, Suzhou shougongye shi (1986).
41 Zeng Ling, Ming Qing Fujian shougongye jingji yanjiu, Ph.D. Diss. (1991).
46 Yu Tongyuan, Chuantong gongji (2012).
48 UNESCO, ‘Text of the Convention for the Safeguarding of the Intangible Cultural Heritage’ (‘Baohu fei wuzhi wenhua yichan gongyue’), Art. 2, Sect. 2 e. The list of crafts acknowledged by the UNESCO since 2008 as ‘Elements on the Lists of Intangible Cultural Heritage’ in China
In the Republic of China on Taiwan, outstanding research on sixteenth and seventeenth-century craft production has been formulated by Luo Lixing.49 Billy Kee-long So from the Chinese University of Hong Kong has published studies about the Song export ceramics industry in South Fujian in the framework of his research on Chinese economic institutions and spatial patterns.50

No scholarly overviews of Chinese craft history appeared in Mainland China prior to 1981. Since then, representative works by Tong Shuye (1981), Zhu Cishou (1988-1990), Liu Guoliang (1990-2003), Ji Ruxun (1998), Zheng Xuemeng (2002), Wei Mingkong (ed.) (2004-2005), and Liu Yongcheng (2000) have appeared. Moreover, about a dozen material collections on guilds have been published, and Peng Zeyi’s important source collection Zhongguo jindai shougongye shi ziliao 1840-1949 has been reprinted, which despite its title contains valuable materials from the Qing dynasty prior to 1840.

The relation of state and crafts is discussed in these volumes from a long-term perspective. Looking at the three most important of these overviews, several changes in the research perspectives in the course of more than forty years emerge.

The first of these histories, Tong Shuye’s Zhongguo shougongye shangye fazhan shi (History of the development of Chinese crafts and commerce), was published posthumously. Tong Shuye (1908-1968) was a specialist in ancient and early modern Chinese history, historical geography, and art history. His scope of research was very broad and included topics such as painting, ceramics, and porcelain. In his early years, Tong taught at several universities and colleges in Shanghai. Between 1945 and 1949, he worked as the section head of the Historical Department of the Shanghai Museum, and in 1949 he became a professor of history at Shandong University.51 Tong’s work, the first continuous Chinese narrative on craft history, represents a typical view from the first decade of the People’s Republic of China. As such, he was obliged to discuss the elements of incipient capitalism in the Qing

includes eleven items, for instance, specific types of architectural and naval carpentry, printing, and textile crafts (see UNESCO, ‘Elements on the Lists of Intangible Cultural Heritage’), while the National List of ‘Representative Cultural Heritage’ in China proclaimed by the State Council between 2006 and 2014 comprises more than 200 crafts (see Zhonghua renmin gongheguo Wenhua bu, ‘Guojiaji fei wuzhi wenhua yichan daibiaoxing xiangmu’).

49 Luo Lixing, Shiliu shiqi shiji shougongye de shengchan fazhan (1997).
51 Zhao Zhongwen, Zhongguo lishixue da cidian, p. 522; Wang Xinghua, ‘Tong Shuye xiansheng er san shi’.
dynasty. Tong explains the rise of capitalism in conjunction with the decline of registration of artisans in the mid-sixteenth century, but he emphasized that until the First Opium War (1839-1842), these ‘sprouts’ were not very robust. He presents the Qing period as a time of ‘long-lasting stagnation’, which was mainly due to the fact that the Manchu Qing, ‘a backward tribe’ (luohou buzhu 落后部族), invaded and ruled the Middle Plains (i.e. China proper). Tong charges that great damage was brought about by the Jurchen (the ancestors of the Manchu and rulers of the Jin dynasty, 1115-1234) in North China and the Mongols (rulers of the Yuan dynasty, 1279-1368) to all of China, causing ‘a setback of the Chinese feudal economy for two hundred to three hundred years’. The early Qing rulers, particularly the Yongzheng emperor (reg. 1723-1735), a ‘dictatorial prince of evil’ (zhuanzhi mowang 专制魔王), crushed the tender sprouts of capitalism by promoting agriculture and disregarding contemporary ‘democratic’ calls that the crafts and commerce should also be treated and esteemed as fundamental economic pursuits. According to Tong, the Manchus carried out this economic policy since they feared capitalism as a danger to their ‘tribal, feudalistic rule’. This had consequences for domestic and foreign capitalism, so that the Qing restrained foreign commerce not because of ‘nationalist’ sentiments but in order to ward off foreign capitalism. Guilds were principally mutual aid ‘citizens’ organizations’ (shimin zuzhi 市民組織) for resistance against the oppression and exploitation by the government and, as such, a continuation of the Ming citizens’ movement.

How did the government allegedly exploit the artisans? Tong stated that although the artisan corvée labour system of the preceding Ming dynasty was formally abolished by the first Qing rulers, in fact local authorities still drafted artisans to execute labour obligations. Wage levels were quite varied within and between craft branches, with the best salaries in the silk and cotton-weaving sector. Tong believed that the remuneration in state manufactories was lower than in the private sector but did not elaborate on this point.

Tong’s sweeping statements about ‘tribal feudalism’, which are no longer politically correct in today’s China, also stand in contrast to present-day knowledge of the achievements of the Qing and the Yongzheng emperor in

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52 Tong Shuye, Zhongguo shougongye shangye fazhan shi, p. 317.
53 Ibid., p. 282.
54 Ibid., p. 283.
55 Ibid.
56 Ibid., pp. 316-318.
particular, whose administrative efficiency is praised in recent scholarship both in China and abroad. This does not deny the problems caused by his autocratic government style.\textsuperscript{57} Like all his colleagues, Tong Shuye was working under extreme political pressure, and the views on political and economic causalities expressed in his work conform to the exigencies of the times.\textsuperscript{58} It is remarkable, though, that capitalism is presented here as desirable and that its presumed crushing is portrayed as a grave error of the strong state, and even that the guilds were described as an anti-government citizens’ movement. The emphasis on these points is so distinct that one may speculate that Tong was making an underlying historical analogy at a time of the most intensive state and party control of all intellectual pursuits.\textsuperscript{59}

Zhu Cishou’s \textit{Zhongguo gudai gongye shi} (History of Chinese traditional industries) superseded Tong Shuye’s account in length and depth. Born in 1922, the author received his Bachelor’s degree in economics at the Chongqing Central University in 1946, and in 1949 he graduated from the Department for Industrial Economy of Qinghua University in Peking. From 1950 to 1952, he worked as an editor of the journals \textit{Zhongguo gongye} (Chinese industry) and \textit{Shengchan yu jishu} (Production and technology). He started his academic career at the Department of Economics at Fudan University and was assigned to teach labour organization and wage payment in industrial enterprises at the Department for Industrial Management of the Shanghai College of Finance and Economics (\textit{Shanghai caijing xueyuan}). In August 1958, he was once again transferred to an editorial position at the Economics Department of Shanghai renmin chubanshe (Shanghai People’s Publishers). In November 1978, he returned to a professorship at the Shanghai College of Finance and Economics.\textsuperscript{60}

\textsuperscript{57} Pierre-Etienne Will, \textit{Nourishing the people}. See Rowe for the Yongzheng emperor’s relationship with his high-ranking officials (William T. Rowe, \textit{Saving the World}, pp. 50–52); Spence for the tolerance shown by the emperor in an attempted anti-Qing rebellion (Jonathan Spence, \textit{Treason by the Book}); and Madeleine Zelin, ‘The Yung-cheng Reign’, pp. 190–191, p. 229 for his activist administrative style.

\textsuperscript{58} A website that is dedicated to his relationship with his teacher Gu Jiegang mentions that in the initial ‘movement for the remodelling of intellectuals’ thought’ (\textit{zhishifenzixianguizao yundong}) 知分子思想改造运动 [in 1954], he was forced to commit self-criticism, but his declarations were refused nine times, until he finally renounced Gu Jiegang’s School of Historical Criticism, ‘Discriminations of Ancient History’ (\textit{gushibian pai} 古史辨派). See ‘Tong Shuye’. Further information on Tong’s relationship to Gu Jiegang and on the political pressure he was exposed to is given in his biography authored by his daughter Tong Jiaoying, \textit{Cong lianyu zhong shenghua}, Chapters 3, 5, and 6.

\textsuperscript{59} Tong Shuye, \textit{Zhongguo shougongye shangye fazhan shi}, p. 372.

\textsuperscript{60} All information from the frontispiece of \textit{Zhongguo gudai gongye shi} and the postface, pp. 987–989.
Zhu's book is the first of a three-volume series on ancient and early modern crafts and on industrialization published between 1988 and 1990. He started research for this work in the 1940s and included the latest archaeological findings for the prehistorical and early historical periods.

For the Qing period, the choice of sources does not diverge so markedly from Tong Shuye's account, but due to the more relaxed political circumstances, Zhu Cishou could offer a more nuanced and full account of the crafts during the Qing. Taking a chronological approach, the work introduces 'state crafts' and 'private crafts' in separate sections. Zhu Cishou sees a peak of government-run manufactories in comparison to private crafts in the Yuan. From the Ming period on, he perceived a gradual decline of the state and a simultaneous rise of the private commercial sector, together with the decline – or rather 'destruction' – of the natural, self-sustaining subsistence economy. According to Zhu Cishou, capitalism arose especially in the mining and smelting, ceramics, and spinning and weaving sectors. He attributes this to the fact that the government sector was corrupt and the private sector active and productive. The elements of capitalist production present in the Chinese economy during the Ming and Qing were a transition from private handicraft workshops to craft manufactories, which no longer supplied end users but used contractors and distributors to trade China-wide and overseas. According to this narrative, commercialization brought the natural subsistence economy to an end.

In its harsh criticism of the overall performance of the Qing dynasty, Zhu's work stands in the tradition of the 1950s and 1960s economic historiography. Since the existence of hired labour is an important indicator of capitalism, Zhu took great care to quantify the number of people employed in large-scale manufactories, salt wells, and mines.

The most recent series of Chinese craft history, Zhongguo shougongye jingji tongshi (General economic history of the Chinese crafts), published in four volumes between May 2004 and May 2005, was edited by Wei Mingkong (born 1956). The section on the Qing was written by Xu Jianqing (born 1951). Wei and Xu are colleagues at the Department of Economics of the Chinese Academy of Social Sciences in Peking. Since this work was written by a group of authors who all are experts of the specific periods they treat and who had newly revealed materials at their disposition, the work was extended to more

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61 Zhu Cishou, Zhongguo gudai gongye shi, p. 7.
62 Ibid., p. 44.
63 Ibid., p. 43.
64 Ibid., pp. 798-801.
than twice the length of Zhu Cishou’s history. While the structure resembles that of its precursor, with a presentation in chronological, dynastic order; separate treatment of ‘official crafts’ and ‘private crafts’; and subsequent sections with industrial monographs; there has been a great improvement in depth and detail.

For these authors, ‘sprouts of capitalism’ no longer constitute a research objective for the Chinese economy. The term does not occur in Xu Jianqing’s account. Instead, she studies the ‘development’ or ‘growth’ of the handicraft sector. In her analysis, during the Qing, the official sector with its imperial manufactories, palace workshops, and monopoly industries like salt and iron production shrank compared to earlier periods. However, rather than heaping blame on the Qing rulers or bureaucracy, as most studies in the first three decades of the People’s Republic of China do, she presents this tendency as an inevitable consequence of the expansion of the commercial market. It can be considered as a kind of ‘decline’, but she also discusses the advantages that the shift from production under control of the state bureaucracy to production in ‘free’ enterprises entailed for both the suppliers and for the government as a customer. Thus, she arrives at a more balanced evaluation of the function of the state and the stimuli it gave to craft production by concentrating the most skilled craftspeople in its manufactories and by controlling the quality of their products. When these technical and administrative skills spread to the civilian craft branches, they could surpass the state sector in which, due to the specific problems of bureaucratic recruitment and remuneration, corruption was widespread, especially in the nineteenth century. The author also looks beyond the mid-nineteenth century divide but finds the state largely lacking the vigour to revive its former handicraft manufactories that had been destroyed in the Taiping rebellion.

Approach and Research Questions

This overview of Chinese craft historiography – especially the growing appreciation of (or rather the diminishing blame directed at) the Qing administration for its policies towards craft production – brings up several questions that will be addressed in the present study.

The first concerns the efficiency of the Qing state in its direct and indirect control of the crafts and industries during its entire rule. The
Chinese craft histories that focus on the early and mid-Qing state portray in a somewhat strident tone the decline of handicraft manufacturing that was directly managed by the Qing. Zhu Cishou, for instance, generalized that

The commercial sector was active, whereas in the government production, graft was practiced and money embezzled; therefore the corrupt official crafts could not continue. The official crafts of that time harassed the population in an extreme manner: What is called a ‘fair estimate of prices’ is actually cruel extortion, what is nominally ‘cash payment in mutual agreement’ is actually seizing for free.\(^{67}\)

Zhu claimed that since the government sector in the Qing dynasty was much reduced in size and in the branches it covered, it satisfied its demand of goods by purchase and requisition at regulated prices below the market level. With regard to wages, he conceded that clear regulations for wage payment existed and that the wages in the regulated sector were not lower than on the free market, yet he maintained that the positions of the workers were not absolutely free.\(^{68}\)

Even in the later historiography that takes a more appreciative view of the achievements of the Qing official crafts, the qualification of their demise still bears negative nuances, such as ‘in the latter half of the Qing, the official crafts lingered on, and under the combined pressure from the commercial sector and modern mechanization faced their last days.’\(^{69}\)

The present study argues that even if the government did not always comply with market prices and wages, and even if complaints about graft, embezzlement, and arbitrary wage deductions were common throughout the Qing dynasty, there are records of regulations pertaining to prices and wages that stipulate keeping to the market quotas as well as the usage of extra subsidies (\textit{jintie}) if the regulated prices did not meet actual expenses. Emperors and the central administration were well aware of the misallocation of government funds and worked toward greater accountability of all echelons of officials, of which the ‘regulations and precedents’ (\textit{zeli}) yield clear proof. Norms and practice correlated more in the early and mid-Qing period and began diverging more and more in the course of the nineteenth

\(^{67}\) Zhu Cishou, \textit{Zhongguo gudai gongye shi}, p. 43. The quotation is from a Ming dynasty gazetteer of Zhangzhou in Fujian, but Zhu implicitly extends the criticism to the Qing dynasty.


century, although phases of more energetic attempts at regulation can be discerned at this time as well.\textsuperscript{70}

As for the demise of the official crafts, these did not end with the Taiping rebellion and the Opium Wars, and even if the state was no longer engaging in handicraft production on a large scale thereafter, the end of the official handicraft manufactories came gradually and was not in the first place due to corruption and mismanagement. Rather, the state maintained its role in promoting new technologies and was the leading force in the early stages of Chinese industrialization. Therefore, while looking at the phasing out of traditional craft methods, this study will also look into the promotion of mechanized production by the Qing state, which took place at the same time.

In addition, the question of the impact of foreign technology transfer will be considered. New technology and imperialism in the form of encroachments on Qing territory came hand in hand. However, how strong were the inroads that foreign capital made on the Chinese handicrafts? It has been pointed out by Bramall and Nolan that in Chinese Marxist economic historiography, if the pre-Opium War economy is perceived as stagnant, the impact of the West and Japan functioned as a necessary challenge and stimulus for economic progress, whereas if the view of the pre-1840s economy is dynamic, the growth between 1840 and 1940 could be seen as a result of proto-industrialization rather than stimulation from outside. In short, the foreign challenge in one view becomes a liability in the other.\textsuperscript{71}

In concrete terms, Albert Feuerwerker has repeatedly refuted the view that foreign technology and capital crushed the Chinese handicraft industries altogether, arguing that although this applied to the important sectors of handicraft cotton spinning and ginning, other crafts like oil pressing, rice milling, mining by traditional methods, and silk weaving or minor handicrafts like the production of firecrackers, fans, bamboo furniture, and agricultural tools were much less or not at all influenced.\textsuperscript{72} The present study explores this viewpoint with a focus on shipbuilding and printing.

The problem of the performance of the state is closely related to the cyclical conception of the rise, flourishing, and decline of dynasties. The model has been called into question because it cannot explain long-term socioeconomic trends that cover phases extending over several dynasties.\textsuperscript{73} Its explanatory power for broad social and economic processes is limited

\textsuperscript{70} Leonard, \textit{Controlling from Afar} and ‘Timeliness and Innovation’.
due to its fixation on the activities of the central government. However, applying it in an extended version which takes into account the impact of local counterparts of the central government – the provincial elites and administrations – this study asks how we can account for the ‘decline’ of the Qing in consideration of Esherick and Rankin’s statement that in the first decade of the twentieth century not only local elites but also the state was re-organizing and increasing its resources.74

The second field of inquiry concerns the position of the craftspeople in Qing society. A millennia-old concept of the role of the artisans ranks them in the third position after the scholar-officials and farmers, and before the merchants. How does this concept relate to what is known about the lot of the artisans in the Qing period? The historical record is full of the emancipation of the merchants during the Qing, the rise of their status, and the ‘blurring of boundaries’ between the scholars and the merchants. This tendency obviously did not include the artisans, whose position according to the Confucian orthodoxy was not lower than that of the merchants or even slightly higher, but who in real life had fewer chances than merchants to attain social esteem. The present study argues that only the artisan who became a merchant by marketing his products and by hiring labour could aspire to reach social respectability and recognition beyond his own circles. Until the very last years of the Qing, the esteem of the political elite could be acquired by passing official examinations, or, since the early nineteenth century, by purchasing an official title. Much capital was necessary for this costly procedure, which could hardly be earned by a small individual workshop, and certainly not with hired labour or agricultural subsidiary craft production. If there was a way to bypass official examinations, it applied only for a very small part of those artisans who either were closely associated with the court or to those who produced luxury items – but even then, it was the items they produced rather than the producers that were appreciated by the cultural elites.75

In view of this distinction between artisans and merchants, this study also examines the Chinese guilds as professional associations of these two groups. Can the subordinate status of the artisans be recognized in guild structures? The British historian James Farr defines the power relations

74 Esherick and Rankin, Chinese Local Elites, p. 341.
75 For a parallel trend as shown in the case of the sixteenth-century German city of Nürnberg, where even a successful family of painters could not enter the ranks of the urban political elites, see Rainer S. Elkar, ‘Fragen und Probleme einer interdisziplinären Handwerksgeschichte’, pp. 10-11.
within the European guilds as a ‘trend towards oligarchy within the guilds
and in urban politics. Wealthier artisans would dominate the guilds, and the
artisans would be increasingly excluded from the constitutional political
community.’

Can similar tendencies be discerned in the Chinese guilds?

Finally, to come to an assessment of the Qing state’s treatment of the
artisans, a look is taken at the interdependence of the guilds and local
politics. In his studies on Hankou, William Rowe showed how guilds took
over many of the previous tasks of the government in municipal administra-
tion and the organization of welfare activities. Did this endure until the
end of the Qing, or did the government try to gain back lost ground, as the
statement by Esherick and Rankin suggests?

The present study, in sum, aims to come to terms with earlier Marxist
Chinese historiography which claims that the Qing dynasty lacked the
efficiency to promote manufacturing and eventually bring about indigenous
capitalism. It also strives to show that, on the contrary, the Qing administra-
tion operated rationally in many respects and that the agents in the private
market were relatively free from government coercion.

Methodically, this study explores normative sources as well as archival
material with a more immediate and less historiographical functions. It
draws on the economic historians Peng Zeyi (1916-1994) and Chen Zhen’s
collections of historical materials on the crafts and guilds as well as the
Qing dynasty regulatory guidelines, zeli and Huidian (Collected Statutes).
For the aspects of both shipbuilding and printing, the records of Western
eyewitnesses in nineteenth-century China and, especially for printing,
recently published interviews with veteran craftspeople are also considered.

76 Farr, Artisans in Europe, p. 188.
77 Rowe, Hankow, p. 299 ff., for ‘corporate functions’ like education, common finances, and
cemeteries, and p. 317 ff. for ‘community service functions’ like firefighting, maintaining the
infrastructure, security services, and armed forces.
78 See for instance Fang Xing, ‘The Retarded Development of Capitalism’, with comments
on the basic state policy of favouring agriculture at the expense of commerce (p. 392), on the
policy of ‘neither encouraging nor banning commerce’, and stating that the attitude of the Qing
court for more lenience towards protoindustrial enterprises such as mining and smelting was
motivated by political aims rather than by ‘the desire to develop the economy and enrich the
country’ (p. 395). This all pertains to the period before the Opium War and applies to commerce
and, by extension, to craft production for the market. For an earlier (c. 1960), less nuanced
argumentation than Fang Xing’s, see Tong Shuye, Zhongguo shougongye shangye fazhan shi,
p. 283, with the assertion that the Qing aimed at warding off capitalist elements ‘in order to
cement their tribal feudalistic rule’.
79 Peng Zeyi (ed.), Zhongguo jindai shougongye shi ziliao, 1840-1949, 4 vols., 1962; Chen Zhen
(ed.), Zhongguo jindai gongyeshi ziliao. Di san ji: Qing zhengfu, Beiyang zhengfu he Guomindang
guanliang ziben chuangban he longduan de gongye, 1961.
Among the Chinese studies on the sector of craft production, the present research draws mainly on Zhu Cishou’s *Zhongguo gudai gongye shi* (History of Chinese traditional industries); the series edited by Wei Mingkong, *Zhongguo shougongye jingji tongshi* (General economic history of the Chinese crafts), especially the section on the Qing written by Xu Jianqing; as well as relevant Chinese studies translated into English in the volume *Chinese Capitalism, 1522-1840*, edited by Xu Dixin and Wu Chengming.

In various respects, the argumentation developed in the present study pertains to questions raised in the debate on the Great Divergence. As will become clear in the ensuing chapters, this study does not take global or Eurasian comparison as its first objective. Instead, it sets out from the Chinese perspective and for that reason concentrates on Chinese institutions and Chinese political economy. Nevertheless it connects with the approach of the California School in considering the basis of the Qing political economy as one of relatively light taxation and exigencies on the population in the way of corvée services. Moreover, this study shows that merchants’ involvement in shipbuilding and ‘donations’ or loans to the state for the upkeep of its marine forces constituted a reverse side of this formally moderate taxation.

State administration plays no great role in Kenneth Pomeranz’s work *The Great Divergence*, yet R. Bin Wong convincingly discusses the impact of political economy and the imperial institutions of the Qing. Wong has recently repeated and enlarged, together with Jean-Laurent Rosenthal, an appreciative view of the state administration of public goods, especially granaries and infrastructure. The present study endorses the view of the Qing administration during the eighteenth century as quite efficient in these respects as well as in its attempt to keep expenses under control. The argument extends to government efforts of the nineteenth and especially the early twentieth century, initiatives that can qualify as useful attempts at modernization, although the Qing could not reap the rewards of their endeavours. Concerning the social position of artisans, this study contributes both concrete data and information on cultural beliefs and convictions that can offer a more focused outlook in time and space than theories that encompass the entire economies of Europe and Asia.

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80 For an insightful analysis of the ideas of the main proponents of the California School and the respective critiques, see Peer Vries, ‘The California School and beyond: how to study the Great Divergence?’ as well as the 2015 special issue of the *Low Countries Journal of Social and Economic History* (TSEG), 2015/2 with a debate on Vries’ 2013 book *Escaping Poverty. The Origins of Modern Economic Growth* and various critical voices on the paradigm of the ‘Great Divergence’.

81 R. Bin Wong, ‘The political economy of an agrarian empire’ and *China Transformed*.

The present study also has links with the research field of the ‘Confucian merchants’ or ‘merchant-gentlemen’, as formulated in Yü Ying-shih’s seminal study on the merchant spirit which also discusses new conceptions of the four occupational groups in society. However, it expands on the craftspeople and their possibilities for study and advancement in official careers and does not follow Yü in his attempt to show, in Weberian terms, parallels between Protestant and Confucian merchant ethics.

The most recent Chinese historiography on the first decade of the twentieth century revises earlier convictions about the decline and utter dysfunction of the government. These new approaches inspired the outlook of the present study, which portrays a dynamic re-organization of the bodies that had controlled craft production and their attempts to launch industrial, mechanized production not only in private enterprises but also in the service of the state.

Contents of the Present Volume

With a view to outlining the state engagement in the handicraft sector in historical perspective, chapter one starts from the turn of the second millennium and gives overviews on the Song, Yuan, and Ming dynasty systems of allocation of materials and labour, and in particular the remuneration of work and the processes of production and distribution. The comparison shows that the degree of coercion to perform actual work services varied between the dynasties, with arrangements including the substitution of corvée for tax payment more important and typical in the Song, and coercive measures more typical for the first phases of the Yuan and Ming dynasties. Consequently, the number of people continuously enrolled in the service of the state decreased from the Song to the Ming, with a high peak in the Yuan. During the Ming period, the initially strong control of craftspeople receded in the course of the dynasty, and the private sector started to overtake the state economy.

Chapter two examines the transition from the Ming to the Qing in the second half of the seventeenth century, describing an initial expansion of the bureaucracies in charge of artisan production but thereafter a downsizing and increasing reliance on the market for most branches of handicraft production in the course of the latter dynasty. Yet this does not apply to craft branches concerned with core necessities of the state: the production

83 Yü Ying-shih (Yü Ying-shih), Zhongguo jinshi zongjiao lunli, pp. 104-121.
of weapons, military infrastructure, monetary production, and to a certain extent printing remained under close state control throughout.

After the first decades of the Qing, craftspeople were accommodated by not compelling them to corvée service. The great majority of the artisans in the service of the state worked as remunerated, hired labourers. Focusing on the institutions of the central government that controlled the crafts, this section considers administrative and technical tasks as well as the increase and decrease in personnel and responsibilities, especially in the Ministry of Public Works and the Imperial Household Department. As ideas of modernization and industrialization were first realized in China, the Imperial Household Department maintained the organizational modes of the Manchu monarchy, while the Ministry of Public Works became a ‘modern’ institution during the transition from the monarchy to a republic. Contact with industrialization and Western principles of work organization led to more formalized training, most prominently in shipbuilding, but apprentice training in mechanized textile production was also introduced.

Chapters three to eight consider the government-artisan relationship by studying specific sectors. Chapter three concentrates on building, porcelain, and textiles, which largely served representative purposes for the central government. The reasons the state withdrew from or maintained the organization of craft production are also outlined.

Chapter four analyzes in greater detail the perspective of production and the institutions involved in state and private naval construction. Chapters five and six consider the perspective of the workforce in the same period, with a retrospective look at the late Ming imperial shipyards. This is particularly enlightening in view of the control of the workforce on the one hand and, on the other, the options given to the government-registered craftspeople of this wharf to select their employment.

In a parallel structure, chapter seven looks at printing in the government and private sectors, again focusing on institutions and production, while chapter eight explores the workforce in both sectors, their remuneration, skills, and training.

Chapter nine, ‘The Artisan’s Place’, examines the role of the artisans in society, with a review of the earliest statements which, seen on the basis of Confucian statecraft writings, seem to have remained more or less stationary during much of Imperial China. However, the perspective on the products of the artisans’ and workers’ labour did change with the onset of industrialization. It will be argued that although craftspeople ranked above the merchants in the traditional ranking of the ‘four occupational
groups’, in actual life they needed to acquire merchant status if they hoped to improve their position.

The tenth chapter explores the activities of the relatively autonomous institution of Chinese guilds as opposed to the state institutions. Taking an evolutionary point of view, the development of craftsmen’s associations from merchant guilds is shown, and the point is reconfirmed that craftspeople were, in everyday practice, subordinate to merchants. Organizations that had great influence in municipal governments in the later nineteenth century were merchant guilds that could afford to finance the ‘liturgical service’ of charity, maintain infrastructure, and raise local militia, as opposed to the less affluent craft guilds.

The hierarchy within the craftshops was reflected in the guilds too, to which journeymen were supposed to belong but where they had less impact than the masters. In the late nineteenth century, a sustained trend of emancipation set in with the establishment of journeymen’s guilds. This tendency can be placed alongside the first traces of industrial proletarianization and worker self-consciousness, thus marking a gradual departure from tradition.

Designations and Definitions of Crafts and Craftwork

In present-day usage of Chinese, the closest equivalent to ‘handicrafts’ is the term shougongye. This is not a classical designation but instead dates from the early twentieth century. The most voluminous Chinese dictionaries, Zhongwen da cidian\textsuperscript{84} and Hanyu da cidian\textsuperscript{85} only give definitions of the term but no earliest occurrences. Since many translations of Western political, economic, and social science terminology originate from Japan and were adopted by Chinese intellectuals staying in Japan for shorter or longer study terms from the last decade of the nineteenth century onwards, a look at Japanese dictionaries may help to limit the time range as to when the word was probably adapted. An early reference to a dictionary entry is mentioned in the largest Japanese dictionary Nihon kokugo dai jiten. It points to an English-Japanese commercial dictionary from 1904, which renders ‘handicraft’ as shukōgyō 手工業 and defines it as ‘production solely by

\textsuperscript{84} Zhongwen da cidian, vol. 13, no. 12050..4 in its definition expressly mentions the term ‘handicrafts’ in English, thus implying, if not stating expressly, that it is a translation. The Zhongwen da cidian (first edition 1955-1960, revised 1966-1968) is mainly based on the dictionary compiled by Morohashi Tetsuji and his team, Dai Kan-Wa jiten, the first draft of which was first published in 1943, but Morohashi’s work does not contain the term shougongye/shukōgyō.

\textsuperscript{85} Hanyu da cidian, vol. 6, p. 293.
hand, without using any machinery. An early Japanese-English dictionary reference of the year 1911 includes, in addition to the entry 'shukugyō', the term shukōgyōsha 手工業者 as 'handicraftman'.

An occurrence of the Chinese term shougongye 可以 be found in one of the earliest modern Chinese encyclopedias, Huang Moxi’s monolingual and explanatory Putong baike xin da cidian of 1911. The definition says that this term was used in opposition to ‘mechanized industry’ as well as to both ‘household production’ and ‘manufactory production’. In the first sense, this implies craft production with simple tools. The second sense signifies artisan production with the assistance of a few family members and apprentices. The products are directly sold to the consumer for one’s personal profit.

‘Handicraft’ is rendered as shouyi 手艺 in Hemeling’s 1915 English-Chinese dictionary, and starting from 1892, the equivalent of shougong 手工 or shouyi is given as ‘craft’ or ‘handicraft’. Apart from dictionaries, full text databases of Chinese newspapers and articles reveal the earliest occurrences of the term – one article in 1904 and two in 1906 in the journal Dongfang zazhi (Eastern Miscellany), and entries from 1906 in the daily newspaper Shenbao – but full text search results in the 1833-1949 Chinese Periodical Full-text Databases start only in 1920. From this evidence, it can be concluded that the term was certainly established in the social and economic sciences by the third decade of the twentieth century and that it was probably adopted earlier in Japan.

The term shougong was preferred in reference to ‘handicraft’ or ‘craft’ in China, while Japanese dictionaries suggest the word tewaza 手業, or shigoto 仕事 (present-day ‘work’, ‘employment’, ‘occupation’), tezaiku 手細工 (‘handicraft’, ‘handiwork’, ‘handmade goods’), and shoku 職 (‘employment’,

86 Nihon kokugyo dai jiten, ‘Jukōgyō’, with reference to Tanaka, Nakagawa, and Itami’s Ei-Wa shōgyō shin jī, which renders the term as equivalent for ‘handicraft’.
88 Thanks to Iwo Amelung for this information. The reference is in Huang Moxi, Putong baike xin da cidian, vol. 2, no. 312.
89 Karl Hemeling, English-Chinese Dictionary, which was based on the dictionary by G.C. Stent published in 1905 by the Maritime Customs.
90 Herbert Giles, Chinese-English Dictionary (1892), F.W. Baller, Analytical Chinese-English Dictionary (1900), G.C. Stent, Chinese and English Vocabulary (1898), Samuel Wells Williams’ A Syllabic Dictionary of the Chinese Language (1903, first ed. 1874) has none of these terms.
91 1833-1949 Chinese Periodical Full-text Databases; Shenbao database, 1874-1949; Dongfang zazhi (The Eastern Miscellany) database, 1904-1948. The Chinese Periodical Full-text databases include journals and newspaper other than Shenbao and Dongfang zazhi.
92 The first article in the full text database of the daily newspaper Yomiuri shimbun with an occurrence of the term is from 20 May 1898, p. 6, in a job advertisement for artisans wanted for arts and crafts production by a shop in Tokyo.
‘work’, ‘job’, ‘office’), and for crafts, shokugyo 職業 (‘occupation’, ‘business’, ‘trade’, ‘vocation’, ‘profession’), shugeiwaza 手藝巧 (‘skilful manual techniques’), or kagyo 家業 (‘family occupation’). Among these, some have at present acquired much more general meanings, such as shokugyo or shigoto, while others have remained in use for ‘handicrafts’. However, in Japan as in China, the established scholarly term in social and economic history remains shukōgyō/shougongye.

Which was then the traditional term for craft occupations? From the technical point of view, craftspeople were first and foremost associated with the gong and jiang. According to Joseph Needham, the character gong 工, used for technical as opposed to agricultural work, shows a tool, probably a carpenter’s square,93 and the character jiang 匠 or 匠 for ‘master-artisan’ indicates an axe or the ‘technical work’ character in a box or in a carpenter’s square (ju). Needham, following Karlgren, claims that in one of its oracle bone forms, the character is interpreted as a man holding a tool,94 but according to more recent paleolinguistic research, gong and jiang are probably etymologically unrelated.95

The semantic field for gong according to the dictionaries Zhongwen da cidian (No. 8911) and Hanyu da cidian (vol. 2, p. 951) includes various or all types of skilled work, notably musicians and shamans. It also refers to female workers and in texts during the first millennium B.C., it was interchanged with ‘official’ guan, perhaps referring to the officials in charge of the workers.

‘Craftwork’ in the sense closest to its European counterpart, is shougong, which refers to manual labour or to artisans,96 and gongyi,97 associated with

93 He Jinsong, Hanzi xingyi kaoyuan, p. 179-180, claims that the tool could be a rammer used for the construction of stamped earth walls. Cf. also Barbieri-Low, Artisans in Early Imperial China, p. 36.
95 Thanks to Wolfgang Behr for this information and the reference to He Jinsong.
96 Zhongwen da cidian and Hanyu da cidian do not agree on this point and cite the same locus classicus (Chronicle of the Three Kingdoms, Chronicle of Wu, ‘Biography of Sun Xiu’) as reference for ‘manual skill’ or ‘manual techniques’ (Zhongwen da cidian, vol. 13, no. 12050.3) or for ‘artisans’ (Hanyu da cidian, vol. 6, p. 293). Hanyu da cidian also notes the meaning ‘manual skill’ (shouyi), ‘work achieved with the hands’, ‘to create with the hands’, ‘subject taught at elementary and junior high schools’, but for the latter four definitions the dictionary gives twentieth-century references.
97 Both Zhongwen da cidian, vol. 11, no. 8911.98 and Hanyu da cidian, vol. 2, p. 958 define it as ‘technical’ or ‘manual’ skill and refer to the Xin Tangshu (New dynastic history of the Tang), compiled between 1043 and 1060, but Hanyu da cidian in addition quotes an occurrence from ca. 800 in Feng Yan, Fengshi wenjian ji (Records of things heard by Mr. Feng) and one from Wang Zhen’s Nongshu (Agricultural treatise, chap. 21), dating from 1313.
'technical skills', which was also part of the official designations like *gongyi ju* (craft office), *gongyi zhuanxi suo* (craft training bureau), and *gongyi chang* (craft manufacture) given as a designation to the technical and vocational schools established after 1902. In present-day usage, *gongyi* has remained more idiomatic than the rather synthetic *shougongye*.

‘Artisans’ as a social and status group are the *gong* and occur as such in the categorization of the four occupational groups. If seen from the perspective of their organizational structure, craft and commercial branches but also individual shops or trade enterprises are designated as *hang* (business lines or proto-guilds). State administrations insisted on referring to the duties of the artisans as *jiangyi* or *gongyi* (master artisan corvée and artisan/labour corvée), even in the late Qing when such corvée obligations were formally abolished.

The new Chinese term was obviously adapted from Japan, where it had been coined after contact with Western concepts. The definitions in the early modern dictionaries and encyclopedias show how in the late nineteenth and early twentieth century, due to the growing importance of mechanized production, the economic branch and business form of handicraft production was terminologically distinguished from the mechanized, industrial production in factories by expressly stressing its manual quality.

Finally, as an explanation of the title of this book, both ‘state’ and ‘crafts’ are meant literally. Although ‘statecraft’ writings are presented in chapter nine, this study’s main focus is on the administration of the Qing and its direct and indirect control of craft production both in the service of the dynasty and in the private sector. The English term ‘statecraft’ was used for the Chinese literature generated by concerned officials and intellectuals who intended to improve, and sometimes reproach, the government policies of their times. The Chinese term for this literature, *jingshi wenbian*, does not express exactly the same metaphor but still points to writings wishing to ‘set in order the times like the threads on the woof of the loom’. This may show the affinity of the terms for political management and for the production of material goods in both the English and the Chinese languages.