



Global Encounters between China and Europe:  
Trade Networks, Consumption and Cultural Exchanges in  
Macau and Marseille, 1680-1840

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# THESIS

## The Imperial Silk Factories of Kangxi in China, 1661-1722

### A mirror for Louis XIV's Royal Factories?

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## **Abstract**

This thesis explains the theoretical background and development of contemporary global and consumer historiography; it examines the interactions and connections between a then seemingly closed China and the outside world through missionaries, the tribute system and overseas trade during the Qing empire. It examines the forms of business organisation, production processes, sources of finance, personnel management, the income and social status of artisans, products and trade channels of the imperial silk factories in late seventeenth- and eighteenth-century China and those court-supplying silk factories of Louis XIV in France. Comparisons and correlations reveal the links established through the exchange of missionaries and goods between these two distant monarchical territories, and the impact of these cultural contacts.

The jesuits sent by Louis XIV arrived at the court of the Kangxi emperor with a well-thought-out research programme and the best equipment of the time to investigate almost all areas of China, such as history, geography, medicine, flora and fauna, handicrafts and so on. The missionaries left behind abundant letters, diaries and translations that built bridges for western research and understanding of China, as well as completing Colbert's global information-gathering project, thus contributing to his mercantilist strategy.

Both the imperial silk factories of Kangxi and those court supplying factories of Louis XIV were the expression of the will of the central power, which, by virtue of its economic control and administrative power, planned, designed, produced and marketed silk production at the highest level throughout its territory. The Chinese imperial silk factories, which flourished under the Kangxi period, were entirely subordinate to the central power and catered entirely to the needs of the court and the bureaucratic administrative system, and were not market-oriented for profit. The mercantilist economic line of Louis XIV also brought a strong influence of royal power over the state silk industry, with the difference that the court-supplying silk factories were mostly privately owned and the royal family was their main customer. The imperial silk factories of Kangxi were under strict control of a centralised feudal system, with countless laws and regulations, inscriptions warning of common faults and defects in the weaving industry, and even severe punishments, all of which served to guarantee the quality and efficiency of

production in the imperial silk mills. In France, on the other hand, during the same period, in order to promote the development of the country's silk weaving industry, Colbert produced an unprecedented number of decrees and specific regulations on production processes and quality control, as well as corresponding punitive mechanisms.

A wealth of historical sources has been used in this thesis, such as the imperial archives of the First Historical Archives of Chinese, "archival collections" and old books, local gazetteers, municipal archives, archive of "Fonds de la Grande Fabrique de soie 1563-1791", and other works and essays. The cross-reference of historical sources and the biases created by cultural differences could stimulate new perspectives and understandings. Although more direct evidence is lacking, in the context of missionary activity at the Chinese court and the encyclopaedic global research of the French Royal Academy of Sciences, and the well-documented collateral evidence of commercial espionage in the manufacture of ceramics, it would be inferred that information about the silk factories of the Kangxi emperor must have served Colbert's mercantilist economic strategy. Comparing the imperial silk factories of Kangxi with those court-supplying silk factories of Louis XIV, this thesis examines the connections and integration, the extensive central intervention in the national silk industry, the flow of silk production, the separation of production and distribution, and the specific decrees and regulations for quality control. All of this suggests that the Chinese imperial silk factories of Kangxi may well have influenced the French silk industry, thanks to the role of the missionary bridge, and that the court-supplying silk factories of Louis XIV can be presumed to be a mirror reflection image of the Kangxi imperial silk mills.

## Resumen

Esta tesis explica los antecedentes teóricos y el desarrollo de la historiografía global y del consumo contemporánea; examina las interacciones y conexiones entre una China entonces aparentemente cerrada y el mundo exterior a través de los misioneros, el sistema de tributos y el comercio de ultramar durante el imperio Qing. Examina las formas de organización empresarial, los procesos de producción, las fuentes de financiación, la gestión del personal, los ingresos y el estatus social de los artesanos, los productos y los canales comerciales de las fábricas de seda imperiales de la China de finales del siglo XVII y del XVIII y de las fábricas de seda que abastecían a la corte de Luis XIV en Francia. Las comparaciones y correlaciones revelan los vínculos establecidos a través del intercambio de misioneros y mercancías entre estos dos distantes territorios monárquicos, así como el impacto de estos contactos culturales. Los jesuitas enviados por Luis XIV llegaron a la corte del emperador Kangxi con un estudiado programa de investigación y el mejor equipamiento de la época para investigar casi todos los ámbitos de China, como la historia, la geografía, la medicina, la flora y la fauna, la artesanía, etcétera. Los misioneros dejaron abundantes cartas, diarios y traducciones que tendieron puentes para la investigación y comprensión occidentales de China, además de completar el proyecto de recopilación de información global de Colbert, contribuyendo así a su estrategia mercantilista.

En esta tesis se han utilizado abundantes fuentes históricas, como los archivos imperiales del Primer Archivo Histórico de China, “colecciones de archivos” y libros antiguos, nomenclátors locales, archivos municipales, archivo del “Fonds de la Grande Fabrique de soie 1563-1791”, y otras obras y ensayos. El cruce de fuentes históricas y los sesgos creados por las diferencias culturales podrían estimular nuevas perspectivas y comprensiones.

Tanto las fábricas de seda imperiales de Kangxi como las que abastecían a la corte de Luis XIV eran la expresión de la voluntad del poder central, que, en virtud de su control económico y su poder administrativo, planificaba, diseñaba, producía y comercializaba la producción de seda al más alto nivel en todo su territorio. Las fábricas de seda imperiales chinas, que florecieron bajo el periodo de Kangxi, estaban totalmente subordinadas al poder central y atendían enteramente a las necesidades de la corte y del sistema administrativo burocrático, y

no estaban orientadas al mercado con ánimo de lucro. La línea económica mercantilista de Luis XIV también supuso una fuerte influencia del poder real sobre la industria estatal de la seda, con la diferencia de que las fábricas de seda proveedoras de la corte eran en su mayoría de propiedad privada y la familia real era su principal cliente. Las fábricas de seda imperiales de Kangxi estaban bajo el estricto control de un sistema feudal centralizado, con innumerables leyes y reglamentos, inscripciones que advertían de las faltas y defectos comunes en la industria del tejido e incluso severos castigos, todo lo cual servía para garantizar la calidad y la eficacia de la producción en las fábricas de seda imperiales. En Francia, por su parte, durante el mismo periodo, con el fin de promover el desarrollo de la industria del tejido de la seda del país, Colbert elaboró un número sin precedentes de decretos y reglamentos específicos sobre los procesos de producción y el control de calidad, así como los correspondientes mecanismos punitivos.

Aunque faltan pruebas más directas, en el contexto de la actividad misionera en la corte china y la enciclopédica investigación global de la Real Academia de Ciencias francesa, y las bien documentadas pruebas colaterales de espionaje comercial en la fabricación de cerámica, cabría deducir que la información sobre las fábricas de seda del emperador Kangxi debió de servir a la estrategia económica mercantilista de Colbert. Comparando las fábricas de seda imperiales de Kangxi con las fábricas de seda proveedoras de la corte de Luis XIV, esta tesis examina las conexiones y la integración, la amplia intervención central en la industria nacional de la seda, el flujo de la producción de seda, la separación de la producción y la distribución, y los decretos y reglamentos específicos para el control de calidad. Todo ello sugiere que las fábricas de seda imperiales chinas de Kangxi bien pudieron influir en la industria francesa de la seda, gracias al papel del puente misionero, y que las fábricas proveedoras de la corte de Luis XIV pueden presumirse un reflejo especular de las sederías imperiales de Kangxi.

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## Part I. Through a “Global History” Perspective

Silk, being the “threads of global desire”, has shaped one of the most important features in early modern economies, with its industry of sericulture and silk textile weaving. Silk weaving techniques originated from the river area of Yellow River and Yangtze River in China, spreading eastward to present-day Korea and Japan; and westward from the China central plains to Gaochang and Khotan in current Xinjiang province in the fifth and sixth centuries<sup>2</sup>, which laid the foundation for the transferring of sericulture and silk weaving technology to the West, as Xinjiang being the gateway from China to the West. In the following centuries, it continued to reach Persia and the Byzantine Empire, therefore to Europe, and later Americas through the new maritime routes. “In this process of diffusion, the desire of silk often fostered technological innovation and created opportunities for new forms of labour organization to emerge. Concurrently, silk consumption constantly reshaped social hierarchies, gender roles, aesthetic and visual cultures, as well as rituals and representations of power.”<sup>3</sup>

Concerning Chinese silk production, it must be mentioned the imperial silk weaving institutions which have existed since the Western Han Dynasty (202BC-8AD), providing silk for clothing and ceremonies to the royal families of various dynasties, due to the significance of costumes and rituals to the imperial authority. In the centralized system of ancient China, the imperial silk factories have been able to concentrate raw silk materials and exquisite silk weaving craftsmanship of the highest criteria, being the representative of the highest productivity of the silk industry in the entire society at the time.

The theme of Chinese silk production and the imperial silk factories in early Qing Dynasty (1644-1840AD) have been generally acknowledged and extensively studied, especially in the Chinese academic sphere. Concerning the general topic of Chinese silk, for instance, in their

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<sup>2</sup> Xuanzang 玄奘. *Great Tang Records on the Western Regions* 大唐西域记. (646AD) Beijing: Simplified Chinese Publisher, 2018.

Note: gāo chāng 高昌, Khotan yú tián 于阗, xīn jiāng 新疆

<sup>3</sup> Dagmar Schafer, Giorgio Riello, Luca Mola, “Introduction: Silk in the Pre-Modern World”, in Dagmar Schafer, Giorgio Riello, Luca Mola, *Threads of Global Desire: Silk in the Pre-Modern World* (Woodbridge: The Boydell Press, 2018)

works *The History of Chinese Silk Culture*<sup>4</sup> and *The General History of Chinese Silk*<sup>5</sup>, Zhao Feng, Yuan Xuanping have generally described the state of silk production, typology and characteristics in all the dynasties. *Illustrated Dictionary of Qing Dynasty Court Costumes*<sup>6</sup> has been one of the classics edited by Palace Museum of the Forbidden City, explaining the fabric, design, production and the grade system of royal clothing, of course, among which, silk has been the protagonist. Debin Ma has drawn a panorama picture of the long history of silk trade and technological diffusion of both overland and sea route, demonstrated the integrations among commercial, scientific and institutional progressions of the silk trade.<sup>7</sup>

As for the specific subject of the imperial silk factories in the Qing Dynasty, well-known works include *Jiangning*<sup>8</sup> *Imperial Silk Factory and Family Cao*<sup>9</sup> of Zhou Ruchang and Yan Zhong, *Jiangnan Imperial Silk Factories and Early Qing Dynasty Politics*<sup>10</sup> by Wei Qingyuan, and *Silk Code in "Dream in the Red Chamber"*<sup>11</sup> of Li Jianhua, etc. These works habitually focus on politics and relationship between emperors and ministers, however, pay little attention to the basic role of silk production, not to mention adapting concrete statistic data of the fabrication and trade. Dagmar Schafer also studied state-owned manufacture during the Ming Reign (1368-1644AD), and confirmed the continuity rather than transformation during the dynasties transition of Yuan, Ming even Qing Dynasties.<sup>12</sup>

Also a few works are certainly dedicated to specific quantified research on silk production, including *Studies on the imperial silk factories in early Qing Dynasty*<sup>13</sup> by Peng Zeyi, *China's*

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<sup>4</sup> Yuan Xuanning 袁宣萍, Zhao Feng 赵丰. *The History of Chinese Silk Culture 中国丝绸文化史*. Ji'nan: Shandong Fine Art Publishing House, 2009.

<sup>5</sup> Zhao Feng 赵丰. *The General History of Chinese Silk 中国丝绸通史*. Suzhou: Suzhou University Publishing House, 2005.

<sup>6</sup> Palace Museum, eds. *Illustrated Dictionary of Qing Dynasty Court Costumes Edited by the Palace Museum 清宫服饰图典*. Beijing: The Forbidden City Publishing House, 2010.

<sup>7</sup> Debin Ma. "The Great Silk Exchange: How the world was connected and Developed." In Dennis Flynn, L Frost and A.J.H. Lantham, eds. *Pacific Centuries: Pacific Rim History since the Sixteenth Century*. London: Routledge Press, 1999

<sup>8</sup> Note: Jiangning is an ancient name of Nanjing.

<sup>9</sup> Zhou Ruchang 周汝昌, Yan Zhong 严中. *Jiangning Imperial Silk Factory and Family Cao 江宁织造与曹家*. Beijing: Zhonghua Publishing House, 2006.

<sup>10</sup> Wei Qingyuan 韦庆远. "Jiangnan Imperial Silk Factories and early Qing Dynasty Politics 江南三织造与清代前期政治." *Shixue Jikan 史学集刊*. 1992. 03

<sup>11</sup> Li Jianhua 李建华. *Silk Code in "Dream in the Red Chamber" 红楼梦丝绸密码*. Shanghai: Shanghai Science and Technology Literature Press, 2014.

<sup>12</sup> Dagmar Schafer, "Power and Silk: The Central State and Localities in State-owned Manufacture during the Ming Reign (1368-1644)", Dagmar Schafer, Giorgio Riello, Luca Mola, *Threads of Global Desire: Silk in the Pre-Modern World* (Woodbridge: The Boydell Press, 2018)

<sup>13</sup> Peng Zeyi 彭泽益. "Studies on the Imperial Silk Factories in Early Qing Dynasty 清代前期江南织造的研究."

*Silk Trade: Traditional Industry in the Modern World*<sup>14</sup> by Lillian M. Li, and most noteworthy, *Study on Jiangnan Silk in the Ming and Qing Dynasties*<sup>15</sup> of Fan Jinmin. These works have explored more explicitly in aspects of factory organization system, manufacturing scale, financial sources, personnel management, income and social status of the craftsmen, typology of products and sales of the silk production. Nevertheless, although with historical materials and data of international silk trade involved, these works are fundamentally based on local Chinese research.

The subject of silk production has been considered a thought-provoking topic outside of its origin country as well, such as in France. Jacques Anquetil, being the author and a weaver himself, recounts the long history of silk, the epic experience of its introduction into Europe from China, and the rise of silk production in Europe, especially in France.<sup>16</sup> Dato Moira talks about the court-supplying silk factories for Louis XIV in her article *Silks for the Crown: Five Partnerships of Merchant Manufacturers in Eighteenth-century Lyon*, investigates five partnerships which supplied silk furnishing to the French crown, from 1741 to the French Revolution, in the context of eighteenth-century Lyon.<sup>17</sup> Obviously, European silk researchers also overwhelmingly focus on local situations, being what they are most familiar with and with most abundant accessible archives.

The introductory part of this dissertation highlights the contemporary theoretic background of global history and historiography of consumption. It explains how the research objective and the specific time range has been chosen; at the same time, it presents the hypothesis and the main questions for the investigation: the difference and coincidence between the imperial silk factories of Kangxi and the court-supplying silk factories of Louis XIV in France, in the aspects of business organization system, the manufacturing processes, financial sources, personnel management, income and social status of the craftsmen, typology of products and sales, etc.

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*History Study* 历史研究. 1963. 04

<sup>14</sup> Lillian M. Li 李明珠. *China's Silk Trade: Traditional Industry in the Modern World (1842-1937)*. Cambridge: Harvard University Press, 1981.

<sup>15</sup> Fan Jinmin 范金民. *Study on Jiangnan Silk in the Ming and Qing Dynasties* 明清江南丝绸史研究. Nanjing: Jiangsu People's Publishing House, 2016.

<sup>16</sup> Jacques Anquetil. *Las Rutas de la Seda: De China a Andalucía, Veitidós Siglos de Historia y Cultura*. Madrid: Acento Editorial, 2002.

<sup>17</sup> Dato Moira. "Silks for the Crown: Five Partnerships of Merchant Manufacturers in Eighteenth-century Lyon." MRes thesis. <http://theses.gla.ac.uk/7970/> 2017

The sources adapt to the investigation will be introduced and analysed, whose availability and characteristics will be evaluated as well. The methodology employed for this research will be explained as how the specific questions raised could be answered and how the hypothesis could be demonstrated.

## **Chapter I. Global History and Historiography of Consumption**

“Strictly speaking, global history is the history of what happened around the world.” “It’s like looking at the entire earth from an imaginary lookout of the universe, and seeing everything in the world.”<sup>18</sup> As it means literally, one approach to global history is to consider it as the history of all in the world. From such a broad perspective, everything that has happened on Earth can become a practical content of global history. At the same time, “global history is both a research object and a unique way of looking at history. That is, it is both a process and a perspective; it is both a research theme and a methodology.”<sup>19</sup> The essential method for global history is entirely different from the conventional process of chronicle and narrative history of nation states or regions. Global historians are therefore distinguished from traditional scholars who study regional or country history by their researching methods rather than historical facts. Global historians make up for what regional historians lack, and vice versa. Generally speaking, Global history could be preliminarily defined as a historical investigation method in which events, processes and phenomena are observed and studied in a global contextual, being not restricted by the borders of nations, politics, geographies or cultures.

As a consequence of more frequent communications between different zones and continents, people became more aware of diverse civilizations and cultures and were more eager to understand their own environment from a broader perspective. Between about 1500 and 1800AD, extensive links were started to be established between regions of the world, bringing people into the early stages of modern history. Globalization in business, culture, and biology involves people around the world and affects their social development.<sup>20</sup> Till modern

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<sup>18</sup> Felipe Fernández-Armesto, Benjamin Sacks. “Networks, Interactions, and Connective History.” In Douglas Northrop, eds. *A Companion to World History*. Oxford: Blackwell Publishing Ltd, 2012.

<sup>19</sup> Sebastian Conrad. *What is Global History?* Oxford: Princeton University Press, 2017.

<sup>20</sup> Jerry H Bentley, Herbert Ziegler. *Traditions & Encounters: A Global Perspective on the Past: From 1000 to 1800*. Beijing: Beijing University Press, 2014.

time, the communications revolution that began in the 1990s also profoundly influenced our interpretation of the past. With the fall of the Berlin wall and the terrorism in the world, people are paying more attention to the global process. Under this circumstance, historiography with research objective of world scope has become an innovative historical writing paradigm beyond the traditional dynasty mode. The world has become much more diverse and integrated than ever before. The great improvements in modern communication and transportation technologies have impacted even reversed the way we comprehend the past. Modern historians could travel much faster and further than a few decades ago, a comprehensive knowledge and on-site observation of the world could make a difference on the perspectives of the historians.

Global history is consequently in its booming age in fact, the greatly enriched communication across countries and regions provides a positive international environment and academic background for the uprising global history. Meanwhile, international conventions, forums or historical museums have made it possible for voices from different countries, regions, political or cultural backgrounds to be heard at the same time, whereas it is undeniable the thoughts of previously colonized countries were often little known. At the same time, the new computer knowledge also inspired global historians, quantitative methods, social networks and nodes gradually took place of the old mode of thinking. Thus, these all lead to the result of adopting a comprehensive global view instead of the previous national or regional view. It could be said that it is incredible to comprehend the great fluctuations in human history without considering from a global perspective.

Global historians are determined to go beyond the distortions of histories characterized by empires and hegemonies, and find the essence of the forces shaping human societies, and predict the future. As Pamela Kyle Crossley said, “One problem that global history has set for itself is how to tell a story without a focus. The ultimate global history method, if it could be realized, would not be a text or story arc, nor an analytical concept, but more likely a context spinner, in which statistics and facts are sorted from a perspective of both data and design.”<sup>21</sup>

Conard divides global history into three categories: global history as the history of all things, global history as the history of connections, history based on the integration concept.<sup>22</sup>

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<sup>21</sup> Pamela Kyle Crossley. *What is Global History?* Oxford: Polity Press, 2008.

<sup>22</sup> Sebastian Conard, *What is Global History?* (Oxford: Princeton University Press, 2017)

The first mode could be called a “panoramic global history”, whose most common outcomes are large-scale comprehensive studies that attempt to capture the global status in a particular time range. Although the length of the research period varies, they share the same writing model: the “global” in their writing means the all-encompassing planet. Just like they choose different time periods, historians also choose certain ideas or historical forms that came along ancient times and transcend the world as research objects.

The focus of the second type of global history being “interaction” and “connection”, countless topics could be studied from this perspective, from the movement of population to the spread of ideas and the development of long-distance trade, all could be included. The time duration and geographical range that historians pay attention to could be varies, which may not necessarily cover the entire earth. It all depends on the purpose of the research and the awareness of the problem. The interconnectedness of the world is the starting point of global history research. The third type of global history approach focuses on “pattern of exchanges” and assumes that there is a certain way to integrate the world.

In Manning’s words, global history is “large-scale interactive research”.<sup>23</sup> The essential idea of global history perspective is interaction, that is, interactions between people of different regions, different nationalities, and different cultures through contact in multiple fields such as economics, politics, and culture. For themes such as immigration and population, movements and exchanges of materials, and processes that transcend national and cultural borders, that historians have long been concerned about, global history is a method of revision, even though being based on many preceding studies. Global history echoes the call for a broader perspective and more inclusiveness, contributing to a better understanding of the interactions and connections that have shaped the modern world.

As this thesis concerns, during the Kangxi period at the turn of the seventeenth and eighteenth centuries, in the context of the Qing Empire which gives the impression to be a closed and reserved empire, it actually existed a lot of interaction and connection between the outside world and China through missionaries, the tributary system and overseas trade, etc. This dissertation takes a global history perspective while examining the production of Chinese

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<sup>23</sup> Patrick Manning, eds. *World History: Global and Local Interactions*. Princeton: Markus Wiener Publishers, 2005.



imperial silk factories at the turn of the seventeenth and eighteenth centuries, making a contrast with the French royal supplying silk factories of the same period. Whereas looking at the characteristics of silk production of the imperial factories, the research also focuses on the national private silk production and sales. This comparative perspective is drawn from the methodology of “connection” and “integration” in global history, focusing on the intercultural and interregional exchanges around the world, in this case China and France, which was the beginning of the globalization. I aim to show how the “connections” established through missionaries and merchandise trade affected the silk production, output, and trade of these two countries.

### **1.1 The development of historiography**

Given that global history has been more and more acknowledged as a significant method to understand the present world, it is certainly necessary to look back at the past exploring the historical trends of different generations and study the development context of global history. As Sebastian Conard said in his book, two defects of modern social sciences and humanities are serious obstructions for a systematic understanding of processes in world range, which could be traced back to the formation of modern disciplines in Europe in the 19th century. First, the creation of social sciences and humanities has been tied to nation-state, and restricted to regional or national histories. Secondly, modern disciplines have a strong colour of “eurocentrism”. At a methodological level, modern disciplines impose specific categories of Europe on the history of others, and by doing so render all other societies as European colonies. Historians often simply argue that studies beyond Europe and North America will not provide insights into historical changes. When the great transformations in history: revolutions, nationalism, industrialization, and secularization, took place outside Europe and North America, they were only considered as emulations and responses to what had happened in Europe. Global history tries to face the challenges posed by the above observations and remove the two unpleasant birthmarks of modern sciences.<sup>24</sup>

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<sup>24</sup> Sebastian Conard. *What is Global History?* Oxford: Princeton University Press, 2017.

The traditional school of the first Eurocentric current in the 19th century was primarily represented by the Marxist. Being a young Hegelian at the beginning, Marx developed his theory of historical materialism which entirely subverted the Idealism of Hegel; According to Marx's theory, the material base of society including the reality, the economy, the modes of production shapes the superstructure which means ideology, culture, religion, morality, politics, law, education, family, media, and art etc. History evolves as the material base evolves. Marx laid the foundation of the paradigm of conflict theory of sociology, ultimately pushing the discipline to study the questions of power, inequality and how these things can drive society change. Marx saw historical development in terms of modes of production and economic classes, and understood "terms of mode" as stages of history; in communism primitive, feudalism, and capitalism, modes of production are described as a combination of forces of production and relations of production.<sup>25</sup> "The history of all hitherto existing society is the history of class struggles."<sup>26</sup>

In contrast to Marx's historical materialism, Max Weber emphasized the importance of cultural influences embedded in religion as a means for understanding the genesis of capitalism.<sup>27</sup> Weber correspondingly contributed to the economic history, as well as economic theory and methodology. At the time of Max Weber, dramatic changes caused by the industrial revolution was converting his country, cities were exploding in size, vast companies were forming, new managerial elites were taking place of the old aristocracy, Weber spent his life analyzing these changes, and developed some key ideas to understand better the working system and future of capitalism. The ordinary view is that capitalism began as a development of technology especially steam power, but Weber provokes that what really made the capitalism possible was a set of ideas, especially religious ideas. Weber worked at a time when Marxism converted very influential in German, his project was to challenge Marxism, the Protestant Ethic is the first and major step in his direction, which forced the most primitive part in Weber's comprehensive investigations into world religion, including the religions of China, India and

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<sup>25</sup> Paul R. Gregory, Robert C. Stuart. *Comparing Economic Systems in the Twenty-First Century*. Minnesota: South-Western College Publishing, 2003.

<sup>26</sup> Karl Marx, Friedrich Engels. *The Manifesto of the Communist Party*. (1848) Eastford: Martino Fine Books, 2012.

<sup>27</sup> Max Weber. *The Protestant Ethic and The Spirit of Capitalism*. (1905) Massachusetts: Courier Corporation, 2003.

ancient Judaism, with particular regard to their differing economic consequences and conditions of social stratification.

The Annales School is a historiographical current founded by Lucien Febvre and Marc Bloch in the twentieth last century, which has dominated practically almost all the French historiography of the 20th century and has had an enormous diffusion in the western world. The Annales School is characterized by having developed a historical methodology that is no longer interested in the political events and the individuals as typical protagonists of the work of historiography, nonetheless, by the processes and social structures, of a wide range of subjects that permits carrying out research with methodological approaches of the social sciences. The work of Fernand Braudel defined a “second generation” in the history of the Annales School, which was very influential throughout the sixties. Braudel innovated the field of history by introducing, in the explanation of historical facts, the “durations” (the short, medium and long duration). “The Annales historians, after living through two world wars and incredible political upheavals in France, were deeply uncomfortable with the notion that multiple ruptures and discontinuities created history. They preferred to stress inertia and the *longue durée*. Special attention was paid to geography, climate, and demography as long-term factors. They believed the continuities of the deepest structures were central to history, beside which upheavals in institutions or the superstructure of social life were of little significance, for history lies beyond the reach of conscious actors, especially the will of revolutionaries. They rejected the Marxist idea that history should be used as a tool to foment and foster revolutions. In turn the Marxists called them conservatives.”<sup>28</sup> The third generation is characterized by its heterogeneity, where there is no methodological, political or intellectual consensus. However, some features can be underlined: the increase of the academic and social presence and the interest to study the culture.<sup>29</sup> History of cultural practices is the fourth generation of the Annales, which proposed a new history of “cultural practices” to replace the ambiguous history of “mentalities”.<sup>30</sup> Historians have restarted a questioning of history: what it is and how history is constructed. This was the result of a long process of self-awareness of the discipline.

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<sup>28</sup> Olivia Harris. “Braudel: Historical Time and the Horror of Discontinuity.” *History Workshop Journal*. Volume 57, Issue 1, Spring 2004

<sup>29</sup> John L. Bintliff. *The Annales School and Archaeology*. London: Leicester University Press, 1991.

<sup>30</sup> John L. Bintliff. *The Annales School and Archaeology*. London: Leicester University Press, 1991.

Nevertheless, the “euro-centred” interpretation of world history has long dominated the mainstream, William McNeill published *The Rise of the West* in 1963, which became one of the most typical portrayals of that era, reflecting a European-centric hegemony from a macro perspective. McNeill described the modern world as a product of Western tradition and a unique achievement in Europe that was exported to the rest of the world during the most powerful period of the West.

In the 1970s when the world’s anti-imperialism wave was soaring, the “modern world system” of Immanuel Wallerstein shifted analysis of capitalist development to the consideration of reproductions of metropolises and peripheries, abbreviated the history of capitalism to the occupation of the core status of the world of the western world, the non-Western regions were referred to as periphery, and a semi-periphery middle zone was created between the two. Even Wallerstein’s theory of the world system clearly presupposes a centre, assuming that more countries and regions are gradually included in the European world system. Samuel Philips Huntington believes that the rise of the ideological conflict in the Cold War will be replaced by a conflict of civilizations.<sup>31</sup>

The “microhistory” school surged in Italy in the 70s and 80s last century, “in the works of scholars as Carlos Ginzburg, Edoardo Grendi and Giovanni Levi. For them, microhistory was associated with a specific practice, or mode, of working with primary sources. Microhistorians reduced the focus of their analyses, reading their sources as if through a microscope, and thereby prioritizing small details, or clues, which they used to unravel the teleology and triumphalism of grand narratives.”<sup>32</sup> “Italian microhistorians were always concerned with the questions of how to relate the particular focus of their analyses to more general processes. As Levi wrote in 1991, ‘even the apparently minutest action of, say, somebody going to buy a loaf of bread, actually encompasses the far wider system of the whole world’s grain markets.’<sup>33</sup> When Carlo Ginzburg writes, therefore, in the Cambridge History of the World that microhistory ‘may in fact be regarded as an indispensable tool’ of global history, this should

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<sup>31</sup> Samuel P. Huntington. *The Clash of Civilizations and the Remaking of World Order*. New York: Simon and Schuster, 1996.

<sup>32</sup> John-Paul A Ghobrial. “Introduction: Seeing the World like a Microhistorian.” *Past & Present*. Volume 242, Issue Supplement 14, November 2019, Pages 1–22, <https://doi.org/10.1093/pastj/gtz046>

<sup>33</sup> Giovanni Levi. “On Microhistory.” In Peter Burke, eds. *New Perspectives on Historical Writing*. Pennsylvania: Pennsylvania State University Press, 1992.

not be seen as some rear-guard action intended to respond to the recent rise of global history - as has been the case in some other fields - but rather a reflection of the genuine inclination of microhistorians towards some of the same questions being posed by global historians today.<sup>34</sup> “Global history challenge us to recast the methods and scale of our research in much the same way that microhistory did in the early 1980s.”<sup>35</sup>

The two approaches of French and Italian microhistory as described by John-Paul A. Ghobrial in *Seeing the World like a Microhistorian*, “the first entails a focus on the analysis of a single individual, object or place, which is then used as a sort of microcosm modes of history (social, economic, cultural and more). In contrast, the second approach takes its cue from connected history and it prioritizes the close analysis of sources produced by human action as it occurred across multiple, connected contexts. Ghobrial made a metaphor: Where the first looks for the world in a grain of sand, the second sifts through many beaches around the same ocean with a fine-toothed comb. Despite the important differences between these approaches, what they also share is an aspiration to combine the study of global historical processes with a focus on the close analysis of primary sources as well as the work of contextualization necessary to decipher their meaning.” “The idea of jeux d’échelles, or ‘playing with scales’, that is, connecting different scales of analysis, each of which reveals its own distinctive form of historical knowledge.” Three distinct approaches offer good examples of a specific method of connecting microhistory and global history, first, the method of “following” that lay at the heart of the early forms of Italian microhistory<sup>36</sup>. In 1979, Carlo Ginzburg and Carlo Poni described a sort of “nominative methodology” where by following identical names as they appeared in different Italian archives, historians could “reconstruct the interconnections among diverse conjunctures”.<sup>37</sup> Levi invites to use the specificity of local contexts to reassess the general questions that we ask about universal historical processes. Thirdly, special attention paid to small details in their sources that might otherwise be ignored by historians working only from

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<sup>34</sup> Carlo Ginzburg, “Microhistory and Global History”, in Jerry H Bentley, Sanjay Subrahmanyam and Merry Wiesner-Hanks, ed., *The Cambridge World History* (Cambridge: Cambridge University Press, 2015)

<sup>35</sup> Maxine Berg, eds. *Writing the History of the Global, Challenges for the 21st Century*. Oxford: Oxford University Press, 2013.

<sup>36</sup> Anne Gerritsen, ‘Scales of a Local: The Place of Locality in a Globalizing World’, in Douglas Northrop, ed., *A Companion to World History* (New Jersey: Blackwell Publishing Ltd, 2012)

<sup>37</sup> Carlo Ginzburg, Carlo Poni, ‘The Name and the Game: Unequal Exchange and the Historiographic Marketplace’, in Edward Muir and Guido Ruggiero, *Microhistory and the Lost People of Europe* (Baltimore: Johns Hopkins University Press, 1991)

a global vantage point. Scholars are particularly alert to what Carlo Ginzburg has described as the “decisive importance of those traces, those clues, those details previously overlooked, which upset and throw into disarray the superficial aspect of the documentation”.<sup>38</sup>

Maxine Berg wants to understand a long-distance trading connection and a small space in this connection which revealed complex interactions over value and equivalences. She explained what is global and what is micro in her study. “The power of place needs to be built into our global histories. Global historians have not given the attention they might have to local spaces; methodological reflection on the microhistories we build on these can challenge and refine the categories, theories and frameworks of global history.”<sup>39</sup>

In 1998, Gunder Frank published the *ReOrient: Global Economy in the Asian Age*, demonstrating that before the Opium War China was the centre of the global economy. China has maintained this advantage for a long time, and the West caught up only after 1800AD. He has become a supporter for the theory of the rise of contemporary China. Whereas, with a historical materialism background, he once thought that the world modern history is a history of the rise of Western capitalism. In the 1990s, he only maintained Marx’s concept of “capital accumulation” and abandoned the “production mode” doctrine: human history is no longer ordered by the five major production methods, so there is no such thing as capitalist mode of production. The world history has become ten cycles, and the region where the “global accumulation” dominated has become the centre of the global economy. “We found that the entire discussion about the ‘method of production’ was not only a meaningless gossip, but also diverted attention from the real problem. Participants in these discussions tried to avoid holistic analysis. Therefore, it is best to completely abandon the knot of ‘capitalism’.”

The greatest contribution of this work was the concept that before the promotion of the West’s “take off”, most of the world’s silver was concentrated in China, which is, a theoretical cornerstone of the emerging California school. Gunder Frank accused Wallerstein of supporting “western” scientific and cultural achievements and abandoning his materialism and objectivity. It was through refutation of cultural subjectivist views that Frank was able to explain the

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<sup>38</sup> Carlo Ginzburg, Carlo Poni, ‘The Name and the Game: Unequal Exchange and the Historiographic Marketplace’, in Edward Muir and Guido Ruggiero, *Microhistory and the Lost People of Europe* (Baltimore: Johns Hopkins University Press, 1991)

<sup>39</sup> Maxine Berg, eds. *Writing the History of the Global, Challenges for the 21st Century*. Oxford: Oxford University Press, 2013.

temporary transfer of wealth production from China to Europe. His generally indifferent approach to European and North American meticulousness has been praised by global historians, many of whom have proposed a goal to eradicate the last remnants of “Eurocentrism” in the writing of global history.<sup>40</sup>

When the California School took over this topic, its starting point was different from Gunder Frank. The latter regards China as the object of Western imperialism, while the former sees China’s unlimited business opportunities and huge market in history - this is the “globalization” methodology since the 1990s. As Frank predicted, the narrative focus of the world could be more and more concentrated on China rather than elsewhere. The themes of economics and trade could explain the development of Europe: Europe has evolved from a marginal and opportunistic participant in a China-centric world system to a temporary occupant of the economic core of this system. Though being a controversial but apparently idealized “China-centric view of history”, it’s likely to free our understanding of Chinese history from the narrow framework of European comparisons of believing that the social and economic dynamics in East Asia were caused by European influences.

*The Great Divergence* of Kenneth Pomeranz was one significant initiation for global history, with a methodological approach to the concept of “divergence”. Divergence in development between Europe and the Lower Yangzi Delta demonstrates the consequence of delays in the economic progress in the Lower Yangzi region. Pomeranz is a Chinese specialist with a global perspective. The book “Great Divergence” completely rewrote the “European Miracle”: the background of the “Great Divergence” in Europe and the difference with the non-Western regions are not that exaggerated, one of the pedals of the Western “take-off” is the advanced economy of China. Pomeranz claimed that ecological inequity in access to coal followed by the technological progress consuming coal triggered a divergence in development between Europe and Asia from the later eighteenth century. Like R. Bin Wong, Pomeranz believes that China’s market economy is closer to the ideals of classical economics: it is not bound by feudalism and mercantilism, nor existed slavery and serfdom; the commerce in Chinese cities are not constrained by guilds like the European cities. In the 18th century,

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<sup>40</sup> Pamela Kyle Crossley. *What is Global History?* Oxford: Polity Press, 2008.

regardless in the orient or the occident, the core areas of the old continents encountered limitation: exhaustion of land, soil degradation, forest cutting, and shortage of reliable energy, which caused obstacles to further production. Only new land, fuel and food supplies can ensure enduring growth. Pomeranz believes that economic advance of Europe in the 19th century, benefited partially from the proximity of coal mines, enabling the West to substitute land-intensive products with energy-intensive industries. Another factor is the Americas. Besides providing “miracle fields”, the Americas also provide raw materials, and silver which is closely related to the trade with the East.<sup>41</sup>

*The Great Divergence* caused a huge repercussion in academic circles with its innovative perspective of historical research, leading to the formation of a continuous “Great Divergence Debate”, which focuses on the investigation of reasons explaining the emerge of Western world since the nineteenth century, surpassing the ancient powerful empires such as Qing China, Mughal India and Ottoman Empire. Most frequently, the Great Divergence debate concerns comparison between Europe in early modern time and Qing China.

For instance, Peer Vries in particular analyses that in the period from roughly 1400 to 1800AD the most advanced economies of Eurasia formed a world of “surprising resemblances” and that the Great Divergence between “the West” and “the Rest” only originated with industrialisation and must be interpreted as a fairly contingent and recent phenomenon, basically due to differences in the availability of resources. He also points out that the Californians have a tendency to exaggerate the resemblances between Western Europe and East Asia, whereas more attention should be paid to political and military and cultural institutions.<sup>42</sup> Debin Ma posits that the political institution of imperial China - its unitary and centralized ruling structure - is an essential determinant to China’s long-run economic trajectory and its early modern divergence from Western Europe.<sup>43</sup>

Kent Deng proposes a “nutritional perspective” to find out whether and to what degree exists a common path between the Yangtze Delta and England after 1600AD, considering

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<sup>41</sup> Kenneth Pomeranz. *The Great Divergence: China, Europe, and the Making of the Modern World Economy*. New Jersey: Princeton University Press, 2001.

<sup>42</sup> Richard von Glahn, Peer Vries. “State, Economy and the Great Divergence: Great Britain and China, 1680s–1850s.” *The American Historical Review*. Volume 121, Issue 4, October 2016, Pages 1251–1252.

<sup>43</sup> Debin Ma. “State capacity and great divergence, the case of Qing China (1644–1911).” *Eurasian Geography and Economics*. December 2013, 54:5-6, 484-499



situations of food supplying, urbanization, commercialization, and industrialization. He concludes that even though the early modern Jiangnan area enjoyed “nutritional security,” the living standard was declining to even lower than the England’s labouring poor.<sup>44</sup> Jack Goldstone believes that too much research has focused on the economy and ignored the population, he took a demographic approach to reveal a close link between phases of global demographic transition and phases of the Great Divergence and Great Convergence. “As we account for the crucial role of the demographic component in these processes, we show that the timing of the trend change was not coincidental. Our findings suggest that the dynamics of global population growth and the Great Divergence and Great Convergence therefore may be considered so closely coupled as to be two sides of the same coin. On the other hand, they also suggest that the Great Divergence and Great Convergence should be treated as a single process, as two phases of the global modernization.”<sup>45</sup>

Meanwhile, an important new progress in global history study has been the emergence of the studies of “Indian Ocean”, “Atlantic World” and “Pacific World”. In contrast to the descriptions of civilizations and even the view of Wallerstein’s narrative from a central area, these new themes have taken margins as the core, assuming the paths of communication as the focus of the study, no matter being a maritime route, a trading port, or an interconnected inland town. Although the Pacific World research started later than the Indian Ocean and Atlantic World study, it has also emerged as an extremely rich field of research, which includes studies of comparisons and system of relations among the Pacific world, including America, Europe, and Asia. To study these ocean areas as unique and dynamic environments as well is a method of “encounter” and “integration” research.

In his work *Traditions and Encounters: A Brief Global History*, Jerry H Bentley devoted not only to show the contents of actual encounters, but also proposed to phase global history according to the fluctuations in features and frequencies of cross-cultural contacts, which has been an attempt to break through the conventional chronological method defined by European

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<sup>44</sup> Deng Kent, Patrick O’Brien. “Nutritional Standards of Living in England and the Yangtze Delta (Jiangnan), circa 1644–circa 1840: Clarifying Data for Reciprocal Comparisons.” *Journal of World History*. vol. 26 no. 2, 2016, p. 233-267.

<sup>45</sup> Andrey Korotayev, Jack Goldstone, Julia Zinkina, “Phases of global demographic transition correlate with phases of the Great Divergence and Great Convergence,” *Technological Forecasting and Social Change*, December 2015, Volume 95

experiences. Bentley regards the increasing frequency and altering contents of the “encounters” as a variable which has been decided by the global trade development and technological progresses, not by any single nation, individual culture or civilization.<sup>46</sup> Bentley pointed out that the independence of different cultures and the interaction between different cultures coexist. What he is pursuing is not to describe the fact that there is a connection between regions, but to explore the mechanism that causes this connection, that is, the mechanism of cultural exchange and integration, and think of this mechanism as the fundamental drive for global historical development.

In a word, the history research methods of the Annales School, various “micro history”, the Great Divergence debate, and studies of different ocean world, etc. all weakened the grand historical narrative and impacted Eurocentrism hypothesis. This thesis will take the perspective of global history and focus on the production of Chinese imperial silk factories at the turn of the seventeenth and eighteenth centuries, and compare it with the French royal supply factories of the same period, in order to summarize the characteristics of silk production of the imperial factories, at the same time, as an extension, include the nationwide silk production and domestic and foreign sales. This comparative proposition is drawn from the methodology of “connection” and “integration” in global history, focusing on the intercultural and interregional exchanges around the world, especially China and France in the research phase of this thesis, being the beginning of globalization. This thesis aims to study how the “connections” established through missionaries and merchandise trade has affected the silk production, output and trade of the two countries.

## **1.2 Research from a transnational and comparative perspective**

The Great Divergence debate has opened up a new space for economic history, which is now pursuing outline of investigation encompassing beyond Europe, America, or any national histories into global comparisons and connections. The development of different historiographies, as well as the global perspective, have reshaped frameworks for historical analyses. The term of transnational and comparative history has been more and more

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<sup>46</sup> Jerry H Bentley, Herbert F Ziegler, and Heather E Streets. *Traditions and Encounters: A Brief Global History*. Beijing: McGraw-Hill Education (Asia) Co. and Peking University Press, 2008.

perceptible in the research of global history. Renovated thoughts in global history, has generated significant comparative history studies on trade routes, resources, capital, demography and incomes among different areas in the world. The “great divergence” related investigations challenge us to not restrict on the internal national histories, but to make comparisons in a much broader global range. Transnational and comparative history are as well methodologies adopted by this thesis, which intends to make a comparison of two imperial silk factories in China and in France at the crossing of the seventeenth and eighteenth century, investigate the connections through missionaries and commodity exchanges between the two remote monarchs, and find the influences cause by these cultural contacts. Therefore, in this chapter, the methodology of comparison and transnational history is specifically analysed to comprehend its significance in global history research.

“When we speak of transnational history, we are not referring to a method, but to an approach, a viewpoint that allows us to discover new dimensions of the past or reassess and, if necessary, criticize previous ideas on previous interpretations of it.”<sup>47</sup> Transnational history started to show more importance in the historical research during the 19<sup>th</sup> and 20<sup>th</sup> centuries to go beyond the limitation of national history, specifically for the historical period after World War II the previous boundary between national and international history is blurred. Without a doubt, transnational history has appeared long before that, especially in the economic and cultural fields, subjects with a transnational background such as industrialisation, capitalism, demographic growth, imperialism, culture etc. have normally been handled in a transnational perspective.

Transnational history is not just history research of ranges other than national states, as Jan de Vries argued about Annales School, which focused on studies on regions or Braudelian ‘worlds’ (the Mediterranean, the Spanish Atlantic). Whereas the studies with “units either bigger or smaller than the state, did not really speak to each other”.<sup>48</sup> “They were presented as histories that are disconnected, with their backs to each other.”<sup>49</sup> “Transnational history,

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<sup>47</sup> Bartolomé Yun Casalilla, “Transnational history. What lies behind the label? Some reflections from the Early Modernist’s point of view,” *Culture & History Digital Journal*, 3(2): e025. Doi: <http://dx.doi.org/10.3989/chdj.2014.025>

<sup>48</sup> Jan de Vries. “Reflections on doing Global History.” In Maxine Berg, eds. *Writing History of the Global*. Oxford: Oxford University Press, 2013.

<sup>49</sup> Bartolome Yun Casalina, “‘Localism’, Global History and Transnational History: A Reflection from the Historian of Early Modern Europe,” *Historisk Tidskrift*, 2007,127, 4, 659-678

however, is not a homogeneous approach. It not only changes its meaning because national history is changing continuously, it also comprises a wide variety of complementary and sometimes conflicting approaches and methods, such as history of transfers, comparative history, global history, history of regions and history of international relations.”<sup>50</sup> In many circumstances, transnational history has been associated with comparative history. “Transnational history and comparative history at first glance look closely related, since both approaches make an effort to go beyond national history. But historians often see them as opposing concepts.”<sup>51</sup> Comparative history in some extent has been regarded as a “disguised” national history, as the comparisons have been made with units of nations, “hence a continuation of the predominance of national history.”<sup>52</sup> However, some research tendencies of historical comparison must be considered, the objective of comparative history is not only searching for dissimilarities, but also for interconnections.

Marc Bloch famously asserted that “all history is comparative history”, he systematically explicated historical comparison and identified the methods of comparison into two main categories: the first comparisons across space and time such as “an examination of Mediterranean civilisations - Hellenic or Roman - alongside contemporary ‘primitive’ societies”, while the determinism and universalism underlined in which has been rejected by most historians today.<sup>53</sup> The second involves of making “a parallel study of societies that are at once neighbouring and contemporary, exercising a constant mutual influence” and “exposed throughout their development to the action of the same broad causes”.<sup>54</sup>

As to the contribution comparative history could offer, first, it inspires to ask the right question to the historical sources. “A document is like an examination. The real difficulty lies in putting the right questions. That is where comparisons can be of such valuable help to the station.”<sup>55</sup> By interpreting the historical facts revealed by the right questions, through analysing

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<sup>50</sup> Kiran Klaus Patel. *Transnational History*. 2010. Web publication/site, EGO - Europäische Geschichte Online, Mainz. <http://www.ieg-ego.eu/patelk-2010-en>

<sup>51</sup> Hartmut Kaelble. “Comparative and Transnational History.” *Ricerche di Storia Politica, Fascicolo Speciale*. ottobre 2017.

<sup>52</sup> Hartmut Kaelble. “Comparative and Transnational History.” *Ricerche di Storia Politica, Fascicolo Speciale*. ottobre 2017.

<sup>53</sup> Prasanna Parthasarathi. “Comparison in Global History.” In Maxine Berg, eds. *Writing History of the Global*. Oxford: Oxford University Press, 2013.

<sup>54</sup> Marc Bloch. “Toward a Comparative History of European Societies.” *Lietuvos Istorijos Studijos*. 1928, 390. doi: 10.15388/LIS.2017.39.10767.

<sup>55</sup> Marc Bloch. “Toward a Comparative History of European Societies.” *Lietuvos Istorijos Studijos*. 1928, 390. doi:

the similarities and differences, the comparative method contributes to the discovery of “mutual influences” between “different and neighbouring societies”, whereas, Bloch emphasised more on the “real causes” discovered through the comparison. “This is where the comparative method seems capable of rendering the most conspicuous service to historians by setting them on the road that may lead to the discovery of real causes.”<sup>56</sup>

From the perspective of global history, we shall see more impacts of the “mutual influences” explicated by Bloch. Historians have never realized before that the world is so mutually influenced and closely related, especially since the early modern globalization, about the topics related to the currency and commodity circulation, cultural and technological exchanges in the world including Asia, Europe and America. The entangled history, connections and influences, were all paid much attention. Comparison with a transnational perspective has become the most popular and efficient tools for the global history research. In addition, Historians could make up for the lack of historical materials through comparison of various historical materials. Through the comparison of historical data in several aspects, differences and similarities between different phenomena can also be found. Furthermore, historical comparison has also been revealed in comparison of empires, industrial development, production and consumption of certain products in different countries of Europe, Asia, Latin America or Africa in the perspective of global history, which has been done popularly. Comparison with another country or another historical period often inspires renovated views and understanding of the history of one’s own.

It must be noted that the so-called comparison must be equal, and neither party is used as a standard reference item. Otherwise, the comparison loses its meaning. As Kenneth Pomeranz indicated that a “reciprocal comparison”<sup>57</sup> should be adopted to depart from the Eurocentric limitation. Jan de Vries also argued: “Comparative history, while useful, if not essential, to many historical questions, is commonly used to emphasize the special feature of a nation’s history, leading to its further essentialization. This might be indispensable to world history. My negative assessment would be developed that did not ‘privilege’ one nation, culture, or

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10.15388/LIS.2017.39.10767.

<sup>56</sup> Marc Bloch. “Toward a Comparative History of European Societies.” *Lietuvos Istorijos Studijos*. 1928, 390. doi: 10.15388/LIS.2017.39.10767.

<sup>57</sup> Kenneth Pomeranz. *The Great Divergence: China, Europe, and the Making of the Modern World Economy*. New Jersey: Princeton University Press, 2001.

civilization as a standard for comparison.”<sup>58</sup> The methodology of comparison and transnational history have also influenced economy history, by promoting the connection between economy history with cultural and social history.<sup>59</sup> For instance, with the concept of “industrious revolution”, Jan de Vries initially combined consumer cultures in Europe with global material cultures.<sup>60</sup>

A large number of dissertations have provided examples to show how consumption models in different countries can transnationally influence many other regions in the world like a butterfly effect. Such as the study on Asian luxury products like tea and porcelains in England in the eighteenth century and the import substitution process of Maxine Berg.<sup>61</sup> Manuel Pérez García examines the strategic geopolitical locations that fostered commercial, consumer and socio-economic networks between China and Europe between 1680 and 1800, considering two case studies, Macau’s links with southern China and Marseille in Mediterranean Europe.<sup>62</sup> He explores these early Sino-European bilateral trade relations and how they contributed to the creation of a new type of global consumerism.<sup>63</sup> In addition, he looks at the links between transcontinental flows of physical capital and patterns of consumption, focusing on the socio-cultural and economic transfers that occurred when different commodities were introduced to regions with different values and identities. In particular, it examines the role of merchants and their significant influence on consumer decisions, describing how they created demand for new necessities in local, national and international markets in the Western Mediterranean region.<sup>64</sup> In “*Creating Global Demand: Polycentric Approaches, Crossroads of Silk and Silver in China and Iberian Empires during the Early Modern Era*”, the regions of Asia, Europe and the Americas are compared by analysing the global demand for Western goods in China, and the demand for Eastern goods in Europe and the Americas.<sup>65</sup> At the same time, comparative and

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<sup>58</sup> Jan de Vries. “Reflections on doing Global History.” In Maxine Berg, eds. *Writing History of the Global*. Oxford: Oxford University Press, 2013.

<sup>59</sup> Maxine Berg, eds. *Writing the History of the Global, Challenges for the 21st Century*. Oxford: Oxford University Press, 2013.

<sup>60</sup> Jan de Vries. *The Industrious Revolution: Consumer Behaviour and the Household Economy, 1650 to Present*. Cambridge: Cambridge University Press, 2008.

<sup>61</sup> Maxine Berg. *Luxury and Pleasure in Eighteenth Century Britain*. Oxford: OUP Oxford Press, 2004.

<sup>62</sup> Manuel Pérez García. *Global History with Chinese Characteristics. Autocratic States along the Silk Road in the Decline of the Spanish and Qing Empires 1680-1796*. London: Palgrave macmillan, 2021.

<sup>63</sup> Manuel Pérez García. *Global History and New Polycentric Approaches. Europe, Asia and the Americas in a World Network System*. London: Palgrave macmillan, 2018.

<sup>64</sup> Manuel Pérez García. *Vicarious Consumers: Trans-National Meetings between the West and East in the Mediterranean World (1730-1808)*. Farnham: Ashgate Publishing Company, 2013.

<sup>65</sup> Manuel Pérez García. “Creating Global Demand: Polycentric Approaches, Crossroads of Silk and Silver in China

polycentric approaches are applied to the analysis of trade nodes in early modern Asian, American, African and European markets. These analyses present new case studies in the local context, looking at the impact of global commodities and changing consumer behaviour in local markets linking the Pacific and Atlantic regions, reassessing the Great Divide debate.<sup>66</sup>

The methodology of transnational history and historical comparison is of great significance to the study of global history. Transnational history makes historical research no longer confined to the framework of national history and motivates to observe historical facts from a broader global perspective. Historians are aware of the close ties in the world more than ever before, attentions paid to those connections and mutual influences could stimulate more productive thinking. At the same time, numerous and varied historical materials are collected together, without comparison, it is impossible to see the characteristics of each historical material and detailed similarities and differences between historical materials. Furthermore, through studying historical data of various transnational areas and in different languages, cross references could even be used to make up for lack of certain historical data. The coincidence in historical materials from different sources or the bias caused by cultural differences could trigger interesting controversies.

### 1.3 Literature review and main hypothesis

Silk constitutes a significant part of the Chinese civilization, which has been closely integrated into Chinese literature, art, etiquette system and technological innovations, all along the history from Neolithic age to modern time. As to the origin of silk, the most famous official saying is “Princess Leizu discovering silkworm and inventing silk loom”<sup>67</sup>, Leizu being the Yellow Emperor’s wife who is said to have discovered sericulture and initially made silk fabrics. Constant discoveries of modern archaeology have also verified the precise origin of silk, the Neolithic relics of Qingtai [qīng tái 青台] Village of Henan [hé nán 河南] province excavated

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and Iberian Empires during the Early Modern Era”. *Journal of Iberian and Latin American Economic History*, 38(3), 405-419.2020. doi:10.1017/S0212610919000284

<sup>66</sup> Manuel Pérez Garcia. “Beyond the Silk Road: Manila Galleons, trade networks, global goods, and the integration of Atlantic and Pacific markets (1680–1840)”. *Atlantic Studies*, 19:3, 373-383, 2022. DOI: 10.1080/14788810.2021.1930457

<sup>67</sup> Luomi 罗泌. *Grand History 路史*. (Song Dynasty) Beijing: Beijing Library Press, 2003.

in the eightieth have scientifically dated the beginning of silk history to 5,500 years ago.<sup>68</sup> In addition, the image of silkworm or cocoon has been found in many Neolithic stone carvings or decorative ornaments, such as the silkworm image on the tooth carvings unearthed from the Hemudu [hé mǔ dù 河姆渡] site in Yuyao [yú yá 余姚], Zhejiang; the cocoon-shaped decoration found in the Yangshao [yang sháo 仰韶] cultural site in Shanxi Province, and the pottery cocoons excavated from the Yangshao culture in Hebei all reflect the ancient people's consideration for the ecology of silkworms.

As the birthplace of sericulture, China has a history of silk production and trade as long as Chinese civilization itself. Silk products could be recognized as the most representative work of Chinese traditional material civilization. After thousands of years, by the Ming and Qing dynasties, sericulture and silk production were mainly concentrated in the Taihu lake basin in the south of the Yangtze River, the Pearl River delta in South China and the Sichuan basin. The silk production mode included small family workshops, private factories with a certain scale, as well as imperial silk factories. In family workshops, women and children were involved in the process of silk weaving; private silk factories had amplified to be the main force in silk production; the imperial silk factories had been more and more developed in this social background, with improved organizational structure and detailed division of labours.

Imperial silk factories and private sericulture and silk weaving industry influenced each other and complemented each other. As Giorgio Riello talked about a significant characteristic in the development of silk industry in Europe with codified craftsmen's knowledge and espionage organised by the state in sericulture: "The importance of the sector in national economies and the consequent control that states and empires exercised in developing sericulture, silk manufacturing, and trade."<sup>69</sup> National control and imperial organization also played an indispensable role in Chinese silk weaving industry. Although the traditional perception believed that court-run imperial silk factories deprived the private silk industry of labours and disadvantaged the sericulture and silk production of the whole society<sup>70</sup>, it is

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<sup>68</sup> Zhang Songlin 张松林, Gao Hanyu 高汉玉. "Observation and Research on Silk Fabric Excavated from Qingtai Site in Xiangyang 蒙阳青台遗址出土丝麻织品观察与研究." *Chinese Relics 中原文物*.1999. Vol.3

<sup>69</sup> Giorgio Riello. "Textile Sheres." In Dagmar Schafer, Giorgio Riello, Luca Mola. *Threads of Global Desire: Silk in the Pre-Modern World*. Woodbridge: The Boydell Press, 2018.

<sup>70</sup> Note: The research theories in this area mainly come from the second half of the last century, could also be



undeniable that the imperial silk factories have promoted and inspired private silk production with their organization format, high quality standards, top-level product design and exquisite craftsmanship.<sup>71</sup>

The progression of transporting of silk from the oriental to the occidental is more a legend than a history. “The transfer of sericulture was a lengthy and sometimes ineffective process that clearly cannot be ascribed to a single event.”<sup>72</sup> It’s difficult to concrete its starting point and time, whereas a terminology closely linked to this process is the “silk road”<sup>73</sup>, which is not a “road”, but a commercial network that origins from central China, passes through mountains, deserts or oceans without any signs. In this system, it has been exchanged not only commodities such as silk, porcelain and tea but also ideas of technology, culture, philosophy and religions. In the vast trading net, silk has been the protagonist all through the history. “In the first millennium BCE China was already an exporter of silk textiles and both ancient Greek and Roman consumers enjoyed sensuous pleasure of Asian silks.”<sup>74</sup>

Through the silk road crossing Eurasia, the tributary trade, and the new maritime routes, Chinese silk has been traded since ancient times, and has become a luxury commodity pursued world widely, the technology of sericulture and silk weaving has also been spread overseas along the trade road. Muslims in Central Asia first grasped the secret of silk fabricating and then spread it to Europe. In “Vermis Sericus”, a series of six illustrations demonstrate the history and techniques of silk production in Europe, showing the arrival of silk manufacturing in the occidental, when in the picture it showed Emperor Justinian (r. 527-605 CE) on the horseback receiving the first imported silk cocoons from two Nestorian monks.<sup>75</sup>

The spread process of silk from the east to the west has been studied and described as these following: “Starting from present-day northern China, sericulture moved to Korea and central

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influenced by the politics and ideology of anti-imperialism at that time.

<sup>71</sup> Note: Idea inspired and shared by Fan Jinmin 范金民. *Study on Jiangnan Silk in the Ming and Qing Dynasties* 明清江南丝绸史研究. Nanjing: Jiangsu People’s Publishing House, 2016.

<sup>72</sup> Christin Moll-Murata, “Chinese Guilds from the Seventeenth to the Twentieth Centuries: An Overview,” *International Review of Social History*, 53 Supplement, 2008.

<sup>73</sup> Note: it is originally derived from a set of five volumes published in 1877 by Ferdinand von Richthofen, a German imperial geographer, in 1877

<sup>74</sup> Debin Ma. “The Great Silk Exchange: How the world was connected and Developed.” In Dennis Flynn, L Frost and A.J.H. Lantham, eds. *Pacific Centuries: Pacific Rim History since the Sixteenth Century*. London: Routledge Press, 1999

<sup>75</sup> Note: Eemperor Justinian Received the first imported silkworm eggs from Nestorian Monks. From Giorgio Riello. “Textile Sheres.” In Dagmar Schafer, Giorgio Riello, Luca Mola. *Threads of Global Desire: Silk in the Pre-Modern World*. Woodbridge: The Boydell Press, 2018.

Asian (Khotan) and probably to India (where a local variety of silk worm was already known) around 300-200BC. A second phase in around 300-400BC allowed sericulture to be transferred to south China where the city of Suzhou later emerged as one of the most important centres of silk textile production.”<sup>76</sup> “The arrival of sericulture in Byzantium, possibly in the sixth century, is therefore only one step in a process of global transfer, perhaps not as important for the creation of a European silk industry as Stradanus wanted us to believe. In fact, a further phase from the nine to eleventh centuries saw Muslim expansion into North Africa and southern Europe bring silk production to Spain and Sicily. Eventually sericulture expanded to Italy in the fifteenth and sixteenth centuries, to France and central Europe in the late fourteenth and fifteenth centuries, and to Latin America in the sixteenth century.”<sup>77</sup>

Concerning the situation in France where the focus of this thesis laid, primarily in the fifteenth century in the Avignon area in France, silk production and sericulture industry were developed to meet the luxury needs of the pontifical court. As a consequence of the crusade against the Albigensian, the wars and especially the departure of the Avignon Popes,<sup>78</sup> the silk weavers migrated along the Rhône Valley, further north to the small town of Vienne at first, and finally they settled in Lyon, which was by then already an important commercial centre for the importation of silk woven in Italy. “A decree was issued on March 8, 1462, in favour of the fairs of Lyon to the detriment of those of Geneva; and another, on November 23, 1466, which proposed the creation of a royal fabrique of cloths of gold and silk in Lyon. Louis XI, installed in the castle of Plessis, in the district of Tours, decided then to move the royal fabrique to that city. The French King Charles VIII, on July 17, 1494, issued a decree prohibiting the use of cloth of gold, silver or silk that “did not have the seal of ‘Cité de France’”. This measure was intended to curb imports of Italian fabrics and to encourage Lyon merchants to develop silk weaving in their own city.”<sup>79</sup> *Historie de Lyon et du Lyonnais* demonstrates the great expansion of the market of silk fabrics in the kingdom: “The desire to show off and the taste for ostentation had reached the court and the nobility aristocracy, and extended to the great merchants and men

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<sup>76</sup> Christin Moll-Murata, “Chinese Guilds from the Seventeenth to the Twentieth Centuries: An Overview,” *International Review of Social History*, 53 Supplement, 2008, 227

<sup>77</sup> Luca Mola. *The Silk Industry of Renaissance Venice*. Baltimore: Johns Hopkins University Press, 2000.

<sup>78</sup> Zutshi, P. “The Avignon Papacy.” In M. Jones, eds. *The New Cambridge Medieval History Cambridge*: Cambridge University Press, 2000.

<sup>79</sup> Jacques Anquetil. *Las Rutas de la Seda: De China a Andalucía, Veitidós Siglos de Historia y Cultura*. Madrid: Acento Editorial, 2002.

of laws. No clothing could be compared to silk cloths, bright and smooth, heavy and with bright colours; damasks from Lucca, satins from Milan and velvets from Genoa were all the rage.”<sup>80</sup>

In 1536, in order to attract the best silk weavers, Francisco I issued a decree and exempted all taxes for all silk weavers in the kingdom. These privileges applied to all the cities of silk fabriques, such as Paris, Avignon, Tours or Nimes, though it was Lyon that took the preponderance. From then on, the French market had achieved a considerable development. But what gave Lyon a real prominent status was the decree of 1540 that declared the city “the sole factory of all the raw and fabricated silks that enter the kingdom. They must compulsorily pass-through Lyon, after having entered through Susa if they come from Italy; by Montelimart if they come from Avignon or Franche-Comté, and from Bayonne if they come from Spain.”<sup>81</sup> The diverse procedures of protection made Lyon a city of true monopoly, which allowed a considerable development of what would be later called “Le Gran Fabrique”. In 1554, the silk industry in Lyon could already feed 12,000 people.<sup>82</sup>

For the development of sericulture in the kingdom, at the time of Enrique IV, 6,000 feet of mulberry trees were brought from the Languedoc to transplant them in the regions of Tours, Orleans, Lyons and Beaujolais. Mulberry trees were put in the park of Fontainebleau, and then 20,000 in the garden of the Tuileries, and even some trees in the middle of the Vosges square. Two years later, silkworm eggs were distributed in the centres of mulberry plantations.<sup>83</sup>

One of the most remarkable summits of the silk industry of Lyon was marked by the reign of Louis XIV, the Lyonnais silk manufacturers finally renovated with their own style from the Italian trends. The theme tune of the silk fabrics was often the reflection of the royal life: imperial hunting scenes under the Sasanians; scenes of hippodrome under the Byzantine emperors, etc. The Louis XIV style was a mirror of his sumptuous life in Versailles and royal majesty, with a solemn and pompous flourish style. Louis XIV’s favourite subjects liked gardens, fountains, flowerpots, and rockeries could be found in the silks of that time. Henri Algoud expressed: “Would it be necessary to insist on the refinement in the execution of this

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<sup>80</sup> Jean-Pierre Gutton. *Historie de Lyon et du Lyonnais*. Paris: Presses Universitaires de France-PUF, 1998.

<sup>81</sup> Note: Text quoted in *L’industrie et le commerce de la soie, aperçue historique de la soie*, work done for the Franco-British exhibition of 1908, p.47

<sup>82</sup> Jacques Anquetil. *Las Rutas de la Seda: De China a Andalucía, Veitidós Siglos de Historia y Cultura*. Madrid: Acento Editorial, 2002.

<sup>83</sup> Jacques Anquetil. *Las Rutas de la Seda: De China a Andalucía, Veitidós Siglos de Historia y Cultura*. Madrid: Acento Editorial, 2002.

flowery style? To translate the relief, to give the impression of planes in depth, to make flowers, foliage and fruit to shape them perfectly, distributing shadows and lights to highlight them, to compose and vary the colours, it has been necessary, not to change the technique, but to appeal to all the subtle resources of carving and embroidery, multiplying the silk dyes and employing them in a new one.”<sup>84</sup>

Due to the policy of Colbert, customs and fees had been eliminated between each province, but Lyon city maintained as a privilege its own customs, through which all the domestic or foreign silk products should pass obligatorily; consequently, Lyon recovered its dominating position with strong competitiveness to foreign silk. The organizational system of the work in the Royal Factory of Lyon corresponded to a new form of servitude. Women and girls were forbidden to work from home, however, were obliged to work in the “fábrica”, with a rigid schedule of twelve hours in winter and eighteen hours in summer, which had though caused various strikes. In this way, it had been difficult for the independent workshops to compete with the Royal Factory, including workshops of the Italian weavers who were attracted to France by the numerous privileges offered by Colbert to foreign workers. Fortunately, incessant orders from Versailles were distributed to Lyon. In 1685, the devastating revolution of the edict of Nantes happened when Lyon was about to reach its hegemony, which caused an effect of the exclusion of Protestant manufacturers, bankers and weavers, who immigrated to Germany, Holland, Switzerland and England with their specialties and know-how. As a result, for instance, London used to import per year 200,000 pounds of silk fabrics from Lyon, though began its domestic manufacture and monopolized all Chinese silk through its factories of the East India Company. It was a hard blow for the Lyonnaise silk industry, the looms of Lyon had dropped from 13,000 to 4,000.<sup>85</sup>

Global trade has promoted the exchange of commodities, certain types of goods have become highly sought-after luxury items because of their scarcity outside of their origin. Merchants could make profits through trading, and the most profitable way is ultimately to localize production, that is, “substitute production.” “Clearly trade was the rational response to

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<sup>84</sup> Henri Algod. *La Soie; Art et Histoire*. Paris: Payot & CIE, 1928.

<sup>85</sup> Jacques Anquetil. *Las Rutas de la Seda: De China a Andalucía, Veitidós Siglos de Historia y Cultura*. Madrid: Acento Editorial, 2002.

a global specialization of production with products in high demand fetching premium prices outside their respective ‘spheres’ where they were appreciated as something different (exotic) and uncommon (rare).”<sup>86</sup> For the case of silk, first silk textiles were exported, later certain area started to produce imitations with imported raw silk yarn, finally the original material could also be developed locally, therefore the entire process has been replaced. The whole process is named “reverse engineering” by Giorgio Riello.<sup>87</sup>

For silk production, the technology of sericulture, silk reeling and textile weaving has been critical; the inheritance and spread of skills is inevitably one of the themes of the development of global silk industry. Due to the competition for interests between countries and regions, these technologies have often been confidential, therefore espionage in silk production has also been a fairly common phenomenon in history. “A second characteristic of the silk sector was the high level of technological transfer through codified and craftsmen’s knowledge, as well as industrial espionage.”<sup>88</sup>

Another example is Jean-Antoine Nollet’s (1700-70) journey to Piedmont in 1749, sponsored by the French Bureau of Commerce to gather intelligence of silk manufacturing.<sup>89</sup> The case of Nollet alerts us to a third and important characteristic in the development of the silk sector, especially in early modern Europe: the importance of the sector of national economies and the consequence controls that state and empire exercised in developing sericulture, silk manufacturing, and trade.<sup>90</sup>

At the crossing of the seventeenth and eighteenth centuries, the three Jiangnan imperial silk factories have reached a peak in terms of their production scale, technical craftsmanship and trend-leading influence on private silk factories; while in France, the court supplying silk factories in Lyon also had developed into a large scale. In the same period, through the Jesuit missionaries and overseas trade between China and France, there was a rich exchange of culture,

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<sup>86</sup> Giorgio Riello. “Textile Sheres.” In Dagmar Schafer, Giorgio Riello, Luca Mola. *Threads of Global Desire: Silk in the Pre-Modern World*. Woodbridge: The Boydell Press, 2018.

<sup>87</sup> Giorgio Riello. “Textile Sheres.” In Dagmar Schafer, Giorgio Riello, Luca Mola. *Threads of Global Desire: Silk in the Pre-Modern World*. Woodbridge: The Boydell Press, 2018.

<sup>88</sup> Giorgio Riello. “Textile Sheres.” In Dagmar Schafer, Giorgio Riello, Luca Mola. *Threads of Global Desire: Silk in the Pre-Modern World*. Woodbridge: The Boydell Press, 2018.

<sup>89</sup> Paola Bertucci. “Enlightened Secrets: Silk, Intelligent Travel, and Industrial Espionage in Eighteenth-Century France.” *Technology and Culture*. 54/4, 2013, 820-52

<sup>90</sup> Giorgio Riello. “Textile Sheres.” In Dagmar Schafer, Giorgio Riello, Luca Mola. *Threads of Global Desire: Silk in the Pre-Modern World*. Woodbridge: The Boydell Press, 2018.

skills and commodities.

There are innumerable literatures about Chinese silk, among which, such as “Chinese Silk History”<sup>91</sup>, “General History of Chinese Silk”<sup>92</sup>, “Cultural History of Chinese Silk”<sup>93</sup>, and “Cultural History of Zhejiang Silk”<sup>94</sup> have introduced the historical development of silk, typology of silk textiles, and silk producing technology. In certain chapters, these works also present the production of imperial silk factories in different dynasties. The “Illustrated Dictionary of Qing Court Costumes”<sup>95</sup> compiled by the Palace Museum records and demonstrates the imperial costumes woven by the imperial silk factories, and introduces the imperial costume classification system, production processes, and silk craftsmanship.

Essays and works about imperial silk factories in the Qing Dynasty include *The emperor's eyes and ears in the south of the Yangtze River; the three imperial silk factories in Jiangnan area in the Qing dynasty*<sup>96</sup>, *A preliminary study on the political status and functions of the Jiangnan three imperial silk factories of the imperial household department in Kangxi period*<sup>97</sup>, *Research on the supervisors of Jiangning imperial silk factories in the Qing Dynasty*<sup>98</sup>, and *Social role of Li Xu of Suzhou imperial silk factory in Qing Dynasty*<sup>99</sup>, all focus on the relationship between supervisors of imperial silk factories and the emperor, which is an viewpoint of particular interest to Chinese historians.

*The Development of Suzhou Imperial Silk Factory*<sup>100</sup> introduces the historical

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<sup>91</sup> Luo Ruilin 罗瑞林, Liu Bomao 刘柏茂. *Chinese History of Silk 中国丝绸史话*. Beijing: Textile Industry Press, 1986

<sup>92</sup> Zhao Feng 赵丰. *The General History of Chinese Silk 中国丝绸通史*. Suzhou: Suzhou University Publishing House, 2005.

<sup>93</sup> Yuan Xuanoing 袁宣萍, Zhao Feng 赵丰. *The History of Chinese Silk Culture 中国丝绸文化史*. Ji'nan: Shandong Fine Art Publishing House, 2009.

<sup>94</sup> Yuan Xuanoing 袁宣萍, Zhao Feng 赵丰. *The History of Chinese Silk Culture 中国丝绸文化史*. Ji'nan: Shandong Fine Art Publishing House, 2009.

<sup>95</sup> Palace Museum, eds. *Illustrated Dictionary of Qing Dynasty Court Costumes Edited by the Palace Museum 清宫服饰图典*. Beijing: The Forbidden City Publishing House, 2010.

<sup>96</sup> Zhang Qiong 张琼. “The Emperor's Eyes and Ears in the South of the Yangtze River, the Three Imperial Silk Factories in Jiangnan Area in the Qing Dynasty 皇帝的江南耳目, 清代的江南三织造.” *Forbidden City*. 2016, Vol 8, p36-44.

<sup>97</sup> Kong Weichen 孔维琛. “A Preliminary Study on the Political Status and Functions of the Jiangnan three Imperial Silk Factories of the Imperial Household Department in Kangxi Period 康熙时内务府江南三织造的政治地位和职能初探.” *Course Education Research*. 2017, Vol.21.

<sup>98</sup> Wang Zhiqiang 王志强. “Research on the supervisors of Jiangning imperial silk factories in the Qing Dynasty 清代历任江宁织造任期考述.” *Historical Archives 历史档案*. 2018, Vol.1

<sup>99</sup> Zhang Pengxin 张彭欣, Fan Jinmin 范金民. “Social Role of Li Xu of Suzhou Imperial Silk Factory in Qing Dynasty 清代苏州织造李煦的社会角色.” *Historical Archives 历史档案*. 2018, Vol.2

<sup>100</sup> Yu Jing 俞菁. “The Development of Suzhou Imperial Silk Factory 苏州官府织造机构始末.” *Archives*

background and progress of the establishment of Suzhou imperial silk factory, *Discussion on the imperial silk factories of Ming and Qing Dynasty and the classification of the fabric products*<sup>101</sup> also provides a code of silk consuming according to social hierarchy in Ming and Qing dynasties, at the same time made some quantitative analysis on the production of imperial silk factories and private silk workshop in the Ming and Qing Dynasties. *Analysing and thinking on the technical features of the imperial silk factories in ancient China*<sup>102</sup> took Suzhou imperial silk factory as an example, focusing on its labour-intensive production and management methods.

Among the academic works concerning the imperial silk factories in the Qing Dynasty, it must be mentioned an dissertation published by Peng Zeyi in the 1960s, *Studies on the imperial silk factories in early Qing Dynasty*, investigating in details the business organization system, the manufacturing equipment scale, finance, personnel management, income and social status of the craftsmen, product types and sales, etc. of the imperial silk factories in the Qing Dynasty.<sup>103</sup> In the book of Fan Jinmin, *Study on Jiangnan Silk in the Ming and Qing Dynasties*, it is declared that the research of the imperial silk factories of Jiangnan had been focused rather on the study of the officials who were managing the factories than the silk production; the author collected related archives and records, analysed statistically the production scale, economic resources for production and actual productivity of the three imperial silk factories. For the influence of the imperial silk factories, Fan doesn't see only the negative effect as Chinese historians often emphasize on the labour exploitation aspect, indicated that the imperial silk factories are motivative and positive factors to build the incompatible silk production centres of Jiangnan area.

*Gazetteer of Suzhou Imperial Silk Factory* is an ancient book written by Sun Pei, published in the twenty-fifth year of Kangxi emperor (1686); the writer once participated in the edition work of the local gazetteer of Suzhou, he took advantage of official documents to edit Suzhou

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&Construction. 2015, Vol.3

<sup>101</sup> Zhang Jianfeng 张剑锋. "Discussion on the Imperial Silk Factories of Ming and Qing Dynasty and the Classification of the Fabric Products 试论明清官营丝绸织造及其织物典制." *Texture Reports 纺织报告*. 2019, Vol.5

<sup>102</sup> Dong Fenhe 董粉和. "Analysing and thinking on the technical features of the imperial silk factories in ancient China." *Lan Zhou Study 兰州学刊*. 2018, Vol.5

<sup>103</sup> Peng Zeyi 彭泽益. "Studies on the Imperial Silk Factories in Early Qing Dynasty 清代前期江南织造的研究." *History Syudy 历史研究*. 1963. 04

local gazetteer as well as the *Gazetteer of Suzhou Imperial Silk Factory*. It's a significant document recording events concerning silk textiles of imperial and administrative use of Qing Dynasty before the twenty-fifth year of Kangxi (1686), as well as information concerning fabric materials and wages, etc.

Besides historical archives, works, essays, there is literature concerning the imperial silk factories, the most outstanding one is *Dream of Red Chamber*. Cao Xueqin, the writer, whose family has been officials of Jiangning imperial silk factories for three generations since his grand-grandfather, who was especially trusted by Kangxi emperor. On the first years of emperor Yongzheng (1678-1735), the Cao family encountered a fatal strike caused by political conflicts, Cao's father was dismissed and the family property was confiscated. *Dream of Red Chamber* is a novel like an encyclopaedia, taking a love story as the main line, depicting the rise and fall of four noble families who were closely tied to the officials of the three imperial silk factories.<sup>104</sup> The Cao family had succeeded managing Jiangning imperial silk factory for as long as 58 years, at the same time, hold a concurrent post of "investigating censor of salt business" and "supervisor of copper", therefore actually the imperial silk factories of Jiangnan formed a bureaucrat group with political, economic and cultural powers.<sup>105</sup> There have been numerous academic study of the *Dream of Red Chamber*, which even had a specific term called "Redology".

Concerning the imperial silk factories, the above literature review has set a stable base for further research of the Jiangnan imperial silk factories and the private silk industry. On the other hand, about le Grande Fabrique of France, the work of Justin Godart in 1899 must be revealed, as it has been the groundwork for all the succeeding historical researches, and a systematic elucidation of the organization of the silk-weaving guild. By means of archives of guilds concerning the organizational protocols and juridical records, the author broke down the guild organization to different layers, investigating its history, production methods and mechanisms.

<sup>106</sup> In the succeeding research by Jean Peyrot and Carlo Poni in the 1970s and 1980s, a study

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<sup>104</sup> Cao Xueqin 曹雪芹(1727-1732), "Dream of the Red Chamber 红楼梦," (Beijing: People's Literature Publishing House, 1996)

<sup>105</sup> Zhou Ruchang 周汝昌, Yan Zhong 严中. *Jiangning Imperial Silk Factory and Family Cao 江宁织造与曹家*. Beijing: Zhonghua Publishing House, 2006.

<sup>106</sup> Justin Godart. *L'ouvrier en Soie: Monograohie deu Tisseur Lyonnais: Etude Historique, Economique et Sociale. Premiere Partie, La Réglementation du Travail: le Maitre Ouvrier en Draps D'or, D'argent et de Soie, de*



of individuals in the guild, commercial production processes and techniques of the silk merchants had been carried out through quantitative analyses, as a supplement to the work of Godart.<sup>107</sup> Lesley Miller assessed the role of samples in the marketing approaches, observed its advantages and disadvantages, using both archival and material proofs. The commercial affiliation of Lyon and Paris was also analysed in her work, particularly the exchanges between the Lyonnais merchant manufacturers and the Parisian mercers and businessmen.<sup>108</sup> In the dissertation of *Silks for the Crown: five partnerships of merchant manufacturers in eighteenth century Lyon* of Dato, Moira, five partnerships of Lyon who supplied silk furnishing to the French court, from 1741 to the French Revolution was investigated. It intends to sort out the micro history of the 23 men who formed this partnership, within the context of social and economic life in the eighteenth-century France. It observes how these merchant manufactures, being selected as official suppliers of the Crown, integrated into the silk-weaving guild and the local society of Lyon. Besides the characteristics of their production, their background, career and social evolution are considered as well. “This work suggests that the position of royal suppliers required no specific level of fortune or social status, but that a great variety of men, with diversified profiles, accessed this charge.”<sup>109</sup>

Beyond a general presentation of the historiographical theories of global history and consumption history, it is essential to specify what is the main emphasis of this dissertation. This thesis intends to investigate the silk production and consumption in China and France at the crossing of the seventeenth and eighteenth century, focusing on the comparison between the imperial silk factories of the Kangxi period of Qing Dynasty and the court supplying silk factories of Louis XVIII of France. Though there have been abundance of works researching respectively the Chinese silk trade, the sea-ban policy, the organization of the guilds and the silk production development in Europe, a contrast of the two official silk factories at a coincidental historical period would be rather innovative and stimulating.

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*l'Établissement de la Manufacture à Lyon (1466)*. Paris: A. Rousseau, 1899.

<sup>107</sup> Jean Peyrot. “Les Techniques du Commerce des Soies au XVIII<sup>e</sup> Siècle, à Travers les Documents Commerciaux et Comptables des Fabricants de Soieries.” *Bulletin du Centre d'Histoire Economique et Sociale de la Région Lyonnaise*. n° 1, 1973, p. 29-48.

<sup>108</sup> Lesley Ellis Miller. “Paris-Lyon-Paris: Dialogue in the Design and Distribution of Patterned Silks in the Eighteenth Century.” Jon Stobart, Bruno Blonde, eds. *Selling Textiles in the Long Eighteenth Century*. London: Palgrave Macmillan, 2014.

<sup>109</sup> Dato, Moira, *Silks for the Crown: five partnerships of merchant manufacturers in eighteenth-century Lyon*. MRes thesis. 2017.

Basing on the methodology of paying attention to the “connections” and “influences” between different areas, by comparing the imperial silk factories of China and court-supplying silk factories in France in the reigns of two monarchs, my thesis intends to analyse the coincidences and variations of the business organization systems, the manufacturing scales, financial situations, personnel management methods, income and social status of the weavers, product types and sales, etc., of the two official factories. At the same time, to reveal the influences of the French Jesuits to the silk production of both monarchs, and verify if the French court-supplying silk factories were a mirror reflection of the imperial silk factories of Kangxi period.

Concerning this theme, one of the principal questions to be deal with is: What’s the connection between the imperial silk factories in Kangxi period of the Qing Dynasty and the court-supplying silk factories of Louis XIV in France? Have there been any mutual influences between the two factories due to the bridge of culture, sciences and trade made by the Jesuits? Were the court-supplying silk factories mirror reflection of the imperial silk factories of Kangxi period?

Other important questions associated could be: What’s the situations of the business organization systems, the manufacturing equipment scales, financial situations, personnel management methods, income and social status of the weavers, product types and sales, etc., of the two imperial factories? At the same time, what’s the coincidences and variations between them? How was the development along history of the imperial silk factories? What is the distribution of the silk products from the imperial silk factories, including the court, the administrative system and the tribute system? Did the inspection missions of the French missionaries dispatched by the French court include the observations of imperial silk factories? How did these affect the production of silk manufacturing in France, especially the court-supplying silk factories?

Concerning a wider environment of the private production: How was the private silk production of Jiangnan area in Kangxi years? What was the relationship between the imperial silk factories and the private silk factories? How did the imperial silk factories influence the private silk industry? How was distribution of the silk products from the private silk factories? How was the domestic consumption of silk products? What was the role of the Chinese silk

products in the early globalization in modern time? These questions could be responded by examining the whole process of the production in the Chinese imperial silk factories and the court supplying silk factories, as well as making a comparison to tell the coincidences and variations, in a contextual panorama of the silk production and consumption in the Chinese and French market.

## **Chapter II. Sources and Methodology**

### **2.1 Cross reference of the existing data and materials available in archives**

#### *Imperial Archives in the First Archive of China*

There are around ten million Qing Dynasty sources preserved in China's First Historical Archives which are documentation formed through all the history of Qing Dynasty of more than 300 years since 1607 to 1911.<sup>110</sup> The contents of the archive cover many aspects of the Qing Dynasty, including politics, economy, military, culture, art, ethnicity, religion, diplomacy, science and technology, astronomy, geography, meteorology, major events, important ordinances, important historical figures, etc. They are valuable first-hand materials for studying and compiling Qing Dynasty history. The Qing Dynasty was a feudal regime with a centralized and authoritarian system. The emperor's power was supreme, and the state's general affairs were handled directly by the emperor. Therefore, the archives formed focusing the emperor's activities constitute the essential of the national archives. There are more than 100 types of documents, which can be roughly divided into five parts: the emperor's order documents, the memorials of the ministers, the exchange documents between various areas and countries, the official historical records, and the archives of the royal family.

Among the imperial archives, the memorials to the throne of the Qing Dynasty are one of the most important archives with high historical value and large volume. The origin of the memorials to the throne could be dated back to the Kangxi period of the Qing Dynasty, when certain officials and local supervisors with special identities were granted the privilege to present notices in secret folds, which was an important development of the official memorial

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<sup>110</sup> Note: information from the official website of China's First Historical Archives.

system. It was clearly declared the reason of the secret memorial to the throne system by emperor Kangxi, “I grant the ministers to report in secret memorials, as it is important for me to supervise timely and closely all the affairs, I would review all the reports by myself. Therefore, the nobility and the ministers would be more cautious and behave.”<sup>111</sup> Since the Yongzheng Dynasty, it has been stipulated that all important or confidential affairs of the central and local governments must be reported to the emperor by the senior officials in folds of memorials. In this way, the memorials to the throne became an important official document for senior officials of the Qing Dynasty to make statements to the emperor.

Memorials to the throne with red comments, zhupi zouzhe [zhū pī zòu zhé 朱批奏折], are memorials reviewed by the emperor with red ink. They are normally written on a folded white paper, some are on light yellow paper, red paper even yellow silk. The character “zou [zòu 奏]” in “zhu pi zou zhe” is a word with a long history to describe especially reports of the ministers to the emperor. Since the memorial documents usually have the emperor’s handwritten reviews and instructions, which contributed to their legal and administrative importance at that time, in terms of its historical value, they are also prominent among the various official documents of the Qing Dynasty. There are records in the memorials to the throne of all the important affairs, concerning diplomacy, politics, military, economy, and culture etc. over two hundred years after the mid-Kangxi period in the Qing Dynasty. The contents are rich, systematic and reliable, which other documents cannot be compared with. They are one of the original sources of many Qing historical documents, many historical materials could be found exclusively in the memorials to the throne, which in other documents could be recorded indefinitely or inaccurately. The memorials to the throne are among the most primitive historical materials and the most straight historical evidence for the study of Qing history. Therefore, many researchers and scholars who study the history of the Qing Dynasty attach great importance to the study and utilization of the memorials to the throne of the Qing Dynasty.

Meanwhile, digitalized historiography, as a brand-new methodology, features the contemporary historical research, which highlights the digitalization of historical materials,

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<sup>111</sup> “Hadith of Emperor Kangxi 圣祖仁皇帝圣训. Vol. 24.” (1731) *Imperial Libraries of Wenyuange Sikuquanshu* 文渊阁四库全书. Shanghai: Shanghai Ancient Books Publishing House, 2003.

emphasis on interactive networks, and database search services. Through the local network and official website of the First Historical Archives of China, the “Information Platform of China's First Historical Archives” and the “Full-text Database of Ming and Qing Archives” offer accesses to a large quantity of digitized fonds, including: the cabinet, Department of Military, memorials to the throne, Imperial Housekeeping Apartment, and Department of Law, etc. The digitalized archive system permits word retrieval of the full-text archives, text-image checking, and the full text copying, which greatly benefit and efficient the researching work.

*“Collection of Archives” and ancient books*

In addition to the original historical materials of the First Archive of China, there are a number of existing collections that have been published, which include archives been classified according to dynasties and related themes and has assembled various laws and regulations, rules and regulations of Kangxi years especially, such as *Collected Status of Kangxi Period of Qing Dynasty*<sup>112</sup>, *Compilation of Memorials to the Throne of Kangxi Period*<sup>113</sup>, *Compilation of Translated Manchu Language Memorials to the Throne of Kangxi Period*<sup>114</sup>, which all facilitated the research on Kangxi years as required in this paper. *Archives on Western Catholic Activities in China in the Early Mid-Qing Dynasty*<sup>115</sup>, compiled by the First Archive of China, is a collection of activities of trade and culture exchange between China and western countries in the early and middle Qing Dynasty. And *Archives concerning the Cao Family of Jiangning Imperial Silk Factory*<sup>116</sup>, compiled by the Ming and Qing Archives Department of the Palace Museum, is a summary of Cao Family archives of the Jiangning Imperial Silk Factory, mainly based on memorials to the throne.

Besides archival documents and collections, there are also records about imperial silk factories in ancient books. A well-known example is *Memoria of Suzhou Imperial Silk Factory*

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<sup>112</sup> Yi Sang A 伊桑阿 eds. *Collected Status of Kangxi Period of Qing Dynasty 康熙朝大清会典*. (Qing Dynasty) Nanjing: Phoenix Publishing House, 2016.

<sup>113</sup> First Historical Archives of China, eds. *Compilation of Memorials to the Throne of Kangxi Period 康熙朝汉文朱批奏折汇编*. Beijing: Archive Publishing, 1984.

<sup>114</sup> First Historical Archives of China, eds. *Compilation of Translated Manchu Language Memorials to the Throne of Kangxi Period 康熙朝满文朱批奏折全译*. Beijing: China Social Science Press, 1996.

<sup>115</sup> First Historical Archives of China, eds. *Archives Concerning Western Catholic Missions From the Early to Mid-Qing Dynasty in China 西洋天主教在华活动档案史料*. Beijing: Zhonghua Publishing House, 2003.

<sup>116</sup> Department of Ming and Qing Archives of the Palace Museum, eds. *Archives concerning the Cao Family of Jiangning Imperial Silk Factory 关于江宁织造曹家档案史料*. Beijing: Zhonghua Publishing House, 1975.

by Sun Pei of Qing Dynasty<sup>117</sup>, which was compiled according to the documents of the time including the Collected Status of Qing and memorials to the throne, etc. In the ancient literature collection of Shanghai Library, the original document could be reviewed of “Management of Suzhou Imperial Silk Factory and the Taxation Documents of Xushu Customhouse [hǔ shù guān 浒墅关]”<sup>118</sup>, which contains information of production cost on materials and labours for both court-supplying and administrative use silk produced by Suzhou imperial silk factory, dated 15 March 1859, the ninth year of Xianfeng Emperor. Although it is a document of the later Xianfeng period, it is of important reference value for the silk production management of the imperial silk factories in prior time.

Bibliotheca Zi-Ka-Wei of Shanghai Library is also a focus of this research. There are more than 2,000 precious western-language books before 1800, including Chinese, Latin, English, French, German, Russian and Japanese languages, covering philosophy, religion, politics, economics, linguistics, literature, art, history and geography, etc.<sup>119</sup> Among them, there are journals written by western missionaries and merchants, containing records about the social conditions and commodity economy of the Qing Dynasty, which contributes to further understand the daily life, economic transactions and networks of Chinese social groups and Jesuit missionaries in the seventeenth and eighteenth centuries. Such as narratives and descriptions about typology of silk in *Voyage a Canton, Capital de la Province de Ce Nom*<sup>120</sup>, *Jean Francois Gerbillon. SJ, one of the five mathematicians sent by Louis XIV to China* records the diary and correspondence letters of Jean Francois Gerbillon. SJ, known with his Chinese name Zhang Cheng [zhāng chéng 张诚], a Jesuit in the Kangxi period.<sup>121</sup>

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<sup>117</sup> Sun Pei 孙佩, Qian Siyuan 钱思源. *Memoria of Suzhou Imperial Silk Factory* 吴门补乘, 苏州织造局志. (1696) Shanghai: Shanghai Classic Publishing House, 2015

<sup>118</sup> Note: historical archive from ancient literature collection of Shanghai Library, *Management of Suzhou Imperial Silk Factory and the Taxation Documents of Xushu Customhouse* “管理苏州织造兼管浒墅关税务文, 今将咸丰九年三月十五日造解上用官用缎匹等项用过工料钱粮按照例定价值?”

<sup>119</sup> Note: data from the introduction to Bibliotheca Zi-Ka-Wei of the website of Shanghai Local Gazetteer Office

<sup>120</sup> Macartney, Van-Braam. *Voyage a Canton, Capital de la Province de Ce Nom*. Paris: Chez André, Imp.-Libraire, An VII de la République Française, 1753.

<sup>121</sup> Yves de Thomaz de Bossiere. *Jean Francois Gerbillon. SJ, One of the Five Mathematicians Sent by Louis XIV to China (1654-1707)* 耶稣会士张诚路易十四派往中国的五位数学家之一. Henan: Daxiang Publishing House, 2009.

### *Local gazetteers*

Local gazetteers have been viewed as “encyclopaedias of a place,” recording history of places with a wide catalogue of contents and a long duration time range. They have been extremely influential on politics, economy, and culture from the ancient times to the present. Compiling gazetteers has been a long-lasting cultural tradition in China, the origin of which can be traced back to the records of the ancient historians, such as *Rites of Zhou* [zhōu lǐ 周礼], it can also be traced to the earliest geographical works of China, such as *Shang Shu·Tribute of Yu* [shàng shū yǔ gòng 尚书·禹贡] and *Classics of Mountains and Seas* [shān hǎi jīng 山海经]. After the Qin Dynasty (221-207BC) more and more gazetteers were written, in the Sui (581-619AD), Tang (618-907AD), and Song Dynasties (960-1279AD), the local gazetteers became more elaborate by including maps alongside explanatory text.

Gazetteer redacting became extremely popular in the Ming Dynasty (1368-1644AD) and especially so in the Qing Dynasty (1616-1912AD) when the *General Gazetteer of Qing Dynasty* [dà qīng yī tǒng zhì 大清一统志] was compiled three times in the Qianlong and Jiaqing periods. A trend of gazetteer writing swept over the country as the imperial court stipulated that gazetteer of provinces, cities, and counties must be compiled every sixty years. Specific gazetteer compiling organizations were established all over the country and many literary men dedicated themselves to this process, producing a large number of gazetteers of high quality.

Although the scope of local gazetteers is limited to one region, the contents are extremely extensive, concerning both ancient and current history, recording not only nature and geography, but also politics, economies, military, customs, and biographies. As one scholar has noted, “Geographical gazetteers include history, territories, area, and divisions; political gazetteers record establishments, officials, armaments, and memorabilia; economical gazetteers have hukou, land grants, local products, and customs; social gazetteers involve customs, dialects, temples, and fairy tales, gazetteers of historical documents include biographies, art, epigraphy, and monuments.”<sup>122</sup>

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<sup>122</sup> Gu Jiegang 顾颉刚. “Preface for Comprehensive Chinese Local Gazetteers 中国地方志综录·序.” In ZhuShijia 朱士嘉. *Comprehensive Chinese Local Gazetteers 中国地方志综录*. Taibei: Xin Wen Feng Publishing House, 1986.

In the gazetteer compilation process, loyalty to historical archives has been a traditional method. "Sources of local gazetteers are extremely reliable, including epigraphs, official records and announcements, classics, with notes of exact time, place and person." Gazetteers have been regarded as "the most honest historical materials." Gazetteers do not explore the law of the development of nature and history, but only provide information for scientific or historical researches; they do not make any comments but only provide narratives. During the Ming and Qing Dynasties, one of the preparatory works of local officials to be on post was to read the local taxation records from the gazetteers in order to learn about local territories, the number of households, real estate registration, tax services, and customs, etc. In this way, gazetteers have been not only a reference material for local officials, but also an important source for historians.

Ancient gazetteer books have been scanned to be read on the computer. In the digitalized database of gazetteers, a variety of related options can be used for an accurate search, which makes it possible to exclude a lot of irrelevant data. In modern academic research, knowing how to make full use of electronic literature means much more efficiency, innovation, and reliability of the results. The database consulted in my thesis is the China Fangzhi Library database which is a full-text search version of a large-scale ancient book database that specializes in a collection of local gazetteers, and covers a wide range of sources from Han and Wei Dynasties to the modern Republic of China. The contents include all aspects concerning these places, such as geographic information, landscape and views, administrations, historical evolution, taxes and revenue, products, resources and local customs, etc. The database was developed by Liu Junwen, a professor at Beijing University, and produced by Beijing Ai Ru Sheng Digital Technology Research Centre.

*Archives Municipales, Fonds de la Grande Fabrique de soie 1563-1791*

The production of silk in Lyon, the silk capital, was known as "la Grande Fabrique", with a large population working in thousands of workshops for hundreds of merchants. The work with silk, a precious material, was strictly regulated to avoid any fraud, and these regulations were governed by consular ordinances, municipal authorities and royal decrees. All regulations, registrations, permits and consular orders were recorded, listed and kept in the archives. The



subject of this archive is the digitised list of these registers in the HH series from HH561 to HH624, whose catalogue includes: registers of apprentices, journeymen, craftsmen, etc.; catalogues corresponding to these registers; some registers of consular orders and the accounting management of companies; some registers of the operation of the guilds; volumes of the archival inventory of large factories made at the end of the 18th century.

## 2.2 Social network analysis

After the development of several decades, social network analysis has become one of the fundamental concepts in the fields of social sciences, natural sciences and information sciences. It's hard to say that social network analysis is a specific discipline, it is more frequently applied as a research method or perspective. There is a significant difference between the analysis framework of social network analysis and the analysis of traditional social structure. The latter usually uses the characteristics of individuals, such as age, education level, etc. to define the structure of social groups and emphasizes the use of standard statistical indicators, such as average and analysis of variance, etc. social network analysis regards the relationship between two or more people, groups, or institutions as the basic unit of analysis. These networks of social individuals may be resource transfer types, associations or biological connections like kinships. Under the social network analysis framework, "social network" is a collection of all relationships between individuals, and "social structure" is an assumption of the way these relationships are presented.

As noted by Michel Bertrand, Sandro Guzzi-Heeb, Claire Lemercier, in the historical discipline, the use of social network analysis has walked in two ways: investigations approach with formalization in technical terms that implies the application of the social network analysis, and those that use the concept of network to explain some space of the social reality, but without incorporating the formal analysis.<sup>123</sup> Traditional quantitative social sciences take individual "tags"- attributes such as gender, income, social status, and class as the basic units of analysis to obtain certain indicators such as sex ratio, demographic statistics, and average income, and study their mutual relationship. However, this method ignores the influence of social

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<sup>123</sup> Michel Bertrand, Sandro Guzzi-Heeb, Claire Lemercier. "Introducción: ¿en Qué Punto se Encuentra el Análisis de Redes en Historia?" *Revista Hispana para el Análisis de Redes Sociales*. 2011, vol. 21, núm. 2

interactions between individuals on these attributes. Social network analysis puts the relationship in the centre. In these theories, individuals are abstracted as nodes, and the social relations between individuals as edges between nodes form a network together, therefore the structural network could provide a systematic explanation of social phenomena.

Social network analysis can also be called social network theory or social network science. It was first established and developed by sociologists about 100 years ago.<sup>124</sup> By the end of last century, social network analysis was mainly in the research field of social sciences, such as sociology, anthropology, and economics, etc. Since the late 1990s, social network analysis paradigm has diverged: One research paradigm is still based on sociology and anthropology with the more preferred term being “social network”, and the emphasis has been placed on small-scale samples and interviews, mainly through qualitative research methods and simple quantitative research methods; another research method is based on statistical and more complex mathematical methods, emphasis on large samples and massive data, mainly through quantitative research and more complex computer science research methods, which are typical “natural science” studies.

However, in recent years, these two diverged research methods have shown a convergence trend. The general trend is that the “science” features of social network analysis seem to be gradually strengthening, and at least it is becoming a typical interdisciplinary field that is neither a pure social science nor a pure natural science. Previous social sciences often focused on the characteristics of individuals, which are also called actors, while ignoring the relationships between individuals. Social network analysis is the method and perspective of research on relations, whose most important feature is that it considers the interdependence between individuals and is closer to the real society.

According to the famous chain letter experiment of Milgram, all the people in the world who doesn't know each other need only a few middlemen to establish a link. Experiments prove that on average, only six people can contact any two strangers in the United States.<sup>125</sup> Social network analysis has been neglected in many research fields. Since the 1970s, social network

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<sup>124</sup> Linton C. Freeman. *The Development of Social Network Analysis: A Study in the Sociology of Science*. New York: Empirical Press, 2004.

<sup>125</sup> Jeffrey Travers, Stanley Milgram. “An Experimental Study of the Small World Problem.” *Sociometry*. Vol. 32, No. 4, 1969.

analysis methods have gradually matured in sociological studies, and other disciplines have integrated. The most typical example is the social network analysis of the board of directors in management; some historians began to try to combine social network analysis methods with historical research, thus a historical social network analysis method (HSNA) has been developed. In recent years, with the diversification of historians' analytical tools, social network analysis has provided new ideas and rich details for the study of history. Charles Wetherel has systematically discussed the feasibility of applying HSNA method to historical research, by not only evaluating the basic elements of HSNA, but also demonstrating how to adapt social network analysis approaches to case analysis of nineteenth century Russian serfs. A database on kinship relations in certain region was constructed from a series of historical survey data conducted in Russia in 1795-1850; through a full social network analysis process, the author assessed the situation of kinship in the farm life.<sup>126</sup>

With the rapid development of social network theory, a large number of special-purpose analysis software has been developed, and a large number of natural science fields such as physics, mathematics, information science, and medicine have entered the field of social network analysis, leading to a revolutionary change in the field. A very important performance is that the level of quantification is constantly improving. Commonly used software includes: SQL, Gephi and GIS etc. SQL is actually the standard language for dealing with relational databases, which can be effectively used to insert, search, update, delete database records, and helps in optimizing and maintenance of database. Gephi is an easy access and powerful network analysis tool of visualization and exploration for graphs and networks, while GIS system provides an infrastructure compiling and analysing maps, sharing and discovering geographic information. All these software is offering new angles to see the researching data.

Even though the social network analysis has become a strategic analytical paradigm in a wide variety of issues, historians have been slow to adapt this method to their field. Because historians are plagued by an incomplete historical record and imperfect understandings of past social relations, HSNA remains an inherently problematic enterprise. Yet despite conceptual, methodological and evidentiary obstacles, social network analysis possesses real potential for

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<sup>126</sup> Barry Wellman, Charles Wetherel, "Social network analysis of historical communities: Some questions from the present for the past," *The History of the Family*. Vol. 1, Issue 1, 1996

historical analysis. However, the method of social network analysis is a modern approach to carry out investigations, it helps to make a clearer view of the investigated situation. “It allows to draw attention to certain relationships that, perhaps, are not so easy to appreciate at first sight, especially when researching groups with a large number of participants.”<sup>127</sup> For the historical research, the resources and archives are essential. Certainly, historians are facing problems of insufficiency and inadequateness of sources, which is different from other lines of research, such as in sociology or anthropology, data could be obtained from fieldwork or questionnaires. Whereas, it is even more important to take full advantage of the existing sources and data of historical archives, the method of social network analysis combining new computer sciences could offer a new approach to analyse and interpret these sources.

Especially in the study of consumption history concerning commodities flow between Asia, Europe and America in the early modern time, which is the theme of the GECEM project. Through a database<sup>128</sup> in which a global map is constructed with local varieties, it facilitates the quantitative research of trading network data collected from historical archives in different areas of the globe, meanwhile, visualizes social network of family coalition and marriage strategies of the actors with genealogy software. The combination of social network analysis and informatic science could certainly lead to renovative academic achievements in global history study. The main innovative element of the database implementation is the ability to code and cross-reference historical data in both Chinese and Western languages, maximising the collection and optimisation of data and proposing a solution for the collection and analysis of probate inventories and trade records.<sup>129</sup>

Manuel Pérez García describes in his work the use of new technologies, software coding and computer analysis in the social sciences and humanities, particularly in the field of economic history. It discusses how a new multi-relational database was designed using the “Access” software package and the SQL language to test the hypothesis of the “industrious revolution” and proposes the theory of “vicarious consumption” as an alternative model for

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<sup>127</sup> Eric Van Young. *Mexico's Regions Comparative History and Development*. San Diego: Centre for US-Mexican Studies, 1992.

<sup>128</sup> Manuel Pérez García., and Manuel Diaz-Ordoñez. GECEM Project Database version 2021. GECEM Project Database. Retrieved. May 2022. [www.gecemdatabase.eu](http://www.gecemdatabase.eu)

<sup>129</sup> Manuel Pérez García, Manuel Diaz-Ordoñez. “GECEM Project Database: A digital humanities solution to analyse complex historical realities in early modern China and Europe”. *Digital Scholarship in the Humanities*, 2022. fqac046, <https://doi.org/10.1093/llc/fqac046>

analysing the circulation of Chinese goods in the western Mediterranean region in the eighteenth century. This approach makes it possible to navigate the data in a way that goes beyond the traditional use of “excel” sheets.<sup>130</sup> At the same time, Manuel Pérez Garcia uses new archival data from the GECEM project database to study the circulation of Chinese goods in the Western Mediterranean market in the eighteenth century and applies social network analysis to measure the social distribution of these goods mediated through trade networks. The conclusion was drawn that a middle class, dominated by merchants, rather than by the agency of local oligarchs and aristocrats, was changing consumer behaviour in the Western Mediterranean market.<sup>131</sup>

### 2.3 GECEM database

The GECEM project (Global Encounters between China and Europe: Trade Networks, Consumption and Cultural Exchanges in Macau and Marseille, 1680-1840) contributes to the Great Divergence debate by measuring micro data on levels of consumption across different social groups. A thorough analysis on the circulation of goods and merchants, as main social agents in changing consumer behaviour, will show the cross-cultural dimension of this research. The GECEM research team analysed historical materials of Spain, Portugal, France, and China to understand the market integration process in Asia and Europe during the “dawn of globalization”. Among them, the inaugural of the Manila Galleon in the Pacific trade route since the sixteenth century, and the global circulation of silver greatly promoted trade between Europe and Asia, which formed the main driving force that initially encouraged the globalization process.

One of the main topics of the GECEM project is to develop a large-scale complex database. “The model of direct and indirect relationships between a wide range of entities represented by social actors, geographical places, forms of business organization, means of transport, consumer goods, etc. Each of these relationships are associated with different individualized

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<sup>130</sup> Manuel Pérez Garcia. “Consumption of Chinese goods in southwestern Europe: a multi-relational database and the vicarious consumption theory as alternative model to the industrious revolution (eighteenth century)”. *Historical Methods: A Journal of Quantitative and Interdisciplinary History*, 52:1, 15-36, 2019. DOI: 10.1080/01615440.2018.1523695

<sup>131</sup> Manuel Pérez Garcia. “Testing the “trickle-down” theory through GECEM database: consumer behaviour, Chinese goods, and trade networks in the Western Mediterranean, 1730–1808”. *Cliometrica*. 2022. <https://doi.org/10.1007/s11698-022-00253-w>

attributes such as size, colour, value, weight, appraisal, market price, manufacturing material of different consumer goods, as well as the type of social or family relationship involved or the role of socio-economic agents who participated in these exchanges. In addition, the latitude and longitude of places where these transactions took place can be registered in order to project in the QGIS software the global and local map of these economic transactions.”<sup>132</sup>

Thus, according to the chronology of the project, which covers from the last quarter of the seventeenth century to the first half of the nineteenth century, the main objective of this database is to gather enough information that can help to explain when and how globalization began, and what was the effect of changes in patterns of consumption on economic growth in China and Europe. Furthermore, of places where these transactions took place could be registered by their latitude and longitude, thus integrate with the QGIS software to show a map which could be zoomed globally and locally, of these economic transactions.

The GECEM project database ([www.gecem.eu](http://www.gecem.eu); [www.gecemdatabase.eu](http://www.gecemdatabase.eu)) is an innovative application of digital humanities tools to global (economic) history, in contrast to the traditional static Excel files often used by academics in early modern historical research. A bottom-up mining of new historical data is used to analyse the flow of goods, consumer behaviour and trade networks in early modern China and Europe. Focusing on Macau and Marseille, two strategic entrepôts that redistributed goods. The study uses a polycentric approach as a framework to analyse the links between southern Chinese and European markets and the Spanish, French, South American and Pacific trade zones.<sup>133</sup>

The GECEM database will be operated through an online network system, whose data mainly comes from European and Chinese historical archives in early modern times, including the First Historical Archive of China (FHAC) in the Forbidden City in Beijing, the Macao Historical Archives, the Xujiahui Collection of the Shanghai Library Building, Rhône Provincial Archives in Marseille France, French Marseille Chamber of Commerce Archives, Cambridge University Library, Archivo General de Indias in Seville Spain, and European University Institute Library in Florence Italy. These scattered data resources collected by the

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<sup>132</sup> Manuel Diaz-Ordoñez. “GECEM Database, Digital Humanities and Scientific Interdisciplinary: Understanding Global History from the Historical Document to Binary Computer Language.” *GECEM Newsletter*. 2020. Vol. 4.

<sup>133</sup> Perez-Garcia, M., Wang, L., Svriz-Wucherer, O., Fernández-de-Pinedo, N., & Diaz-Ordoñez, M. (2022). “Big Data and “New” Global History: Global Goods and Trade Networks in Early Modern China and Europe”. *Itinerario*, 46(1), 14-39. doi:10.1017/S0165115321000310

GECEM team from Europe, China and America will be integrated and cross-referenced through the GECEM database to facilitate analyses of the economic and cultural exchanges, diverse directions of economic development, and varied speeds of modernization, etc. between Europe and Asia. In addition, the GECEM database is compatible with Open Access tools, for example, with GEPHI for social network analysis, GENOPRO for genealogical analysis, and QGIS for spatial analysis. The GECEM database could also be freely accessed from public channels in the future, therefore contribute to academia and society.

The GECEM project database brings together the professional knowledge of economic historians, historians, international relations experts, sinologists and IT professionals to establish a new model for revealing material and cultural exchanges between Europe and Asia from the perspective of global history. It is a renovative narrative method focusing on the allocation of commodities represented by silk, wine and porcelain in the global commodity circulation, and the influence of these commodity exchanges on the consumption patterns of all classes of society in the “early globalization period”. The subject of this thesis is also in line with the theme of the GECEM database, by comparing the imperial silk factories in China and French court-supplying silk factories during the early globalization period at the turn of the seventeenth and eighteenth centuries, concerning their production methods, scales, product typologies, and product consumption, etc. The data from historical materials of China and Europe supporting the thesis will also become part of the GECEM database, at the same time, the massive data of the GECEM database and the data analysis methods of computer technology are also providing further support to this thesis.

## **Part II. Imperial Silk Factories and Private Silk Production in Jiangnan Area of Kangxi Period of the Qing Dynasty (1661-1722)**

This part of the thesis is devoted to reproduce analytically details of the three imperial silk factories of Jiangning (Nanjing), Suzhou and Hangzhou in the Kangxi years of the Qing Dynasty (1661-1722AD), from facets of the developing history and political characteristic, production processes and personnel management, production scales including the costs and outputs of the silk products, etc. At the same time, there will be a study on the private silk production level in the society of Jiangnan area where the imperial factory located in the same historical period. Through a panorama picture of the Jiangnan silk production and consumption facts, questions could be answered of what's the relationship between the imperial silk factories and the private silk production in the society, and how the various silk products were involved in the tribute system and the preliminary global trade system.

### **Chapter III. Production in the Imperial Silk Factories**

#### **3.1 The historical development and political characteristics of the imperial silk factories**

The history of the productive organization form of the imperial silk factories can be traced back to West Han Dynasty (202BC-8AD), basing on written documents. “In the first year of Chengdi Emperor of Han Dynasty (28 BC), the east weaving factory was removed, the west weaving factory changed its name into the ‘weaving factory’”<sup>134</sup>, which was the earliest imperial silk factories with exact historical records. The East Han Dynasty (25AD-220AD) inherited the weaving factory of the West Han Dynasty, which was set up where the silk industry was highly developed, to produce all varieties of exquisite silk fabrics. The costume official [fú guān 服官] was set in Linzi of Qi county<sup>135</sup>, to manage the silk production supplying the costume of the empire for spring, winter and summer, which was renowned as “costume official

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<sup>134</sup> Ban Gu. (82AD), “Preface of Memorial of Officials”, *Book of Han* 汉书 (Beijing: Zhonghua Book Company, 1962)

<sup>135</sup> Note: Linzi of Qi county is the current Shandong Province of China.



of three seasons of Qi county [sān fú guān 三服官]”.<sup>136</sup> “The costume officials managed imperial factories of several thousands of weavers, the annual cost reached more than ten thousand.”<sup>137</sup> According to information of ancient books, the imperial factories by costume officials were also set in Xiangyi County which is current Nansui [nán suī 南睢] County of Henan province and Chengdu of Sichuan Province.<sup>138</sup> Both “weaving factories” and “costume officials” could be considered the most primitive presence of the imperial silk factories.

In Tang Dynasty (618-907AD), imperial silk factories were widely established to supply the luxurious royal court and administration, it was under the supervision of Shaofu official [shào fǔ 少府]<sup>139</sup>. The imperial silk factories were responsible for all the costumes of the emperor, the princes and the ministers.<sup>140</sup> The Tang imperial silk factories were systematically organized, and produced in large scales, according to the records in *Old Book of Tang* [jiù táng shū 旧唐书], and *Six Laws of Tang* [tāng liù diǎn 唐六典]: “The imperial silk factories were organized with ten weaving workshops, five assembling workshops, four workshops of satin and threads, and six dyeing workshops.”<sup>141</sup> “Weavers and brocade workers who fabricate for the princess’s palace has reached seven hundred people in the imperial factories.”<sup>142</sup> The Tang imperial silk factories were mainly focus in the capital area.

By Song Dynasty (960AD-1279AD), “in the capital, damask and brocade is fabricated; Xijing [xī jīng 西京], Zhending [zhēn dìng 真定], Qingzhou [qīng zhōu 青州], Yizhou [yì zhōu 益州] and Zizhou [zǐ zhōu 梓州] factories are mainly on brocade, woven silk, tie dyed fabrics and double side woven silk fabrics; Zizhou has damask and woven silk factories, Bozhou [bó

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<sup>136</sup> Ban Gu (82AD), “Preface of Memorial of Officials”, *Book of Han* 汉书 (Beijing: Zhonghua Book Company, 1962)

<sup>137</sup> Ban Gu (82AD), “Local Tributes”, *Book of Han* 汉书 (Beijing: Zhonghua Book Company, 1962)

<sup>138</sup> Chang Qu 常璩, “Memorial of Huayang Country 华阳国志”, *Memorial of Shu* 蜀志

<sup>139</sup> Note: In Tang Dynasty, Shaofu official was in charge of technics and handicrafts.

<sup>140</sup> Liu Xu 刘昫. “Officials Three. Shaofu Officer.” *Old Book of Tang* 旧唐书. (945 AD) Beijing: Zhonghua Publishing House, 1975.

<sup>141</sup> Li Linfu 李林甫. “Vol.22 Shaofu/Weaving and Dying department.” *Tang Liudian* 唐六典. (Tang Dynasty) Beijing: Zhonghua Publishing House, 2014.

<sup>142</sup> Liu Xu 刘昫. “Vol.51 Princesses 后妃上.” *Old Book of Tang* 旧唐书. (945 AD) Beijing: Zhonghua Publishing House, 1975.

zhōu 亳州] has crepe silk, Daming [dà míng fǔ 大名府] produces fine crepe silk.”<sup>143</sup> It could be observed that the imperial silk factories in Song Dynasty were widely distributed, including in the North area, Sichuan area and Jiangnan area. The North included Xijing Luoyang [luò yáng 洛阳], Hebei Zhending, Shandong Zibo [zī bó 淄博], Hebei Handan [hán dān 邯郸]; Sichuan area involved Yizhou [yì zhōu 益州] and Zizhou; In Jiangnan, there were imperial silk factories built in Huzhou [hú zhōu 湖州], Changzhou [cháng zhōu 常州], Runzhou [rùn zhōu 润州], and Hangzhou [hang zhōu 杭州].<sup>144</sup>

In the Yuan Dynasty (1271-1368AD), the imperial silk factories were most extensively established and the quantity was unprecedented. In the sixteenth year of Zhiyuan years (1279AD), “more than 70 factories were built, there were 420 thousand of labours at service, to manufacture coins, silk fabrics, bows and arrows, armours, etc.”<sup>145</sup> The raw silk materials in the imperial silk factories of the Yuan Dynasty mainly came from summer tax silk, silk supply of the finest quality must meet first the demand of the imperial silk factories. The craftsmen offered their labour in the imperial silk factories as serfs, the productive processes were strictly categories, the quality requirements and delivery deadlines were also clearly specified.<sup>146</sup> The imperial silk factories had been built one after another in Jiangnan area, including Jiankang 建康 (Nanjing), Zhenjiang, Qingyuan, Hangzhou, Suzhou and Jiaying, etc. Jiangnan imperial silk factories were playing a more dominant role in all the imperial silk factories.

As to the Ming Dynasty, *Collected Statutes of Ming Dynasty* recorded: “There were weaving and dyeing factories in both capitals,<sup>147</sup> imperial silk factories were built both in the court and outside. The inner factory supplied the court, the outside factories were for

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<sup>143</sup> Toqto'a, Alutu. “Volume 175. Food and Commodities. Fabrics 食货上.布帛.” *History of Song* 宋史 (1343) Beijing: Zhonghua Book Company, 1985.

<sup>144</sup> Xu Song 徐松. *Song Huiyao Jiagao* 宋会要辑稿 (Qing Dynasty) Shanghai: Shanghai Classic Publishing House, 2014.

<sup>145</sup> Wang Hui 王恽. *Qiuqian Collection* 秋涧集 (1271-1368AD) Jilin: Jilin Publishing House, 2005.

<sup>146</sup> Chen Gaohua 陈高华, ed., “Vol. 58, Industry Department/Manufacturing,” *Yuan Dian Zhang* 元典章 (Tianjing: Tianjing Classics Press, 2011)

<sup>147</sup> Note: in the nineteenth year of Yongle (1421), the Ming court moved its capital from Nanjing to Beijing.

administrative systems. In Nanjing, there were factories producing religious use silk, and court-supplying factory, imperial silk factories were also set in Suzhou and Hangzhou.”<sup>148</sup> Central weaving factory and local weaving and dyeing factories were two systems supplying the Ming court with satin and fabrics. The central weaving factory was first built in Nanjing, being the Ming capital, afterward was built in Beijing as the capital moved north. Besides the weaving factories in both capitals, there were also 23 local weaving factories listed in *Collected Status of Ming Dynasty*, including Hangzhou [hang zhōu 杭州], Shaoxing [shào xìng 绍兴], Yanzhou [yán zhōu 严州], Jinhua [jīn huá 金华], Quzhou [qú zhōu 衢州], Taizhou [tái zhōu 台州], Wenzhou [wēn zhōu 温州], Ningbo [níng bō 宁波], Huzhou [hú zhōu 湖州], Jiaxing [jiā xìng 嘉兴], Zhenjiang [zhèn jiāng 镇江], Suzhou [sū zhōu 苏州], Songjiang [song jiāng 松江], Huizhou [huī zhōu 徽州], Ningguofu [níng guó fǔ 宁国府], Guangdezhou [guǎng dé zhōu 广德州], Fuzhou [fú zhōu 福州], Quanzhou [quán zhōu 泉州], Jiangxi [jiāng xī 江西], Sichuan [sì chuān 四川], Henan [hé nán 河南], Ji'nan [jì nán 济南] and Taiyuan [tài yuán 太原].<sup>149</sup> Since the Ming Dynasty, Jiangnan has become a focus of the imperial silk factories.

The renowned Jiangnan three imperial silk factories were established by the Qing (1636-1912AD) court in Jiangnan<sup>150</sup>, Suzhou and Hangzhou, the three cities where silk production was the most prosperous since the Ming Dynasty. In the other areas, only Beijing in-court weaving and dyeing factory was kept. In the second year of Shunzhi Emperor (1645), Jiangning Imperial Silk Factory was firstly recovered and managed by Hong Chengchou. In the third year (1646), Chen Youming, official of the Imperial Ministry of Work, started to rebuild the imperial silk factories in Suzhou and Hangzhou. Due to years of disuse and war, the imperial silk factories inherited from Ming Dynasty were left with ruins, and the weavers were all gone.

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<sup>148</sup> Li Dongyang and others (Ming Dynasty). “Volume 201, Ministry of Work. Weaving 部二十一.织造.” *Collected Statutes of the Ming Dynasty of Wanli Years 大明会典*. Yangzhou: Yangzhou Guangling Gujike Imprinting Cooperation, 2007

<sup>149</sup> Li Dongyang and others (Ming Dynasty). “Volume 201, Ministry of Work. Weaving 部二十一.织造.” *Collected Statutes of the Ming Dynasty of Wanli Years 大明会典*. Yangzhou: Yangzhou Guangling Gujike Imprinting Cooperation, 2007

<sup>150</sup> Note: Jiangning is current Nanjing.

Chen Youming tried to collect looms and recruit weavers to recover silk manufacturing which had been declined through wars and disturbances at the crossing of two dynasties.<sup>151</sup> Thereafter, while the ruling of Qing court settled and stabilized, the three imperial silk factories in Jiangnan was also expanded and developed.

The supervisors of the imperial silk factories is called Zhizao [zhī zào 织造], which means literally the action of “weaving and fabricating”, whereas the word is used to address an official position. Regarding Zhizao 织造 of Jiangnan imperial silk factories, the two families of Cao [cáo 曹] and Li [lǐ 李] have to be mentioned. In Kangxi years, the supervisor of Jiangning Imperial Silk Factory was almost an “inherited” post of the Cao family, and Suzhou Imperial Silk Factory for the Li family. Cao Xi, whose wife was a *baomu* [bǎo mǔ 保姆]<sup>152</sup> of Kangxi emperor, was appointed supervisor of Jiangning Imperial Silk Factory since the second year of Kangxi (1663)<sup>153</sup>. Li Xu, the supervisor of Suzhou Imperial Silk Factory on post for thirty years, was a relative of the Cao family<sup>154</sup>; while Sun Wencheng of Hangzhou Imperial Silk Factory was also related to the Cao and Li families.<sup>155</sup>

Of course, being selected to be a supervisor of the imperial silk factory requires talents in addition to “relationships”. The situation in the early period of Kangxi Dynasty was extremely severe and turbulent, with rebellion remains of the Ming Dynasty, Jiangnan was far away from a paradise of abundance and prosperity. Cao Xi showed his talents as soon as he arrived on post in Jiangning, by promoting a series of reforms in silk production and personnel management, to improve the purchasing and production processes of the imperial silk factories and solve the problem of shortage of weavers.

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<sup>151</sup> Sun Pei (1696), *Memorial of Suzhou Imperial Silk Factory 苏州制造局志* (Shanghai: Shanghai Classics Press, 2014)

<sup>152</sup> Note: According to the Manchu royal regulation, a prince should not be raised by his mother, but by eight *baomu* (nannies), four of them were responsible for feeding, the other four were responsible for caring and education, till the prince grew up. Cao Xi's wife was the first nanny for caring and education.

<sup>153</sup> Yu Chenglong 于成龙( Qing Dynasty). “Volume 17. Biography of Cao Xi 曹玺传.” *Gazetteer of Jiangning County of Kangxi Years 康熙江宁府志*. Nanjing: Nanjing Publishing House, 2011.

<sup>154</sup> Note: Li Xu was the brother-in-law of Cao Yin, Cao Xi's son.

<sup>155</sup> Note: The history of big official families of Imperial Silk Factories is very famous in China, as Cao Xueqin, the great-grandson of Cao Xi, wrote “Dream in Red Chamber” inspired by the rise and falls in the official field of the Imperial Silk Factories and their social environment. This novel is equivalent to a literature Bible in China.

In the second year of Kangxi (1663), Cao Xi was appointed supervisor of Jiangning Imperial Silk Factory, where the imperial costumes were made. In the previous years, raw silk material purchasing was handled by middlemen who would benefit from both sides, dying colours were bought compellingly at a low price, and private weavers were obligated to claim looms from the imperial silk factories when there was a shortage of weavers. Cao Xi carried out a series of renovations: silk materials must be purchased directly from the raw silk producers, dying colours must be bought freely at market price, Cao Xi also raised up young weavers and carried out training to supply weavers when there was a shortage, in this way cost was reduced and private weavers were not bothered.<sup>156</sup>

In the twentieth year of Kangxi (1682), the rebellion of three feudatories was put down, Qing Dynasty entered a period of relative stable development. It was critical for the emperor to maintain social stability and expand tax revenue. As an important source of revenue, Jiangnan area was paid great attention by the Qing court. In the middle and late reign of Kangxi, supervisors of the imperial silk factories were reporting via secret memorials to Kangxi emperor of behaviours of local officials, various social events, prices of rice and silk, even local weather.

*Compilation of Memorial to the Throne of Kangxi Years* has a collection of 3119 imperial memorials from the twenty eighth year of Kangxi (1689) to the sixty first year of Kangxi (1722), among which there were 619 memorials to throne from Li Xu, supervisor of Suzhou Imperial Silk Factory, and Cao Yin (Cao Yu, Cao Fu)<sup>157</sup>, supervisors of family Cao of Jiangning Imperial Silk Factory, occupying almost 20% of the total amount. However, only a very small percentage of memorials to the throne of the supervisors were related to silk production affairs.<sup>158</sup> The secret memorials were mostly about news in the official world and social trends in Jiangnan area. Being prompt in time, and objective in contents, due to the special intimate relationship with the emperor, the reports were of great reference value for Kangxi emperor to make corresponding policies, appoint or removal officials, in order to maintain social stability of Jiangnan area.

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<sup>156</sup> Yu Chenglong 于成龙( Qing Dynasty). "Volume 17. Biography of Cao Xi 曹玺传." *Gazetteer of Jiangning County of Kangxi Years 康熙江宁府志*. Nanjing: Nanjing Publishing House, 2011.

<sup>157</sup> Note: Cao Yin, Cao Yu and Cao Fu are three generations of the Cao family.

<sup>158</sup> First Historical Archives of China, eds. *Compilation of Memorials to the Throne of Kangxi Period 康熙朝汉文朱批奏折汇编*. Beijing: Archive Publishing, 1984.

The material welfare especially food supply of farmers has been critical for maintaining social stability for most Chinese states, thus the Qing Dynasty government formulated an unparalleled food supply system, as described by R. Bin Wong, “The essence of its work was the establishment and maintenance of a storage system for millions of tons of grain. These granaries were mainly built-in countries and small towns, and represent the official responsibility for the people’s material welfare. These practices were completely unthinkable in Europe, let alone being able to do it.”<sup>159</sup> To make the system work, it was important to collect information on food prices, climate and rainfall, to predict when and where might occur a severe food shortage and respond timely.

So was the case of Kangxi emperor, he noticed the importance of being informed of local climate and food price flow, with the target of adjusting tax policies in time and prevent civil unrest. In case of wrong or false statement from local officials, the imperial silk factory supervisors were requested to report weather and food price at the same time for a cross reference. For instance, in *Historical Archives of Family Cao of Jiangnan Imperial Silk Factory*, there was a collection of 191 memorials to the throne of the Cao family, among which, 122 memorials contain information of reporting weather and food price, accounting for 63.9%;<sup>160</sup> in some cases, silk price was also included. For the information collection of Jiangnan area, Kangxi emperor requested the supervisors of the imperial silk factories to report immediately, even if the facts in the reports were not confirmed, so as to deal with the incident in a timely manner.

Being the second emperor of the Qing court, in his reign of 61 years, he once paid south inspection to Jiangnan area six times, supervising officials and combating the flood, in order to strengthen and consolidate the ruling of Qing empire. Though Cao and Li, the imperial silk factories supervisors, Kangxi managed to control the activities of feudal literary men in Jiangnan, and tried to lure them to serve the Qing court. Cao and Li also represented the emperor to repair and worship many times the Ming Emperor’s Mausoleum, and edit ancient books such

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<sup>159</sup> R. Bin Wong. *China Transformed, Historical Change and the Limits of European*. New York: Experience Cornell University, 2000.

<sup>160</sup> Department of Ming and Qing Archives of the Palace Museum, eds. *Archives concerning the Cao Family of Jiangning Imperial Silk Factory 关于江宁织造曹家档案史料*. Beijing: Zhonghua Publishing House, 1975.

as *Complete Tang Poems*. All these activities were meant to show that the Qing Empire were inherit to not only Chinese authority of power but also of culture, with the ultimate target to eliminate the gap between Manchu and Han, to win the political support of the Han landlords and intellectuals.

Besides, the supervisors of imperial silk factories were correspondingly in charge of the official salt business, the local customs and copper purchasing tasks, it could be said that they were holding the economic lifeline of the country. The appointment of supervisors of the imperial silk factories was not just an issue of production technique but of a “special intimate relationship” with the court. In this way, the supervisors of Cao, Li and Sun, respectively of Jiangning, Suzhou and Hangzhou imperial silk factories, were functioning as “ears and eyes” of Kangxi emperor in Jiangnan area, thus made Jiangnan imperial silk factories “special agencies” to help the Qing court monitoring Jiangnan area from a distance, which was a unique phenomenon of the imperial silk factories of Kangxi period; and could make a thought-provoking contrast with the selection of the court supplying royal factories of Luis XIV, which would be talked about in the following chapters.

### **3.2 The production processes, personnel management and quality control system of the imperial silk factories in Kangxi period of Qing Dynasty**

“Costumes are symbols of hierarchy, are the foundation of the establishment of the reign.”<sup>161</sup> is a statement of the first emperor of Qing. Being the embodiment of imperial authority and the presentation for social rites, costumes had been paid great attention since the beginning of the Qing Dynasty. In the first year of Shunzhi (1644), it was already stipulated: “Ceremonial costumes and clothes of four seasons for imperial usage, court dresses for princes and princesses, should all be engaged to Imperial Silk Factories in Jiangning, Suzhou and Hangzhou, producing according to the set style of Ministry of Rites.”<sup>162</sup>

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<sup>161</sup> Zhao Erxun 赵尔巽. “Vol. 183 Zhi Qi Shi Ba, Yu Fu Er 志七十八, 舆服二.” *Draft History of Qing 清史稿*. Beijing: Zhonghua Book Company, 1998.

<sup>162</sup> Yi Sang A 伊桑阿 and others, eds. “Vol.1190. Imperial Household Department, Warehouses 卷一一九〇内务府库藏.” *Collected Status of Qing Dynasty/Guangxu Years 钦定大清会典/光绪*. (Qing Dynasty) Nanjing: Phoenix Publishing House, 2016.

The Imperial Household Department [nèi wù fǔ 内务府] was in charge of the court costumes production and management, which is a special organization directly serve the royal family and administrate the court affairs. To make court costumes, first of all, the Ministry of Rites [lǐ bù 礼部] would determine the style, texture, colour and quantity of the costume, and calculate materials and labours needed for each productive process. After the approval of the emperor, the court painter would carefully draw coloured clothing patterns in accordance with the Ministry of Rites, accurately describe the style, pattern, colour, texture and size of the costume. Then, the Imperial Household Department would send the clothes patterns to the imperial silk factories in Jiangning, Suzhou and Hangzhou, where the costumes would be fabricated and weaved strictly following the requirements set out in the drawing.<sup>163</sup>

When the production is finished in the imperial silk factories, the finished satins, materials, costumes would be transported to Beijing and hand in for inspection and acceptance in the Warehouses of Leather, Satin and Costumes managed by the Imperial Household Department, where all the “imperial using” and “administrative using” silk, satins, and brocades fabricated by the imperial silk factories were stored.<sup>164</sup> For the transportation of finished satins, it was regulated at the beginning of Qing Dynasty that there were three shipping boats respectively for Suzhou and Hangzhou imperial silk factories, and two boats for Jiangning Imperial Silk Factory. Since the fifth year of Kangxi (1666), three boats were arranged for Jiangning as well. In the twenty-fourth year of Kangxi (1685), court supplying satins from all three imperial silk factories should be transported by couriers on land. Administrative using satins should be delivered by fast post boat. The previous used shipping boats were all dismissed.<sup>165</sup>

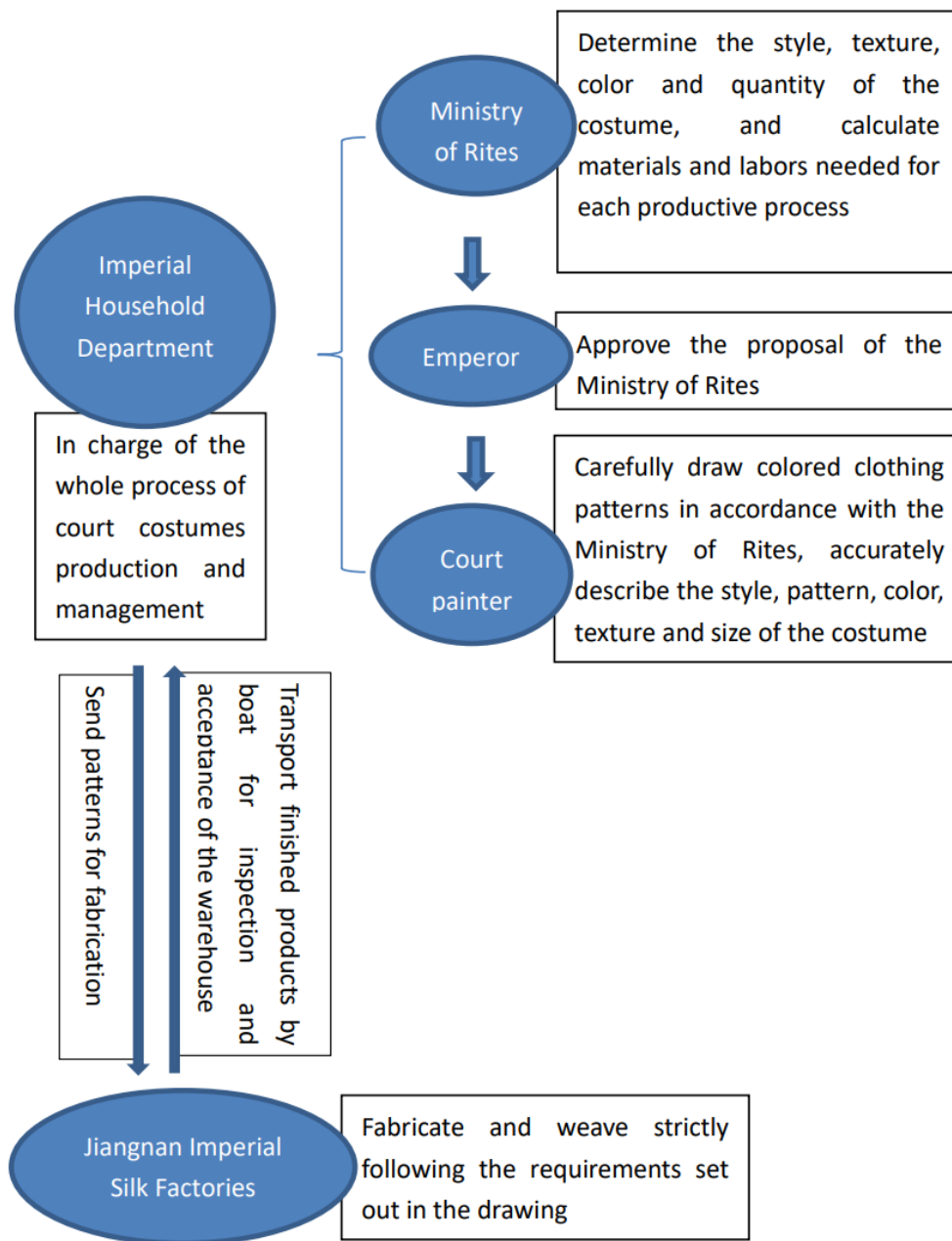
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<sup>163</sup> Palace Museum, eds. *Illustrated Dictionary of Qing Dynasty Court Costumes Edited by the Palace Museum* 清 宫服饰图典. Beijing: The Forbidden City Publishing House, 2010.

<sup>164</sup> Palace Museum, eds. *Illustrated Dictionary of Qing Dynasty Court Costumes Edited by the Palace Museum* 清 宫服饰图典. Beijing: The Forbidden City Publishing House, 2010.

<sup>165</sup> Yi Sang A 伊桑阿 eds. *Collected Status of Kangxi Period of Qing Dynasty* 康熙朝大清会典. (Qing Dynasty) Nanjing: Phoenix Publishing House, 2016.





Sources: Author's own elaboration through data and records from First Historical Archives of China.

Illustration 1. The process of imperial costume and materials production

The above illustration presented the process of imperial costumes and silk materials production, whereas the most important point of the whole manufacturing chain is the organization of the fabrication in the imperial silk factories. The imperial silk factories in Jiangnan area were soon restored after the establishment of the Qing reign, with the background

of the Qing court trying to recover the social economy destroyed by wars at the end of Ming Dynasty; Measures were taken to re-establish production and stabilize the society, including returning land to the people, implementing a loose tax policy, and encouraging development of handicrafts and commerce.<sup>166</sup> In Chinese history, it was a normal situation when regimes change, the new dynasty inherited the political and administrative system of the old one, and reformed and perfected as needed, to show the generosity to accept the cultural system of the defeated or maintain the administrative continuity for political stability; or because “the usurpers might have chosen to show superiority over the defeated power by continuing long-established codes of social distinctions.”<sup>167</sup> The case of Qing Dynasty was not exceptional, therefore, in the imperial silk factories, the production form of “weaving task assignment” [lǐng zhī 领织] from Ming Dynasty was followed.

The assignment of weaving tasks is managed in two ways. One is that the weavers acclaim silk material from the imperial silk factories to fabricate and receive certain payment when hand in the finished silk products. Another is that a full price including the material cost is paid to the weavers for the entire weaving task, before or after the manufacturing tasks. The weavers who claim the weaving tasks included official weavers and private weavers, it has been commonly accepted the idea that the production form of “weaving task assignment” became popular when the imperial silk factories was descending with their financial and organizational status.<sup>168</sup> Whereas, different opinions have been proposed that only when the imperial court placed extra orders on silk products, private weavers would be assigned, normally the official weavers would claim the tasks. The payment to the weavers varied according to the financial situation and the identity of the supervisors of the imperial silk factories, being local officials or eunuchs.<sup>169</sup>

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<sup>166</sup> Note: For example, in the eighth year of Kangxi (1669), the Qing government ordered to give the farm lands of the princes of Ming Dynasty freely to the “previous owners for cultivating”, Emperor Kangxi also changed the method of double taxation based on the number of acres and the number of people, and decreed to implement a tax system of only acre based to “increase population and maintain tax level”.

<sup>167</sup> Dagmar Schafer, Giorgio Riello, Luca Mola, “Introduction: Silk in the Pre-Modern World”, in Dagmar Schafer, Giorgio Riello, Luca Mola, *Threads of Global Desire: Silk in the Pre-Modern World* (Woodbridge: The Boydell Press, 2018)

<sup>168</sup> Peng Zeyi 彭泽益. “Studies on the Imperial Silk Factories in Early Qing Dynasty 清代前期江南织造的研究.” *History Study 历史研究*. 1963. 04

<sup>169</sup> Fan Jinmin 范金民. *Study on Jiangnan Silk in the Ming and Qing Dynasties 明清江南丝绸史研究*. Nanjing:

The weavers been assigned with imperial weaving tasks were not really authentic weavers, but just normal people with financial abundance, as Sun Pei recorded in *Memorial of Suzhou Imperial Silk Factory*, “Rich families of Suzhou, Songjiang and Changzhou were taken as weavers and assigned with weaving tasks.”<sup>170</sup> The imperial silk factories took advantage of the financial ability of those rich families to complete the imperial weaving tasks, which made it indeed an obligated serve. The price paid for the material and weaving were insufficient in many cases though being an official expense of the local official, the weavers had to compensate the deficit by themselves, “the official price paid was only half the whole cost, the weavers had to pay the other half”, “each loom would cost the weaver an extra of around one hundred twenty taels [ liǎng 两] of silver, plus miscellaneous payments and presents to the officials at festivals, which was certainly a huge gap to fill”.<sup>171</sup>

The production form of “assigning weaving tasks” caused serious conflicts between the imperial silk factories and local rich families. In the eighth year of Shunzhi emperor (1651), Yuan Maogong, an official of the criminal department, submitted a memorial to the throne on behalf of the local rich families been assigned with weaving tasks, explaining the malpractice and proposing the abolishment of this implementation. “In Jiangnan area, abundant families were regarded as weavers and assigned with tasks, the only way they could get off of these assignments was to bribe the officials, this situation should be prohibited.” This proposal was approved by an imperial decree in the same year: “The imperial silk factories should buy silk and recruit weavers with the official quote of money and food, fabricate according to the design. Any cases of assigning weaving tasks to rich families, officials who take bribe would be heavily punished.”<sup>172</sup>

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Jiangsu People’s Publishing House, 2016.

<sup>170</sup> Sun Pei 孙佩, Qian Siyuan 钱思源. *Memoria of Suzhou Imperial Silk Factory* 吴门补乘, 苏州织造局志. (1696) Shanghai: Shanghai Classic Publishing House, 2015

<sup>171</sup> Ye Shaoyuan 叶邵袁. *Memorial of Qi Zhen* 启祯记闻录. Shanghai: The Commercial Press, 1911.

<sup>172</sup> First Historical Archives of China. Shunzhi Dynasty Inscriptions, Letter 477, No. 21, eighth year of Shunzhi, Minister of Household Affairs, Ge Dahong, “Requesting royal decree to dispense with the Dispatching of looms to people of Jiangsu and Zhejiang”. 中国第一历史档案馆, 顺治朝题本, 第477函, 第21号, 顺治八年, 户部尚书葛达洪“题为请敕免派机户以苏江浙民困事”. In Fan Jinmin 范金民. *Study on Jiangnan Silk in the Ming and Qing Dynasties* 明清江南丝绸史研究. Nanjing: Jiangsu People’s Publishing House, 2016.

In the thirteenth year of Shunzhi (1656), the imperial silk factories started the system of “buying silk and recruiting weavers”<sup>173</sup>, which means: The imperial silk factories would select and register workshop owners as loom claimers [jī hù 机户], issue official licenses to them for claiming the looms; normally, the workshop owners being chosen mastered weaving techniques and were financially abundant. The imperial silk factories owned the looms and would prepare silk materials, while the workshop owners/loom claimers were responsible for recruiting weavers to carry out production in the imperial silk factories when there were orders from the imperial court. The workshop owners/loom claimers were also in charge of delivering the finished silk products to the imperial silk factories. At the meantime, the workshop owners would receive money(silver) and food (rice) from the imperial silk factories to cover the monthly payment for the weavers; the amount of money(silver) and food (rice) was set monthly with the name of each weaver registered.<sup>174</sup> In many cases, while producing for the imperial silk factories, the registered workshop owners/loom claimers were running their own private business at the same time; which engaged them with characteristics of both official weavers and private weavers.

*Collected Status of the Qing* [dà qīng huì diǎn 大清会典] is a collection of the official regulations and rules of the Qing Dynasty, which detailed the compilation, management, official rank, affiliation and various government systems of the central administrative and military bureaus of the Qing court. The contents were built by national regulations and laws, cases in various regimes, thus made it the base for the work of the imperial officials. The cases had two types, cases of the previous regime and cases of the current regime. In *Collected Status of the Qing*, it was documented that:

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<sup>173</sup> First Historical Archives of China. Shunzhi Dynasty Inscriptions, Letter 477, No. 21, eighth year of Shunzhi, Minister of Household Affairs, Ge Dahong, “Requesting royal decree to dispense with the Dispatching of looms to people of Jiangsu and Zhejiang”. 中国第一历史档案馆, 顺治朝题本, 第477函, 第21号, 顺治八年, 户部尚书葛达洪“题为请敕免派机户以苏江浙民困事”. In Fan Jinmin 范金民. *Study on Jiangnan Silk in the Ming and Qing Dynasties* 明清江南丝绸史研究. Nanjing: Jiangsu People’s Publishing House, 2016.

<sup>174</sup> Fan Jinmin 范金民. *Study on Jiangnan Silk in the Ming and Qing Dynasties* 明清江南丝绸史研究. Nanjing: Jiangsu People’s Publishing House, 2016.

In the first year of Shunzhi (1638), Jiangning, Suzhou and Hangzhou imperial silk factories set one supervisor, one secretary [bǐ tiē shì 笔贴式]<sup>175</sup>, and one treasury, the term of each post was three years. In the eighteenth year of Shunzhi (1655), the term was changed to one year.<sup>176</sup>

In the first year of Kangxi (1662), an additional treasury was set for each imperial silk factory. In the second year of Kangxi (1663), it was approved in an imperial decree that each imperial silk factory should have one supervisor, two secretaries, and three treasuries, with permanent term. In the same year, custom command papers were issued to the three imperial silk factories.<sup>177</sup>

The additional position of secretaries and treasures could be considered as a result of expanded production scales; while the permanent term of office especially for the supervisor emphasized the organizational stability of the imperial silk factories, and indicated their unusual relationship with the imperial court. All these above formed the background of a lifelong term of Cao Xi, the supervisor of Jiangning Imperial Silk Factories since the second year of Kangxi emperor (1663).

According to the regulation of the Qing court, a decree must be issued to appoint an official. The earliest decree to appoint supervisor of the imperial silk factory was found to be in the second year of Kangxi (1663):

Hereby appoint by this decree, Chang Ming, being talented, official of the in-court warehouse, to manage court supplying satins in Hangzhou Imperial Silk Factory; at the same time, a concurrent post of silk production management of the Ministry of Revenue and Ministry of Work. The silk fabricating affairs, economical resources and food supply for this task are all very important. The key duty is to strictly supervise the subordinate officials, and manage the weavers, making sure that they are obeying regulations. Annually supplying satins must be produced according to designated colours and styles. Chang Ming, as the official, must carefully manage and organize the material selection and silk fabrication processes of the weavers. The fabric weaved must be even in pattern and adjusted in size, delicate and fresh in colours, mustn't be too short, too narrow or too loose.

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<sup>175</sup> Note: bitieshi 笔贴式, an official especially set for Manchu people, who was responsible for translation of Han and Manchu languages, copy writing of memorial to the thrones, etc.

<sup>176</sup> Yi Sang A 伊桑阿 eds. "Volume 1190, Imperial Household Department. Treasury. Six Warehouses 内务府.库藏.广储司六库." *Collected Status of Kangxi Period of Qing Dynasty 康熙朝大清会典*. (Qing Dynasty) Nanjing: Phoenix Publishing House, 2016.

<sup>177</sup> Yi Sang A 伊桑阿 eds. "Volume 2. Personal Management of the Three Imperial Silk Factories." *Collected Status of Kangxi Period of Qing Dynasty 康熙朝大清会典*. (Qing Dynasty) Nanjing: Phoenix Publishing House, 2016.

As to the financial sources of the imperial silk factories, the money (silver) and food (rice) demanded by the silk production must be allocated from official fund; being not sufficient, the shortfall amount must be calculated and reported to the Ministry of Revenue for further arrangement. The consumption or shortage of weaving equipment and factory buildings should be reported to the governor for repairing and supplementing. Finished satins must be handed in twice a year, in spring and autumn respectively; Only three transporting boats should be used for this special task, if being accompanied by commercial ships or others ships, relative personnel would be heavily convicted. It's strictly prohibited to pretend to be a certified loom claimer (for money or food). By the end of each year, the money, food, and the total amount of finished satin silk products must be clearly listed and reported to the ministry. The supervisors of the imperial silk factories must be diligent and not interfere with local affairs. Being incompetent, making errors in satin fabrication, or allowing subordinate officials disturb local people, the supervisor would be punished according to the laws.<sup>178</sup>

It has been explained clearly in this decree the responsibility of the supervisors of the imperial silk factories, which is principally to complete weaving and fabricating tasks by supervising subordinate officials, managing weavers, and arranging financial resources for the production. At the same time, the quality requirement for produced silk textiles has been clarified as well: the styles and colours must follow the original design strictly, both the material selection and fabricating process should be monitored carefully, and the criteria of finished silk products has been set regarding size, colour, length and density. For the financial resources of the imperial silk factories, an official fund of money and food was dedicated to the fabrication, the Ministry of Revenue and the local governor were taking care of the financial shortfall and equipment maintenance. Besides, the delivery and transportation of finished products were regulated as well.

The same decree also revealed some problems encountered in the fabrication and production process of the imperial silk factories. The silk textile production should be planned with certified loom claimers; however, this organization form wasn't systematized yet at the early years of the Qing Dynasty, it was often interfered by local guild headers. For example, in

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<sup>178</sup> First Historical Archives of China. Archive number 2-1-2, 2nd year of Kangxi, "Decree to appoint Chang Ming as supervisor of Hangzhou Imperial Silk Factory 内库理事官常明任杭州织造敕谕", 康熙二年四月二十九日, 大库史料 2-1-2, 敕谕二. In Fan Jinmin 范金民. *Study on Jiangnan Silk in the Ming and Qing Dynasties 明清江南丝绸史研究*. Nanjing: Jiangsu People's Publishing House, 2016.

Note: The First Historical Archives of China has hidden a number of sources originally open to the public for diplomatic and political reasons, and as a result several of the archives in this thesis have had to be re-cited.

the sixth year of Kangxi (1667), the imperial silk factories were short of 170 certified loom claimers, which means 170 looms were not claimed by any weavers. A guild header suggested to obligate weavers with quotas, weavers or private weaving factories were forced to claim one loom from the imperial silk factory for every twenty looms they own, later the quota was changed to one for every nine looms, as many weavers or private weaving factories would pay bribe to get rid of this quota. Taking advantage of this errand, the guild headers took bribes and bothered the weavers.<sup>179</sup>

This quota was finally abolished in the twentieth year of Kangxi (1703), therefore, certain workshop owners were selected in an official way as loom claimers, they would recruit weavers by themselves, the weavers should also be registered in the imperial silk factories.<sup>180</sup> An official certificate was issued to each weaver by the imperial silk factories, with which the weavers could receive their monthly food quota. In the certificate, it is stated the current situation of the imperial silk factory, such as the quantity of looms and the regulations of the “loom claimer system” as indicated in the above text. The punishment for making illegal benefits from the certificate is also specified, if the weaver or loom claimer sell certificate to others, both the seller and the buyer would be punished, and the certificate would be confiscated. The name of both the loom claimer and the recruited weaver is listed; in order to avoid imposters, the age, appearance, hometown and address of the weaver is described, though being very simple. The certificate was hold by weaver himself, for each loom there should be one certificate. The following certificate is from the fifth year of Qianlong Emperor (1740), preserved in Suzhou Silk Museum.

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<sup>179</sup> Sun Pei 孙佩, Qian Siyuan 钱思源. *Memoria of Suzhou Imperial Silk Factory* 吴门补乘, 苏州织造局志. (1696) Shanghai: Shanghai Classic Publishing House, 2015

<sup>180</sup> Sun Pei 孙佩, Qian Siyuan 钱思源. *Memoria of Suzhou Imperial Silk Factory* 吴门补乘, 苏州织造局志. (1696) Shanghai: Shanghai Classic Publishing House, 2015

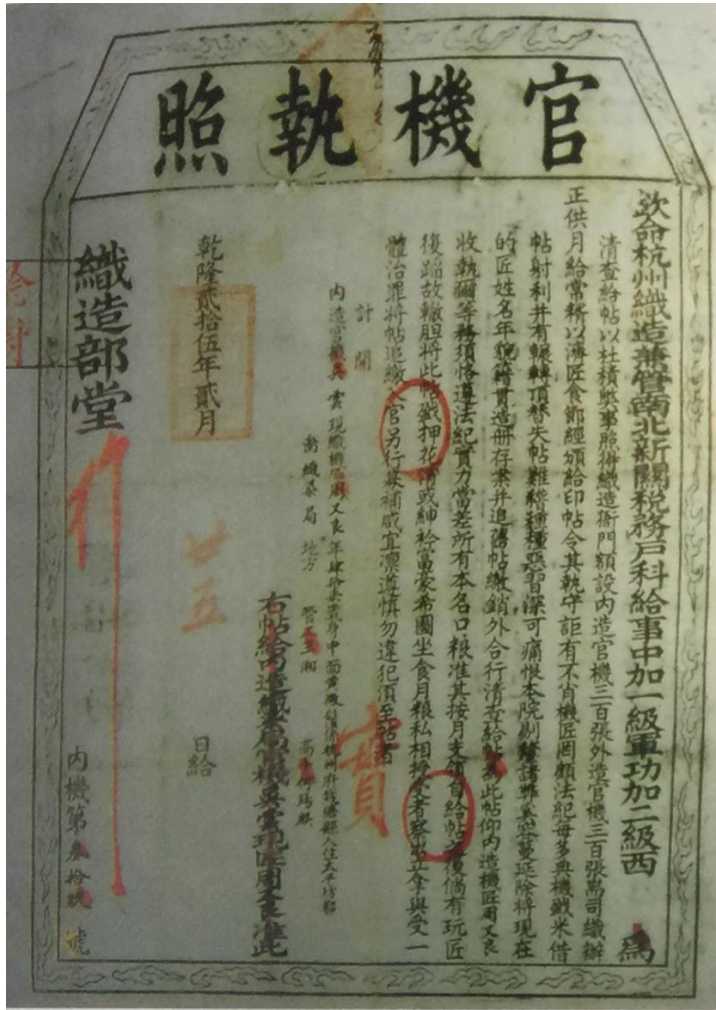


Illustration 2. Weaver's license. Qianlong period, Qing Dynasty. Suzhou Silk Museum, Jiangsu, China

Being supplying the imperial court, Jiangnan imperial silk factories not only set departments and divided responsibilities clearly, but also established an extremely high criteria and strict punishment laws for the quality control of the imperial silk products. The severe management and punishment regulations were guarantees for the quality of silk products of the imperial silk factories. While rebuilding the imperial silk factories in Suzhou and Hangzhou at the beginning the Qing Dynasty, Chen Youming had already made strict rules and principles:

If the production was delayed because of bad quality of the warp and weft, the responsibility goes to the workshop owners; The dye houses are in charge of dyeing vivid



colours to the textiles; If the fabric is too loose, short in size, wrong in colour, the duty should be taken by the weavers; Any mistakes of the weavers must be punished.<sup>181</sup>

The inscription on the *Notes on Weaving Warp System* also states:

Responsibility is apportioned to the individual, for example, if the warp and weft are not detailed and the lack of material to make them, thus leading to errors in weaving, the responsibility lies with the steward. If the colours of the machine are not bright and vivid, the responsibility lies with the dyer. If the woven product is sparse and flimsy, not of sufficient size, or in the wrong colour, the responsibility lies with the weaver.<sup>182</sup>

Weavers and administrative officials who did not meet the requirements would be severely punished economically and administratively. The degree and application of the punishments had been specified according to different faults in the production process. In *Collected Status of Qing Dynasty*, it had been detailly regulated:

Those who do not fabricate according to the regulations, would be beaten fifty times with a bamboo whip... Those who weave satin rough and thin, also get fifty whips. If the products could not be used or should be rebuilt because of the quality, the economic damage and labour cost should be compensated. It would be considered as stealing in serious situations, the compensation being doubled and craftsmen been condemned, the factory director would be condemned one level inferior, the official one more level inferior.

The directors who take private materials to fabricate in the imperial factories, would have been whipped sixty times, the silk textiles would be confiscated; the weavers would be wiped fifty times; those who were aware but kept silent would be equally punished, those who wasn't aware would be punished three levels inferior." "Those who couldn't hand in timely the complete quantity of demanding silk products, would be whipped twenty times being ten percent incomplete; would be beaten twenty whips more for every ten percent more, up to fifty whips. The director and the official would be less severely punished as well. The director would be whipped forty times, being late at distributing the production materials.<sup>183</sup>

When finished silk products were handed in to the imperial court, the imperial silk factories would also be condemned for any quality problems inspected; the silk textiles with flaws could

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<sup>181</sup> Sun Pei 孙佩, Qian Siyuan 钱思源. *Memoria of Suzhou Imperial Silk Factory* 吴门补乘, 苏州织造局志. (1696) Shanghai: Shanghai Classic Publishing House, 2015

<sup>182</sup> Suzhou Historical Museum, eds. "Notes on Weaving Warp System. Shunzhi forth year 1647 织造经制记. 顺治四年(1647)." In *Suzhou Industry and Commerce Tablet Inscriptions in Ming and Qing Dynasty* 明清苏州工商业碑刻集. Nanjing: Jiangsu People's Publishing House, 1999.

<sup>183</sup> Yi Sang A 伊桑阿 eds. *Collected Status of Kangxi Period of Qing Dynasty* 康熙朝大清会典. (Qing Dynasty) Nanjing: Phoenix Publishing House, 2016.

be adapt to usage of an inferior level as regulated in the fifteenth year of Kangxi.<sup>184</sup> As recorded in the following memorial to the throne by He Yi, the director of the Imperial Household Department, in the fifth year of Kangxi (1711):

Jiangning Imperial Silk Factory has handed in 945 *pi* of dragon satin, python satin, Zhuanghua satin, court satin, Nanjing satin, and gauze; 2815 python satin for official use, ... with a total of 3760 *pi*, among which 12 *pi* have problems of skipping yarn and dropping colour. Suzhou Imperial Silk Factory has handed in 224 dragon satins, 2451 python satins..., totally 2759 *pi*. Hangzhou Imperial Silk Factory handed in 6050 *pi* thin silk, spring silk..., the 12 *pi* satins with problems from Jiangning couldn't be used, please place an order for compensation and reproduction.<sup>185</sup>

The specified penalty laws as listed above could also be considered as a reflection of the common faults in the silk production process: such as the inferior quality of the warp and weft materials, the wrong size or colour of the silk fabrics, and a fraudulent situation that the director taking private materials to fabricate in the imperial silk factories; the last phenomenon is rather interesting, being listed in the punishment regulation, indicates that there was such phenomenon in the imperial silk factories; the reason for this action might be the advanced fabricating technic and excellent weavers in the imperial silk factories; or simply the benefit obtained by taking advantage of the free labour in the imperial silk factories. The strict punishment regulations also formed an important method for quality control of the imperial silk textiles, thus contributed to the excellent quality of the products fabricated in the imperial silk factories; along with the production form of “buying silk and recruiting weavers”, getting rid of the shortcomings of the obligated assignment, and optimizing the efficiency and quality of the fabrication in the imperial silk factories.

### 3.3 The production scales of the imperial silk factories, costs and outputs

The formation of the organizational system, including official financial system of the imperial silk factories hadn't been completed until early Qianlong years. The annual output and the exact production scale of the three imperial silk factories hadn't been investigated much.

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<sup>184</sup> Yi Sang A 伊桑阿 eds. *Collected Status of Kangxi Period of Qing Dynasty 康熙朝大清会典*. (Qing Dynasty) Nanjing: Phoenix Publishing House, 2016.

<sup>185</sup> Department of Ming and Qing Archives of the Palace Museum, eds. *Archives concerning the Cao Family of Jiangning Imperial Silk Factory 关于江宁织造曹家档案史料*. Beijing: Zhonghua Publishing House, 1975.

There have been studies concerning the Jiangnan imperial silk factories,<sup>186</sup> nevertheless actual producing processes have been ambiguously mentioned or definitely avoided; Sometimes approximate estimations were made, but the disparity was doubtful. It had been a major flaw for the researches on the imperial silk industries, due to the actual situation of the output was difficult to obtain, because the funding resources of the imperial silk factories were chaotic.<sup>187</sup>

Concerning the productivity of the three imperial silk factories, some study considered that the peak appeared in Kangxi years of the High Qing period<sup>188</sup>, and declined afterword.<sup>189</sup> Meanwhile, assumption had been made that the productivity of the imperial silk factories of Qing Dynasty is a waved line, in view of the financial input and the demand of the court.<sup>190</sup>

Year \ Factory	Suzhou	Hangzhou	Jiangning
1657, Shunzhi 14th year	29936 (only satin for the ministry of revenue) <sup>191</sup>	13684 (only satin for the ministry of revenue)	42942 (only satin for the ministry of revenue)
1658, Shunzhi 15th year		79479	
1662, Kangxi 1st year		43333 (emperor used satin)	43333 (emperor used satin)
1663, Kangxi 2nd year	72303		
1708-1713, Kangxi 47-52 years	50000-60000		
1714, Kangxi 53rd year	58021		
1715, Kangxi 54th year	58021		
1716, Kangxi 55th year	57733		
1717, Kangxi 56th year	61480		
1718, Kangxi 57th year	57752		
1719, Kangxi 58th year	57752		
1720, Kangxi 59th year	57753		
1721, Kangxi 60th year	43333		

<sup>186</sup> Note: The studies concerning the imperial silk factories include:

<sup>187</sup> Lillian M. Li 李明珠. *China's Silk Trade: Traditional Industry in the Modern World (1842-1937)*. Cambridge: Harvard University Press, 1981.

<sup>188</sup> Note: High Qing era refers to the economic prosperity of the Qing Dynasty from the middle Kangxi period to middle Qianlong period.

<sup>189</sup> Lillian M. Li 李明珠. *China's Silk Trade: Traditional Industry in the Modern World (1842-1937)*. Cambridge: Harvard University Press, 1981.

<sup>190</sup> Fan Jinmin 范金民. *Study on Jiangnan Silk in the Ming and Qing Dynasties 明清江南丝绸史研究*. Nanjing: Jiangsu People's Publishing House, 2016.

<sup>191</sup> Note: Here satin is a conclusive word for the silk textiles, weaved for using of the Ministry of Revenue.

Sources: Han Shiqi. *Memorials to the Throne of Wu County 抚吴疏草*. Vol. 5. "Memorial to the Throne Concerning the cost of silver and food of the Two Imperial Silk Factories of Jiangsu", Vol. 39 "Memorial to the Throne of the Financial Reimbursement for Weaving Materials of Suzhou Imperial Silk Factory". Vol.41 "Memorial to the Throne concerning Financial Reimbursement of Weaving Materials and Weavers' Food of Jiangning Imperial Silk Factories". *Uncollected Books of Imperial Collection of Four (Siku Quanshu) Eighth Series. Volume 5. and Volume 7.* Beijing: Beijing Publishing House. 2000.<sup>192</sup>

*Chart 1: Financial input from the court (silver) data of Shunzhi and Kangxi years of the Qing Dynasty (Unit: liang)*

The financial input of silver and food is an indication of the cost; however, the productivity of the imperial silk factories could be revealed by the amount of delivered silk products. Only a few records could be found relating to the output of the imperial silk factories in Kangxi years. Before Kangxi, the country was not stable politically, the silver and food funding for production was still not well implemented, the scale of the imperial factories varied all the time, it was difficult to study the capacity.

In the first year of Kangxi, Suzhou collaborated with the other two imperial silk factories, and delivered 3300 *pi*<sup>193</sup> satins among a total of 7800 *pi*.<sup>194</sup> In the second year of Kangxi, Suzhou fabricated 3200 *pi* of satins for the Imperial Ministry of Revenue, 1000 pieces of emperor using robe satins, and 3000 *pi* of administration using satins.<sup>195</sup>

In the twenty fourth year of Kangxi (1685), Ge Lu, director of the Imperial Household Department reported that:

The three imperial silk factories cooperated in fabricating 1000 *pi* of satin, 1000 *pi* of gauze, and delivered at the same time 800 *jin*<sup>196</sup> of foreign-style satin, yarn, Hangzhou fine silk, and Hangzhou gauze, golden thread etc.<sup>197</sup> On average, Suzhou delivered

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<sup>192</sup> Note: The table is made with reference to the tables of Fan Jinmin 范金民. *Study on Jiangnan Silk in the Ming and Qing Dynasties 明清江南丝绸史研究*. Nanjing: Jiangsu People's Publishing House, 2016.

<sup>193</sup> Note: *Pi 匹*, measure word used for whole rolls of silk or cloth, the ancient measurement was not as accurate as nowadays, and there may even be some small fluctuations in the same dynasty. According to the "Collected Status of Ming Dynasty", 1 *pi 匹* is about 32.68 *chi 尺* (1089.22cm) in length; the width varies, normally is about 1.87 *chi 尺* (62.26cm).

<sup>194</sup> Han Shiqi 韩世琦. "Vol. 31, Memoria to the Throne Concerning Satins from Jiangning 参江宁缎疋疏." *Memoria to the Throne Concerning Suzhou 抚吴疏草*. Beijing: Beijing Publishing House, 1997.

<sup>195</sup> Han Shiqi 韩世琦. "Vol. 39. Memoria to the Throne Concerning the Reimbursement of Satin in the Second Year of Kangxi 报销苏州织造二年缎疋疏." *Memoria to the Throne Concerning Suzhou 抚吴疏草*. Beijing: Beijing Publishing House, 1997.

<sup>196</sup> Note: One *jin 斤* in Qing Dynasty is about 596.816g.

<sup>197</sup> Institute of History, Liaoning Academy of Social Sciences 辽宁社会科学院历史研究所, eds. "Report of Gelu about the Flaws of the Imperial Satins from the Three Imperial Silk Factories the 24th Year of Kangxi 葛鲁等为遵

around 1000 *pi*. In the fiftieth year of Kangxi, Suzhou weaved and delivered 334 *pi* of emperor using dragon satin, 2451 of python satins for administrative uses, totally 2795 *pi*.<sup>198</sup>

The above-mentioned data could be organized into the following table:

Time \ Type	Court supplying silk	Administrative use silk	Silk for Ministry of Revenue	Total
1662, Kangxi 1st year			3300	3300
1663, Kangxi 2nd year	4000		3200	7200
1664, Kangxi 50th year	334	2795		3129

Sources: Han Shiqi. *Memorials to the Throne of Wu County* 抚吴疏草. Vol. 31. "Memoria to the Throne Concerning Satins from Jiangning". Vol. 39. "Memoria to the Throne Concerning the Reimbursement of Satin in the Second Year of Kangxi". "Report of Gelu about the Flaws of the Imperial Satins from the Three Imperial Silk Factories the 24th Year of Kangxi". "Memoria to the Throne about Flaws of Satin from Jiangning and Demanding Compensation from Heyi, the Director of the Imperial Household Department and others, the 50th year of Kangxi".

Chart 2: Output of Suzhou Imperial Silk Factory in Kangxi years (Unit: *pi*)<sup>199</sup>

For Hangzhou Imperial Silk Factory, it could be found from archives only the records of the 7800 *pi* satin for the Ministry of Revenue in the first year of Kangxi, cooperatively weaved with Jiangning and Suzhou factories, among which, Hangzhou factory took over 3083 *pi*;<sup>200</sup> And in the fiftieth year of Kangxi, Hangzhou delivered 6050 *pi* gauze and spring satin.<sup>201</sup>

Time \ Type	Court supplying silk	Administrative use silk	Silk for the Ministry of Revenue	Total

旨会议三处织造解松御用缎纱等项事宜的题本.康熙二十四年十一月二十二日." *Selected Manchu Archives of the Cabinet of the Qing Dynasty* 清代内阁大库散佚满文档案选编. Tianjing: Tianjing Classics Publishing House, 1991.

<sup>198</sup> Department of Ming and Qing Archives of the Palace Museum, eds. "Memoria to the Throne about Flaws of Satin from Jiangning and Demanding Compensation from Heyi, the Director of the Imperial Household Department and others, the 50th year of Kangxi 内务府总管赫奕等奏御用缎疋跳丝落色请令江宁织造赔补折." *Archives concerning the Cao Family of Jiangning Imperial Silk Factory* 关于江宁织造曹家档案史料. Beijing: Zhonghua Publishing House, 1975.

<sup>199</sup> Note: *Pi* 匹, measure word used for whole rolls of silk or cloth, the ancient measurement was not as accurate as nowadays, and there may even be some small fluctuations in the same dynasty. According to the "Collected Status of Ming Dynasty", 1 *pi* is about 32.68 *chi* 尺 (1089.22cm) in length; the width varies, normally is about 1.87 *chi* 尺(62.26cm).

<sup>200</sup> Han Shiqi 韩世琦. "Vol. 31, Memoria to the Throne Concerning Satins from Jiangning 参江宁缎疋疏." *Memoria to the Throne Concerning Suzhou* 抚吴疏草. Beijing: Beijing Publishing House, 1997.

<sup>201</sup> Department of Ming and Qing Archives of the Palace Museum, eds. "Memoria to the Throne about Flaws of Satin from Jiangning and Demanding Compensation from Heyi, the Director of the Imperial Household Department and others, the 50th year of Kangxi 内务府总管赫奕等奏御用缎疋跳丝落色请令江宁织造赔补折." *Archives concerning the Cao Family of Jiangning Imperial Silk Factory* 关于江宁织造曹家档案史料. Beijing: Zhonghua Publishing House, 1975.

1662, Kangxi 1st year			3083	3083
1711, Kangxi 50th year	6050			6050

Sources: Han Shiqi. *Memorials to the Throne of Wu County 抚吴疏草*. Vol. 31. “Memoria to the Throne Concerning Satins from Jiangning”. “Memoria to the Throne about Flaws of Satin from Jiangning and Demanding Compensation from Heyi, the Director of the Imperial Household Department and others, the 50th year of Kangxi”.

Chart 3: Output of Hangzhou Imperial Silk Factory in Kangxi years (Unit: pi)

In the first year of Kangxi, Jiangning Imperial Silk Factory delivered court supplying satin dragon robe, purchased 4158 pi gauze, and weaved 1417 pi satins among the 7800 pi satins for the Ministry of Revenue cooperated with Suzhou and Hangzhou factories.<sup>202</sup> Besides, annually delivered 400 pieces of sacrifice using yarn, 2000 pieces of decree satin and certain military used robe.<sup>203</sup> In the fiftieth year of Kangxi, Jiangning delivered 945 pi of dragon satin, python satin, silk carving satin, palace silk, Nanjing gauze, and yarn etc., and 2815 pi administrative used python satin, totally 3760 pi.<sup>204</sup>

Type Time	Court supplying silk	Administra tive use silk	Silk for Ministry of Revenue	Military use silk	Total
1662, Kangxi 1st year	4185		1417	2000	7602
1663/Kangxi 2nd year	1000		1840		2840
1711/Kangxi 50th year	945	2815			3760

Sources: Han Shiqi. *Memorials to the Throne of Wu County 抚吴疏草*. Vol. 5. “Memoria to the Throne Concerning Materials and Food Consumed by the Two Imperial Silk Factories in Jiangsu”. Yi Sang A 伊桑阿 and others, eds. *Collected Status of Qing Dynasty/Guangxu Years*. “Vol.709. Imperial Household Department, Imperial Silk Factories”. “Memoria to the Throne about Flaws of Satin from Jiangning and Demanding Compensation from Heyi, the Director of the Imperial Household Department and others, the 50th year of Kangxi”.

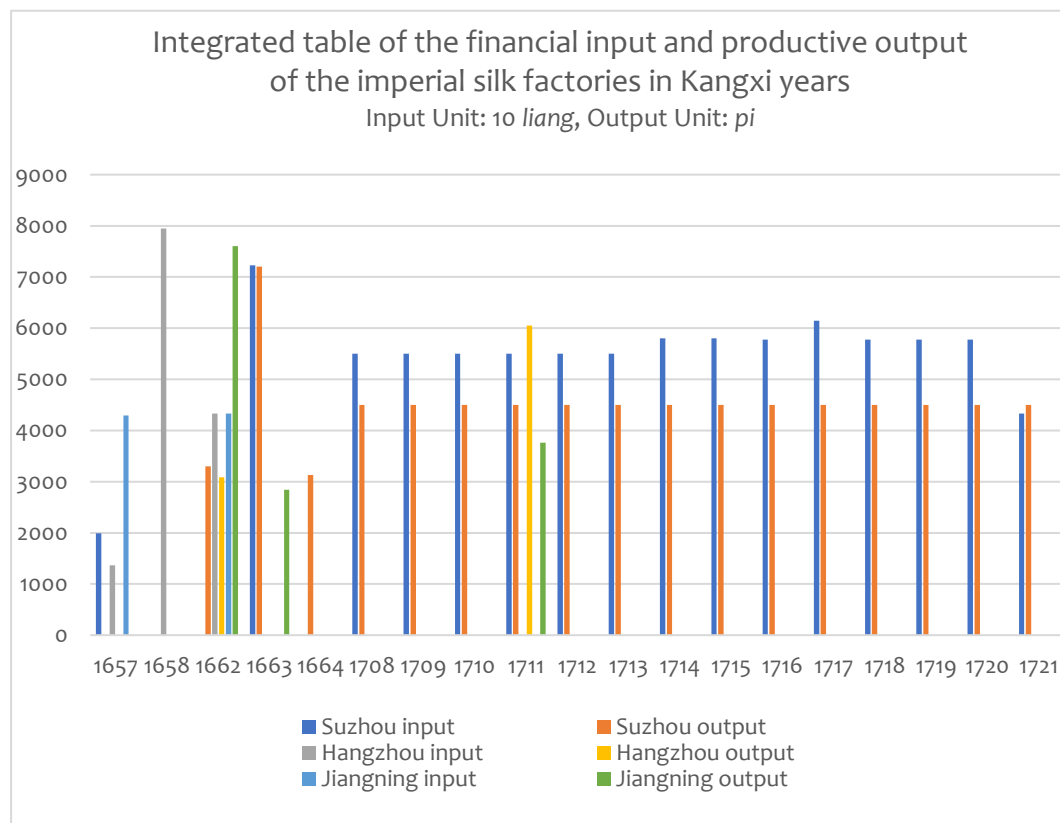
<sup>202</sup> Han Shiqi 韩世琦. “Vol.5 Memoria to the Throne Concerning Materials and Food Consumed by the Two Imperial Silk Factories in Jiangsu 题为奏报江苏二织造用过工料匠粮疏.” “Vol. 31 Memoria to the Throne Concerning Satins from Jiangning 参江宁缎疋疏.” *Memoria to the throne concerning Suzhou 抚吴疏草*. Beijing: Beijing Publishing House, 1997.

<sup>203</sup> Yi Sang A 伊桑阿 and others, eds. “Vol.709. Imperial Household Department, Imperial Silk Factories 卷七〇九.工部.织造.” *Collected Status of Qing Dynasty/Guangxu Years 钦定大清会典/光緒*. (Qing Dynasty) Nanjing: Phoenix Publishing House, 2016.

<sup>204</sup> Department of Ming and Qing Archives of the Palace Museum, eds. “Memoria to the Throne about Flaws of Satin from Jiangning and Demanding Compensation from Heyi, the Director of the Imperial Household Department and others, the 50th year of Kangxi 内务府总管赫奕等奏御用缎疋跳丝落色请令江宁织造赔补折.” *Archives concerning the Cao Family of Jiangning Imperial Silk Factory 关于江宁织造曹家档案史料*. Beijing: Zhonghua Publishing House, 1975.

Chart 4: Output of Jiangning Imperial Silk Factories in Kangxi years (Unit: pi)

In order to have a direct view of the financial input which indicate the cost of the production, and the quantity of finished products of the imperial silk factories, an integrated histogram is made below, note that the financial input from year 1708 to 1713 was recorded as 50000 to 60000 *liang*, an average of 55000 *liang* has been taken to facilitate the chart; from year 1708 to 1721, the output has been estimated at around 4500 *pi*, according to the financial input data and a referential proportion of the financial input and output of Qianlong years.<sup>205</sup> The unit for the financial input silver has been set as 10 *liang* in order to clearly show the two groups of date which differ greatly in the same chart. From the table, it's obvious to observe the incompleteness of the data, even though with a series of estimated numbers added. Whereas, the financial input and the productive output are rather proportional.



Sources: Author's collaboration of the previous four charts.

Chart 5. Integrated table of the financial input and productive output of the imperial silk

<sup>205</sup> Note: The estimation has been made with reference to the work of Fan Jinmin 范金民. *Study on Jiangnan Silk in the Ming and Qing Dynasties* 明清江南丝绸史研究. Nanjing: Jiangsu People's Publishing House, 2016.

*factories in Kangxi years.*

As can be seen from the chart of the categories and output of the various imperial silk factories, each had its own focus, with the court supplying silk being produced mainly at the Jiangning factory; silk for the ministry of revenue being produced mostly at the Hangzhou factory; and administrative use silk being produced most at the Suzhou factory. The production figures for each of the imperial silk factories are not sufficient to show their production capacity; the decisive factor was the imperial demand for various types of fabrics and approval of funding for weaving.<sup>206</sup>

## **Chapter IV. Private Silk production of Jiangnan Area in the Kangxi Years**

### **4.1 The political and economic background of private silk production of Jiangnan area in the Kangxi period**

China has a long agronomic history, with agriculture and sericulture being the economic lifelines. Empires of previous dynasties all promoted farming and sericulture as an important policy to stabilize the society and consolidate the ruling, there was no exception of the Qing Dynasty. Since the beginning of Shunzhi years (1644), the Qing court had encouraged people to cultivate wasteland, plant mulberry trees and raise silkworms, local officials were even rewarded or punished according to their performance of local wasteland reclamation. As stated in the decree of the fifteenth year of Shunzhi (1658), people could plant mulberry, elm or willows anywhere as they like to get financial benefit. In the decree of tenth year of Kangxi (1671), it was recorded that the local governor must inspect and promote agriculture and sericulture, in case of farmers missing the right agricultural time.<sup>207</sup>

Though being a foreign ruler, the Qing court also inherited the ploughing rites originated from the Western Zhou Dynasty (1045-771BC). “The ploughing rites in spring time, is a

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<sup>206</sup> Fan Jinmin 范金民. *Study on Jiangnan Silk in the Ming and Qing Dynasties* 明清江南丝绸史研究. Nanjing: Jiangsu People's Publishing House, 2016.

<sup>207</sup> Yi Sang A 伊桑阿 eds. *Collected Status of Kangxi Period of Qing Dynasty* 康熙朝大清会典. (Qing Dynasty) Nanjing: Phoenix Publishing House, 2016.



worship to agriculture. This ceremony was also hold in Qing Dynasty, when the nobles and officials would all carry our farming activities together. In February, eleventh year of Kangxi (1672), the emperor practiced these rites himself, as it's important for the country."<sup>208</sup> The most famous Chinese painting that recorded the entire process of silk production is the *Illustrations of farming and weaving* [gēng zhī tú 耕织图] of Lou Yu of Southern Song Dynasty (1127-1279AD), which includes a total of twenty-one cases of farming and twenty-four of weaving, based on the themes of agronomy and silk production at that time. Besides being an art collection in the court, it was a reference for the royal family to understand the production process of silk.<sup>209</sup> "In the twenty-eighth year of Kangxi (1689), the emperor ordered to print and publish the *Illustrations of farming and weaving*, and distributed to the ministers and officials to remind them of the hard agricultural labours."<sup>210</sup> Kangxi emperor even wrote preface poems himself with the target to promote farming and weaving in the whole country.

Besides the historical and imperial emphasizes to sericulture, reforms on taxation system, craftsmanship and private production regulations also facilitated the development of private silk production. The taxation system had been reformed in the Qing Dynasty, taxes were no longer collected in products such as silk, but only money and grains; for example, Yanzhou county of Zhejiang province must pay 4700 *pi* silk as tax to the court in Ming Dynasty, the amount had been transferred to 4700 *liang* silver, for purchasing silk from the weavers.<sup>211</sup> Therefore, the silk products demanded by the court and silk materials needed by the imperial silk factories should all be purchased from the market. This policy made it possible for the silk or satin produced by sericulture farmers to be totally or majorly engaged in market exchange, which was a great promote for the commercialization of silk production.

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<sup>208</sup> Yi Sang A 伊桑阿 eds. *Collected Status of Kangxi Period of Qing Dynasty 康熙朝大清会典*. (Qing Dynasty) Nanjing: Phoenix Publishing House, 2016.

<sup>209</sup> Note: The "Illustrations of farming and weaving" is a poetic presentation of tilling and weaving techniques, originally made by Lou Zhuan during the Southern Song Dynasty. It was repainted by Jiao Bingzhen during the Kangxi period of the Qing Dynasty.

<sup>210</sup> Zhang Naiwei 章乃炜. *Narratives of the Qing Court 清宫述闻*. Beijing: Beijing Classics Publishing House, 1988.

<sup>211</sup> Zou Xichou 邹锡畴, Fang Yinyan 方引彦 (ed.) "Volume 10. Yi Wen 艺文." *Gazetteer of Sui'an County of Qianlong Years 乾隆遂安县志*. Carved Version in thirty second year of Qianlong

Another important reform of Qing Dynasty was the abolishment of the craftsmanship servitude of Ming Dynasty. In the second year of Shunzhi emperor, it was clearly declared in a decree that “each province must remove the craftsmanship servitude”<sup>212</sup>, all the craftsmen in imperial handiworks lines and public projects must be hired and paid accordingly by the government. This renovation greatly freed the labours from the personal attachment to the imperial court, encouraged the craftsmen including private silk factory owners and the weavers, consequently simulated private silk production.

With the development of commodity economy and further expansion of the silk market, the ban that private-owned looms shouldn't exceed one hundred was removed, as the taxation of silk was an important financial resource, the Qing court took this measurement to recover silk production. After Kangxi emperor eliminated the one-hundred-loom ban, more and more private silk workshops with over one hundred looms appeared, though the majority were workshops of small scales. Sericulture became the main side-line of the farmers in the silkworm raising area and an essential part of local economy. In many cities and towns of early Qing Dynasty, especially in the Jiangnan area, “sound of looms could be heard from each household”, “thousands of satins were produced in a day”.<sup>213</sup>

In the thirty-fifth year of Kangxi (1696), the emperor described in the preface to his poem *Ode to Mulberries*, “In the inspection to the west of Zhejiang province, I saw mulberry trees in all the forest, this has been the most prosperous area for silkworm raising and mulberry planting, while the whole southeast area tops the silk production industry in all China.”<sup>214</sup> The whole family, men and women, elderly and children, could share the labour works of mulberry planting, silkworm raising and silk reeling etc., sericulture even dominates the livelihood of the Jiangnan people. For example, “people in Huzhou take sericulture as a priority to the field work, the main resource of family income.”<sup>215</sup>

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<sup>212</sup> Wu Fuyuan 吴幅员, eds. *Recodes of Emperors of Qing Dynasty 清世祖实录*. Taiwan: Taiwan Da Tong Publishing House, 1984.

<sup>213</sup> Shen Yanrui 沈延瑞. *Collections of Dongshe 东畬杂记*. Carved version of the thirteenth year of Guangxu years (1887).

<sup>214</sup> Kangxi. “Ode to Mulberries 桑赋.” (1689) Collection of Emperor Kangxi 圣祖仁皇帝御制文集. In *Imperial Libraries of Wenyuange Sikuanquanshu 文渊阁四库全书*. Shanghai: Shanghai Ancient Books Publishing House, 2003.

<sup>215</sup> Zhou Xuejun 周学浚, eds. *Local Gazetteer of Huzhou County 湖州府志*. Taiwan: Chengwen Publishing House,

There had appeared in Zhejiang province, situations of mulberry planting in grain fields. In the ninth year of Wanli of Ming Dynasty (1581), the land measuring records showed: there were fields of 500027 acres, among which mulberry field 63308 acres, occupying 12.46%, while in Kangxi years of Qing Dynasty, there were 207086 acres mulberry filed in the total land of 499973 acres of the whole county, occupying 41.42%. The alter of grain field to mulberry land led to food shortage, which however caused a prosperous grain silk trade.<sup>216</sup> Even though the farmers had suffered from the exploitation of the feudal reign and merchants, sericulture was still a family sideline with short term economic rewarding, the farmers still hold the perspective to “find peaceful life in the mulberries”<sup>217</sup>.

At the exchange of Ming and Qing Dynasty, due to the disturbing Zheng regime, Qing court imposed a sea-ban policy, reiterated that “no sail is allowed to enter the sea”<sup>218</sup>, even forced local people to demolish houses and move inland. Foreign trade ports were closed, the costal economies of Zhejiang, Fujian, and Guangzhou were collapsed. “In the twenty-third year of Kangxi (1684), it was stated in a decree: the sea is peaceful now, the ports of Shandong, Jiangnan, Zhejiang and Qiongzhou etc. are open for trades.”<sup>219</sup> In the twenty-fourth year of Kangxi (1685), Jiangsu, Zhejiang, Fujian and Guangdong customs were established, among which, Guangdong custom was used as the main export harbour, and a foreign trade administrative system was established with reference to the Ming Dynasty. As the sea-ban policy was removed, overseas silk trade gained its legal status, which caused the rapid increase of silk material and textiles exportation.

The fast development of maritime trade had also brought instability factors while foreign traders were eager for the resources and markets of China, which was the reason Qing court set further restrictions on the silk foreign trade. In the twenty-second year of Qianlong (1757), the

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<sup>216</sup> Yan Chen 严辰, eds. *Local Gazetteer of Tongxiang County in Guangxu Years* 光绪桐乡县志. Version of the Thirteenth Year of Guangxu 1887. Taipei: Cheng-wen Publishing Co. Ltd. 1970.

<sup>217</sup> Yan Chen 严辰 (1887), ed., *Local Gazetteer of Tongxiang County in Guangxu Years* 光绪桐乡县志, version of the thirteenth year of Guangxu 1887 (Taipei: Cheng-wen Publishing Co. Ltd. 1970)

<sup>218</sup> Xiao Yishan 萧一山. *General History of Qing* 清代通史. Beijing: Zhonghua Publishing House, 1963.

<sup>219</sup> Yi Sang A 伊桑阿 eds. *Collected Status of Kangxi Period of Qing Dynasty* 康熙朝大清会典. (Qing Dynasty) Nanjing: Phoenix Publishing House, 2016.

Qing court reaffirmed sea-ban policy, and set the Canton system: foreign trade was only allowed at the port of Guangdong. “Let the governors of Jiangsu and Zhejiang provinces inform the literary and military officials of the coastal areas, and strictly enforce the sea-ban policy. Anyone engaged in foreign trade against the ban, if the smuggled silk were over 100 *jin*, would be punished as smuggling rice over 100 *dan*, to be sent to the distant frontier for penal servitude.”

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The large quantity of raw silk exportation led to dramatic rise of the domestic silk price, and affected destructively the silk production in China. Due to the strong demand of foreign markets, in the twenty-ninth year of Qianlong (1764), a quota system for raw silk exportation in Jiangsu, Zhejiang, Fujian and Guangdong provinces was set, the exportation of first class Huzhou raw silk and silk textiles was still prohibited. Actually, the government ban had been sometimes strict and sometimes loose, plus the existence of smuggling silk, the exportation of Chinese raw silk and silk textiles in the seventeenth and eighteenth century had played an important role in the foreign trade.<sup>221</sup>

#### 4.2 Private silk production of Jiangnan area in Kangxi years

The reign of Kangxi, together with Yongzheng and Qianlong, was the so called “High Qing” period (1662-1799AD), when China was comparatively stable in politics, commercial activities were highly developed, the population had been greatly increased, culture and art were thriving. Being one of the key elements of the commodity trade and traditional handicraft, silk fabrication was at its most developed at this point of time. In Jiangnan area where the imperial silk factories were established, what was the developing level of private silk production? How did the imperial silk factories and the private silk production affect each other? Detailed information concerning private silk manufacturing could rarely be detected from the imperial archives, whereas this information was commonly recorded in local gazetteers all along the history, as the latter emphasised documenting tributes and customs of places.

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<sup>220</sup> Archive Department of Palace Museum 故宫文献馆, ed., “England Trade Case in 24<sup>th</sup> Year of Qianlong 乾隆二十四年英吉利通商案”, *Historical Archives Magazine 史料旬刊*, Vol. 5, 1931

<sup>221</sup> Yuan Xuanoing 袁宣萍, Zhao Feng 赵丰. *The History of Chinese Silk Culture 中国丝绸文化史*. Ji'nan: Shandong Fine Art Publishing House, 2009.

Thus, taking advantage of the full text intelligent search function of the gazetteer database, with searching entries of “silk” [sī chōu 丝綉], “sericulture” [cán sāng 蚕桑], “weaving” [zhī zào 织造], “silk fabricating” [sī zhī 丝织], “gauze” [chōu 紬], “satin” [duàn 缎], “damask” [líng 綾], and “thick loosely woven silk” [juàn 絹], the most commonly used Chinese characters which relate to silk, records concerning private silk production in Jiangnan area between 1662-1799 have been found with much efficiency. In Jiangnan area, being the origin area of first-class raw silk, having convenient transportation due to the river networks, and basing on a highly commercialized society, besides the cities of Nanjing, Suzhou, Hangzhou, Zhenjiang, and Huzhou, many silk producing villages and towns were also scattered in the two provinces of Jiangsu and Zhejiang, where the private silk industry had been outstandingly established, with a vast typology of silk products, expanded manufacturing scale, advanced weaving techniques, and renovated production processes.

Jiangsu province was renowned for its two imperial silk factories in Jiangning and Suzhou, but the private silk industry had also been rapidly and significantly developed by the early Qing Dynasty. The silk industry was one of the most important handcraft industries in Nanjing, and it flourished during the early Qing Dynasty. Even though lacking a local supply of raw silk, Nanjing was famous for its most skilled craftsmen. “Raw silk for satin, thin silk, gauze or yarn was obtained from other provinces, whereas the best weavers are from Jiangning.”<sup>222</sup>

Suzhou had a long history of sericulture, which had always been an important base for the local economy. Planting mulberries and raising silkworms had been a local custom through history.

Mountains by the lake were mostly planted with thousands of fruit trees like oranges or citrons, poor families were mostly engaged in sericulture, the lands were generally planted with mulberries, girls in the family were taught with sericulture knowledge since very young”; “March and April were called sericulture months, all the houses closed doors and social life paused, being the time for silk worms to have cocoons.”<sup>223</sup>

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<sup>222</sup> *Qianlong Period Jiangning New Gazetteers* 乾隆江宁新志. the 13th year of Qianlong 1748.

<sup>223</sup> *Kangxi Gazetteer of Wu County* 康熙吴县志. the 30th year of Kangxi. 1691.

The imperial silk factories issued official certificates to select loom claimers to organize production and hire craftsmen for the imperial factories. Craftsmen for the private production were employed either temporarily or for a long duration. “People in the east city mostly engage in the silk weaving line, each craftsman has his expertise. Being hired by a fixed employer, the craftsman is paid daily; if he is unavailable, a temporarily employed craftsman could take place of him. The craftsmen wait to be hired by the bridges in the early morning every day, satin weavers at Flower Bridge, gauze weavers at Guanghuasi Bridge, while spinning wheel operators at Lanxifang. They make groups of ten or hundred people, standing there waiting for the employers, until breakfast time finished.”<sup>224</sup> The vast scale of the private silk industry in Suzhou could be speculated from the big quantity of labours engaged in the weaving line and the detailed division of weaving technicians.

Sericulture had not only been developed in cities, but also in villages and towns nearby. In Zhenze [zhèn zé 震泽] town of Suzhou area, “being dominated with sericulture, mulberries are widely planted, the whole town is covered in green shade by the crossing of spring and summer time. The mulberries have a variety of more than 20 to 30 types.” “The silk yarn reed in the southwest of the town is thin and white, could be used as warp; what produced in the east town is thicker, could be used for satin.”<sup>225</sup>

Besides the mulberry cultivation and weaver employment situation, a rich typology of silk products described in the gazetteers could also prove the prosperity of local private silk industry. “Suzhou brocades are famous for its rich colours, in the city it is produced satin, yarn, gauze, and thick satin, etc. Wuzhong is dominated with sericulture and weaving, offering clothing and fabrics for all the country. Decoration flowers made with yarn [duī shā 堆纱], embroidery [xiù róng 绣绒], and silk carving [kè sī 刻丝] are the most famous products from Suzhou.”<sup>226</sup>

Shengze [shèng zé 盛泽] Town was another significant centre of silk production and trade

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<sup>224</sup> *Kangxi Gazetteer of Suzhou* 康熙苏州志. the 30th year of Kangxi. 1691.

<sup>225</sup> *Qianlong Zhenze County Gazetteer* 乾隆震泽县志. Reprinted version of Guangxu years of Qing Dynasty.

<sup>226</sup> “Qianlong General Gazetteers of Jiangnan Area 乾隆江南地方志.” *Imperial Libraries of Wenyuange Sikuquanshu* 文渊阁四库全书. Shanghai: Shanghai Ancient Books Publishing House, 2003.

in the early Qing Dynasty, whose silk industry began to rise in the mid- Ming Dynasty, based on the sericulture development in the neighbouring towns and villages. There are many descriptions of scenes of mulberry cultivation and sericulture in the local gazetteers:

Shengze was a village with 50 to 60 families in early Ming Dynasty (around 1368AD), in the Jiajing years of Ming Dynasty (1522-1566AD), the population doubled and sericulture started to be popular; now in the Qianlong years (1711-1799AD), there are hundred time more residents, and the sericulture industry is ten times more developed. Every day, rich merchants come carrying large amount of money to purchase, the market starts at noon every day, the harbour being crowded with boats and the streets being full of people, all the prosperous situation of hustle and bustle is incomparable among all the towns.<sup>227</sup>

Before the Song (960-1279AD) and Yuan Dynasties (1271-1368AD), only people from the counties were occupied in sericulture, city residents started silk manufacturing since the Xi and Xuan years of Ming Dynasty (1245-1435AD), they normally hire weavers; after Chenghong years (1465-1505AD), sericulture became a local custom, residents in all the nearby area engaged in the silk business, rich people hire weavers, the poor weave by themselves, and let their children help, women in the family reed silk yarn. The harvest of silk yarn and the price of satin were key factors affecting their life quality.<sup>228</sup>

Silk production became the main source of revenue for Shengze Town; various silk products were produced in the town and nearby villages and a few local famous brands were formed, which all turned Shengze into a vast silk market, not only domestically but also internationally, as “Merchants from the capital, other provinces and foreign countries all came to trade.”<sup>229</sup>

Being the capital of Zhejiang province and where the Hangzhou Imperial Silk Factory was located, Hangzhou had a correspondingly highly developed private silk industry, which could be reflected from the exquisite special local silk products described in local gazetteers.

“Brocade, named as Zhiwen [zhī wén 织文] brocade in *Book of History· Tribute of Yu* 尚书·禹

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<sup>227</sup> Phoenix Publishing House eds. *Local Gazetteer of Wujiang County in Qianlong Years* 乾隆吴江县志. Nanjing: Phoenix Publishing House, 2008.

<sup>228</sup> Phoenix Publishing House eds. *Local Gazetteer of Wujiang County in Qianlong Years* 乾隆吴江县志. Nanjing: Phoenix Publishing House, 2008.

<sup>229</sup> Zhong Tingji 仲廷机. *Qianlong Shenghu Gazetteer* 乾隆盛湖志. Vol. 3. Stone carving version, the 35th year of Qianlong 1770.

贡, is also called gold brocade [jīn jīn 锦金], as it's as valuable as gold." There have been myths about the origin of the brocade, "a kind of water silkworm turned into beautiful blue with colourful shades after frost, people imitated the colour and dyed the brocade."<sup>230</sup> The most valuable local silk textiles products with top class technic and delicate colours symbolized the highly developed private silk industry in Hangzhou society.

Being famous as the origin place of the best quality raw silk--Hu silk, Huzhou had been an important centre for both supplying raw silk and for silk production; "in the preface of 'Ode to Mulberry' written by emperor Kangxi to promote sericulture among the people, it recorded that the west of Zhejiang province has been covered by mulberries, the southeast area is supplying silk for all the country, while sericulture is only prosperous in this region."<sup>231</sup> The gazetteers also revealed the process of sericulture and the unique ways of the local production:

Silkworm raisers of Huzhou mostly plant mulberries by themselves, if not they would buy mulberry leaves from others; 1 *hu* [hú 斛] of silkworms would consume 160 *hu*<sup>232</sup> of mulberry leaves, it was very difficult to predict the mulberry prices, so the most secure way was to cultivate and purchase at the same time. Sericulture had been a very profitable business in Huzhou, 80 *kuang* [kuāng 筐] of mulberries could be harvested from 1 *mu* [mǔ 亩] of land,<sup>233</sup> the rent and cultivating cost of one year was about 2 *liang*, while the profit could be doubled.<sup>234</sup>

The success of sericulture is depending on the nature, while the traditional method emphasised on human. According to the ancient way, the silkworm room should be built very enclosed, heavily covered with grass curtains; the south window would be closed while blowing south wind, and north window closed with north wind; fireplace was set in the room, five women would wear only light clothes in the silkworm room in any weather: making the fire smaller while feeling hot with light clothes and vice versa. The whole room should be kept in a perfect temperature; therefore, any disadvantage for sericulture caused by the natural weather could be avoided. Meanwhile, there mentioned

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<sup>230</sup> *Kangxi Renhe County Gazetteer* 康熙仁和县志. Vol. 28. Carved version, the 26th year of Kangxi. 1687.

<sup>231</sup> *Qianlong Hangzhou Gazetteer* 乾隆杭州志. Vol. 110. Carved version of Qianlong Period.

<sup>232</sup> Note: Chinese measurement for volume, in the Qing Dynasty, 1 *hu* 斛 equals 50 litres.

<sup>233</sup> Note: 1 *kuang* 筐 equals 20 *hu* 斛, which is 1000 litres.

<sup>234</sup> Huang Zhijun 黄之隽, Zhao Hongen 赵弘恩, eds. "Yongzheng General Gazetteer of Zhejiang 雍正浙江通志, Vol. 280." *Imperial Libraries of Wenyuange Sikuquanshu* 文渊阁四库全书. Shanghai: Shanghai Ancient Books Publishing House, 2003.



two solutions for shortage of mulberry leaves: first, in the situations with lack of mulberries, rice powder could be scattered on the leaves to feed the silkworm, the silk produced in this way could be even more white and durable; Second, mulberry leaves could be dried and minced, when the fresh mulberry is wet, they could be mixed with the dried minced powder.<sup>235</sup>

With sericulture being so important for the Huzhou people, it had developed in a way that followed the customs of people's everyday life: "April is called silkworm month, a type of bird appears this month is called silkworm bird, a kind of little shrimp goes to the market this month is called silkworm shrimp." "In the silkworm month, all the houses closed doors in the village, women didn't dress up and worked all day and all night. It's a pity that the raw silk produced are mostly supplying other places, as Huzhou people are not good at business, therefore the profit is not high."<sup>236</sup>

The gazetteers' descriptions included other silk producing centres. In Tongxiang County, for example, "there are many merchants in the market, the local sericulture and silk production is outstanding."<sup>237</sup> Puyuan town was a silk weaving centre as famous as Shengze, "the silk industry had been the most prosperous in Kangxi years, many people made fortune because of this...weaving machines were regarded as permanent property of the town." "Weaving took place of farming in this town."<sup>238</sup> The Linping town nearby Hangzhou produced light satin and during the Yongzheng period, "there were no less than two or three hundred of weaving machines, each machine could produce one *pi* of satin every day."<sup>239</sup>

During the "High Qing" period, in Jiangnan area where the imperial silk factories were established, the private silk industry also prospered. In cities such as Suzhou, Hangzhou, and Nanjing, all influenced by the advanced silk weaving techniques and skills of the imperial silk factories, each city had its own renowned high-quality silk product specialties from the private

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<sup>235</sup> Huang Zhijun 黄之隽, Zhao Hongen 赵弘恩, eds. "Yongzheng General Gazetteer of Zhejiang 雍正浙江通志, Vol. 280." *Imperial Libraries of Wenyuange Sikuquanshu 文渊阁四库全书*. Shanghai: Shanghai Ancient Books Publishing House, 2003.

<sup>236</sup> Huang Zhijun 黄之隽, Zhao Hongen 赵弘恩, eds. "Yongzheng General Gazetteer of Zhejiang 雍正浙江通志, Vol. 280." *Imperial Libraries of Wenyuange Sikuquanshu 文渊阁四库全书*. Shanghai: Shanghai Ancient Books Publishing House, 2003.

<sup>237</sup> *Kangxi Tongxiang County Gazetteer 康熙桐乡县志 Vol.5*. Version of the 17th year of Kangxi. 1678.

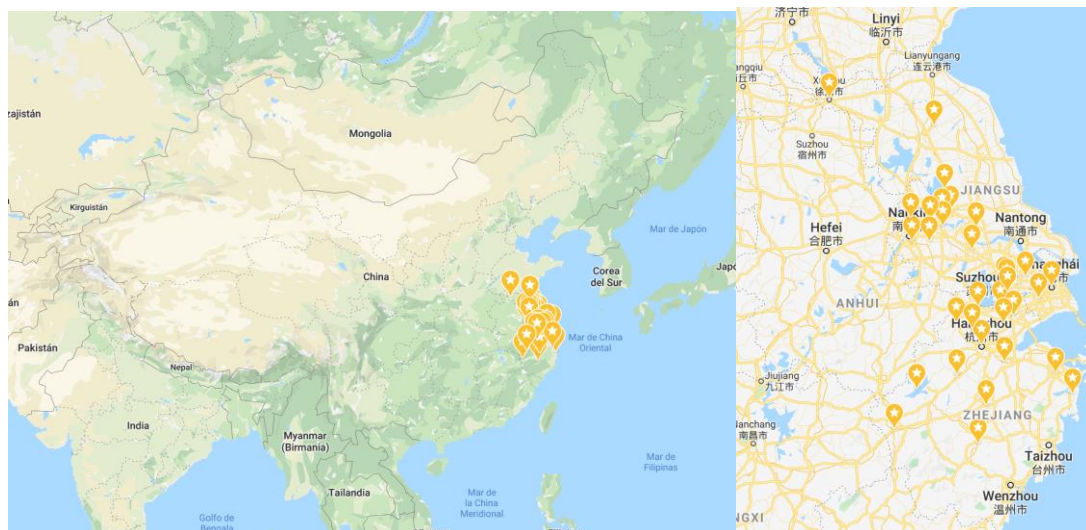
<sup>238</sup> Yang Shuben 杨树本. *Puyuan Suo Zhi Gazetteer 濮院琐志/中国地方志集成*. (Qianlong Years) Shanghai: Shanghai Book Store, 1992

<sup>239</sup> Xu Menghong 许梦闾. *Yongzheng Beixinguan Gazetteer 北新关志*. 9th year of Yongzheng, 1731.

silk workshops. Furthermore, the surrounding villages and towns, such as Shengze and Puyuan, cultivated mulberries and developed sericulture as the main local industry.

### 4.3 The influence of the imperial silk factories to local private silk production

“Books can lie, but places never do.”<sup>240</sup> The silk related materials obtained from the gazetteers are obviously categorized by volumes and named according to different places of origin. “By contrast with the map-based visualization that form the centrepiece of most GIS, gazetteers are simply databases about named places. As such, they are well equipped to incorporate notes, certainty ratings, alternative names in multiple languages, feature types, relationships among places, and citations to sources in ways that are reasonably familiar to historians.”<sup>241</sup> Therefore, maps can be made accordingly to demonstrate the locations of sericulture and silk production in the Jiangnan area (see Illustrations 3 and 4). As we can see directly from the maps in Jiangsu and Zhejiang provinces<sup>242</sup> where the imperial silk factories were built, private silk production was correspondingly popular in the nearby cities, towns, and villages.



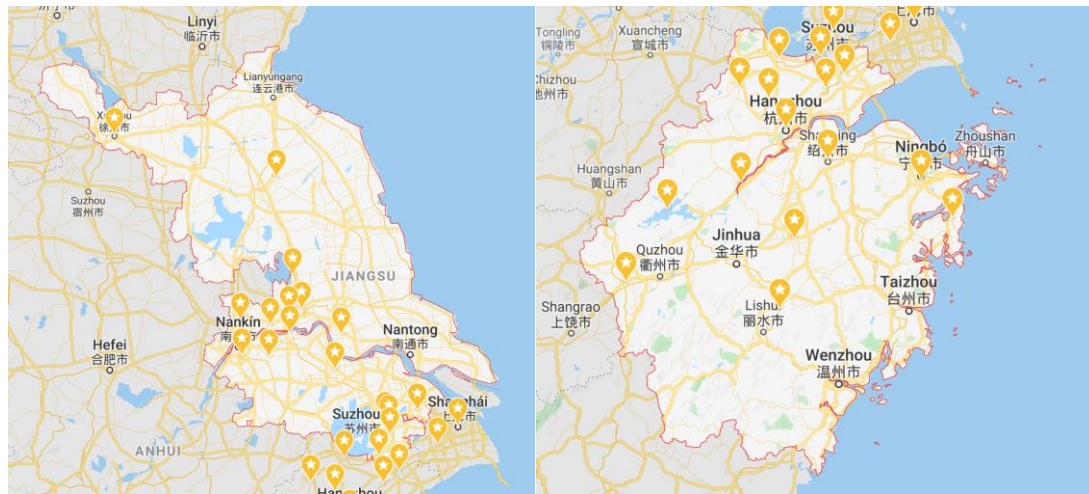
Sources: Author's own elaboration through data and records from Chinese Local Gazetteers

<sup>240</sup> Jack Weatherford. *Genghis Khan and the Making of the Modern World*. New York: Three Rivers Press, 2004.

<sup>241</sup> Ruth Mostern. “Historical Gazetteers: An Experiential Perspective, with Examples from Chinese History.” *Historical Methods: A Journal of Quantitative and Interdisciplinary History*. 2008.

<sup>242</sup> Note: The maps show Shanghai municipal as well, whereas Shanghai used to be a district of Jiangsu Province until 1927.

*Illustration 3: Overview of the distribution of areas with sericulture and silk production in Jiangsu, Zhejiang, and Shanghai*



Sources: Author's own elaboration through data and records from Chinese Local Gazetteers

*Illustration 4: Distribution of places with sericulture and silk production in Jiangsu and Zhejiang provinces*

Concerning the relationship between imperial silk factories and private silk production, scholarship has focused on the negative impact of the imperial silk factories on the private silk industry, pointing out that imperial silk factories were blocking the development of private industries by abusing the craftsmen economically and forcing them to work as an obligated serf. The production form of the imperial silk factories and the private workshops are often talked about in works concerning social economic developments, for instance, in *Social Economy*, Xing and Li condemned the imperial silk factories for occupying the labour sources of the private silk industry, as the recruited craftsmen “were forced to serve the imperial factories, been exploited”, “the craftsmen were offered with quote of food, the obligated serve to the imperial silk factories could last a life long time and be passed to their descendants.”<sup>243</sup>

Wu, Wei, Zhu, Wu li and Ju regarded the feudal economical intervention and direct operation of industry and commerce as the initiation of China's state capital. In their opinion, the feudal society accommodated a high level of productivity with its well-developed material

<sup>243</sup> Xing Chunru 邢春如, Li Munan 李穆南. *Social Economy (First Volume) Social Customs 社会经济(卷一)社会民俗*. Liaoning: Liao Hai Publishing House, 2007.

civilization and elastic economic framework. Whereas, the government-run industry and the private factories had no difference at the level of productivity, only varied in the economic form of taking surplus labour. The private handicraft industry must create a higher productivity than the imperial industry to break through the old economic relations.<sup>244</sup>

This theory of negative effect had its reason, but it couldn't explain the fact that where the private silk production was the most prosperous were where the imperial silk factories were set, which even places with positive conditions to develop silk industry, such as Sichuan province couldn't compete. However, Fan Jinmin concluded in his work that the treatment received by the craftsmen was actually dependent on the financial status of the court; when there were abundant resources, the craftsmen were well paid and the whole national silk industry could be promoted, and vice versa. The prosperousness of private silk production was thus a consequence of the imperial silk factories, which could explain the development of private silk industry in Jiangsu and Zhejiang provinces where the imperial silk factories located.<sup>245</sup>

It is not fair-minded to only talk about the suppression and exploitation of private production by the imperial factories when clearly the imperial and private silk production was interrelated. Through the method of "buying silk and recruiting craftsmen", certified loom claimers could organize "contracting" production for the imperial silk factories, while at the same time they were engaged in their own private production. Weavers could be hired by certified loom claimers who owned private workshops to work for the imperial silk factories, or they could work for the private workshops directly.

Being engaged in court suppling products, the imperial silk factories were fabricating with the most skilled weavers and craftsmen, to the highest standard of quality requirements, whose contributions to the improvement of weaving technics and product varieties undoubtedly stimulated the private silk industry. For instance, the Qing court repeatedly ordered that, the satins fabricated by the imperial silk factories, "must be even with the warp and the weft, fit in

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<sup>244</sup> Wang Yuru 王玉茹, Wu Bojun 吴柏均, Liu Lanxi 刘兰兮, eds. *Economic Development and Market Changes: Anthology of Commemoration of Mr. Wu Chengming's Centennial Birthday* 经济发展与市场变迁-吴承明先生百年诞辰纪念文集. Tianjin: Nankai University Publishing House, 2016.

<sup>245</sup> Fan Jinmin 范金民. *Study on Jiangnan Silk in the Ming and Qing Dynasties* 明清江南丝绸史研究. Nanjing: Jiangsu People's Publishing House, 2016.

width and length, delicate in patterns, and fresh in colours”. “The imperial silk factories made satins, plain or floral, so delicate, the weaving skills were so fluent”. “To make court supplying gauze, a three-person operated shuttle was set, the width could reach two *zhang* [zhàng 丈]”.<sup>246</sup> The three shuttle operators must be technically skilled, but also needed to be precisely synchronized and cooperated. The high-level technics from the imperial silk factories would most probably be adapted when the weavers engaged in private silk production, which could be a great stimulation for the improvement of the private production.

The imperial silk factories certainly contributed to the fashion trend of the silk products, for example, as described in the following Gazetteer record: the Yang plain satin [ yǎng sù 仰素] was invented by a weaver of the imperial silk factory from Jiangning, but it was popular in the capital and other provinces as well. The best technique of silk fabricating of the weavers in Jiangning was also promoted by the high demand of weaving skills and quality for the imperial production.

The imperial silk factories have become more and more renovative in the recent decades, the plain satin of weaver Chen [chéng 程] has been the most outstanding, which was named after the weaver called ‘Yang plain satin’ [yǎng sù 仰素] and had become popular in the capital and other provinces; the fabric of ‘thread satin’ [xiàn duàn 线缎], could be made plain or with pattern, and in different thickness. Though raw silk for satin, thin silk, gauze or yarn was obtained from other provinces, the best weavers are from Jiangning.<sup>247</sup>

The large-scale production of the Jiangnan imperial silk factories, was a great stimulation and promotion also to the production of raw silk. The warp and weft yarns used by the imperial silk factories were almost all from Huzhou, where the best raw silk was produced. As regulated by the Qing court, when the new silk went to the market, the imperial factories “should purchase

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<sup>246</sup> Feng Guifen 冯桂芬, eds. “Vol. 22 Local Specialties 卷二二 物产.” *Kangxi Period Suzhou Local Gazetteers 康熙苏州府志*. Jiangsu: Jiangsu Book Publisher, Guangxu years Qing Dynasty.

Note: zhang is ancient measure word

<sup>247</sup> Yuan Mei 袁枚, eds. *Qianlong Period Jiangning New Gazetteers Vol. 26 乾隆江宁新志*, Vol. 26. (Qing Dynasty) Nanjing: Nanjing Publishing House, 2013.

fairly at current prices”. In order to prevent the officials from reporting false prices, the Qing court set a reimbursement limit to the silk prices, which have been normally considered a fact that the imperial factories forcefully purchased at a lower price. Actually, when the reimbursement limit was not sufficient for the silk price, a special subsidy would be used to compensate, in Hangzhou, “salt tax was used to compensate for silk prices”; in Jiangning, “the idle funds of Huainan and Huaibei would be allocated”; in Suzhou, “deposits and tax penalties from the Imperial Household Department were used”. In certain years when the silk price was extremely high, the imperial silk factories would reimburse with the actual cost. In addition, regarding the silk price reimbursement limit, it was set basing on the constant inspection of the market price, and would fluctuate accordingly. Therefore, it would be concluded that the imperial silk factories were competing for silk materials with merchants all over the country, even foreign merchants, at market prices, the huge annual silk purchasing volume of the imperial silk factories was rather an encouragement for the production of sericulture farmers.

Under such a situation, it could be said that the imperial and private sectors were actually closely linked in terms of personnel and technique, and in this way, they mutually promoted each other. The imperial silk factories directly supplied the royal court and the bureaucracy system, which inevitably had extremely high requirements regarding the quality and design of the fabric products. The exquisite design and quality requirements of the imperial factories would undoubtedly have a positive impact on the improvement of the private production, through the process of the mutual integration of the official and private textile systems. The development of imperial silk factories and privately-owned silk workshops thus complemented each other. During the Kangxi, Yongzheng, and Qianlong periods, the Jiangsu and Zhejiang area where the imperial silk factories were located was also where the privately-owned silk industry was the most prosperous.

## **Chapter V. The Distribution and Influences of Chinese Silk Products in Kangxi Years, Domestically and Globally**

### **5.1 Domestic consumption of silk products of Jiangnan area**

Chinese silk, especially from Jiangnan area, has been recognized with its exquisite design and unparalleled weaving technics all over the world, it could be easily impressed how Chinese silk was considerably exported to foreign countries and involved in international maritime trade, whereas, the domestic consumption of Chinese silk hasn't been paid much attention. Goichi Matsunaga, a Japanese scholar implied in 1897 after an inspection of China's sericulture that the domestic consumption of silk is far above the exportation to foreign countries.

Today, a total of about 800,000 bundles of raw silk has been exported from Guangdong and Shanghai. The consumption in the interior is unknown. By asking the merchants and inspecting the situation, it could be estimated that the domestic consumption is three times of the exportation. People of above middle classes are all wearing silk, from which we could speculate the amount of domestic consumption.<sup>248</sup>

In the nineteenth and twentieth centuries, Chinese silk exportation was already in its booming time with the rapid development of global trade, though a large quantity of domestic consumption existed, as indicated in the report of Goichi Matsunaga; During the early Qing Dynasty, the proportion of domestic consumption of raw silk and silk textiles should be even higher. It could be concluded with much certainty that during the Qing Dynasty, the Chinese silk market dominated by Jiangnan silk was mainly domestic, not abroad.<sup>249</sup>

Since the Ming Dynasty, silk had been the most important commodity in the Jiangnan society, merchants from different places of the country gathered in Jiangnan area to purchase silk. Zhang Han, a prime minister of Ming Dynasty, observed the market in China, in the south east, the most commercialized products are silk and brocades, especially in the Jiangnan area, and recorded in his book: "In Hangzhou, it is all covered with mulberries, the local products of silk textiles were supplying all the places, rich merchants from far away would come to east Zhejiang province to purchase silk products."<sup>250</sup> The significance of domestic silk market since the Ming Dynasty was obviously shown. At the borders of the north and the northwest, existed smuggling of silk textiles to exchange horses among military men and merchants. "In Shanxi

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<sup>248</sup> Goichi Matsunaga 松永伍作. "The Qing Dynasty Sericulture 论清国蚕业." *Agriculture 农学报*. Vol.3, 1898.

<sup>249</sup> Fan Jinmin 范金民. *Study on Jiangnan Silk in the Ming and Qing Dynasties 明清江南丝绸史研究*. Nanjing: Jiangsu People's Publishing House, 2016.

<sup>250</sup> Zhang Han 张翰. "Vol. 4 Memoria of Merchants 商贾记." *Song Chuang Meng Yu 松窗梦语*. Shanghai: Shanghai Classics Publishing House, 1986.

ang Sichuan provinces, there were many cases of smuggling to minorities out of the boarder.”<sup>251</sup>“Military men and their families, even guards of the frontiers, could smug iron wok, tea, silk textiles and copper products to the minorities outside of the boarder exchanging for horses.”<sup>252</sup>

By the Qing Dynasty, Jiangnan silk had been more wildly distributed to all the country, merchants swarm into Jiangnan area, carrying with them local products, food and raw materials needed in Jiangnan area, for exchange of silk textiles. Jiangnan area had become a hub for silk textile business, where Jiangnan silk flew to a vast and prosperous domestic market. In the silk producing areas, such as Hangzhou, “The prosperousness of Hangzhou lie in the highly developed sericulture industry and the exquisite weaving techniques, the silk products are sold all over the country.”<sup>253</sup> “Silk textiles of Nanjing are distributed to the capital in the north, to Gaougouli, Liaoning and Shenyang; to Shanxi, and across the Huanghe River to Shanxi, Gansu and Sichuan in the northwest; to Yunnan and Guizhou in the southwest; through the Wuling Mountains to Huannan, Henan, Zhejiang and Jiangsu.”<sup>254</sup> In Kangxi years, Shenze town of Suzhou area was “crowded with abundant merchants from thousands of miles away, like a big city”.<sup>255</sup>

In *Prosperous Suzhou: Burgeoning Life in a Resplendent Age* [sheng shì zī sheng tú 盛世滋生图], a handscroll by Xu Yang, a court painter in the Qianlong years, depicting the bustling life and prosperous silk trading of Suzhou, the painting was detailly painted with more than a dozen of silk shops, and marked more than twenty silk types. “There are fourteen silk shops appeared in ‘Prosperous Suzhou’: Chouduanzhuang silk shop: cotton silk; Fusheng silk shop:

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<sup>251</sup> Huang Zhijun 黄之隽, Zhao Hongen 赵弘恩, eds. *Imperial Libraries of Wenyuange Sikuquanshu 文渊阁四库全书*. Shanghai: Shanghai Ancient Books Publishing House, 2003.

<sup>252</sup> Ma Wensheng 马文升. “Vol. 62, Memoria to the Throne Concerning Banning Foreign Trade for Security in the Frontier 禁通番以绝边患疏.” *Ming Jing Shi Wen Bian 明经世文编*. Beijing: Zhonghua Publishing House, 1962.

<sup>253</sup> Su Zhou Historical Museum, eds. “The Stele of Wuchang Qianjiang Hall 吴阊钱江会馆碑记.” In *Suzhou Industry and Commerce Tablet Inscriptions in Ming and Qing Dynasty 明清苏州工商业碑刻集*. Nanjing: Jiangsu People’s Publishing House, 1999.

<sup>254</sup> Mo Xiangzhi 莫祥芝, Gan Shaopan 甘绍盘. *Local Gazetteer of Two Counties of Shangjiang in Tongzhi Years 同治上江两县志*. (Qing Dynasty) Nanjing: Nanjing Publishing House, 2013.

<sup>255</sup> Phoenix Publishing House eds. *Local Gazetteer of Wujiang County in Qianlong Years 乾隆吴江县志*. Nanjing: Phoenix Publishing House, 2008.



satin ropes; Zhenze silk shop; Satin shop; Huanyuan Ning satin; Old cotton silk shop: Huzhou thin silk and cotton silk. Shandong Yishui silk: imperial silk, satin, thin silk, cotton silk, court-suppling satin, self-produced eight silk, gold and silver satin, python satin, feather court satin, etc.”<sup>256</sup> Those shop signs were vivid reflections of a rich typology of silk products and the prosperousness of Jiangnan silk market. Merchants from all over the country flew into Jiangnan area for purchasing silk textiles, there was undoubtedly a vast domestic market of Jiangnan silk.

In the Jiangnan silk market, silk textiles could be purchased directly or be bulk ordered with a down payment for special design demands. “Merchants must purchase goods most demanded in their local places; therefore, the products vary in patterns, length and thickness, a down payment must be placed to make an order.” “Merchandisers from different places came to Hangzhou for silk trade, each province had its popular type.”<sup>257</sup> The general supplying and selling process was that the merchants would previously pay a down payment to the weavers, who would produce silk textiles according to the requirements of the merchants within a corresponding time limit. As the demand for colours and size of silk textiles varied so much with orders from different merchants, a fine division of silk manufacturing processes had been formed. It could be inferred that the production method of ordered weaving was adopted mainly due to different design requirements of merchants from varied places and for varied distribution routes, it was as well a reflection of the large-scale and long-term production and consumption processes of the domestic silk trade.

Another reason for the wide domestic market of Jiangnan silk lied in the fashion of wearing silk and the pursuit for luxury in all aspects of the society. In order to maintain the division of social hierarchy and showing the superiority of the ruling class, since Ming Dynasty, the court had set clear regulations on the styles and colours of clothing for different social levels. People

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<sup>256</sup> Fan Jinmin 范金民. “The Portrayal of the Industrial and Commercial Prosperity of Suzhou City in Qing Dynasty - Prosperous Suzhou: Burgeoning Life in a Resplendent Age 清代苏州城市工商繁荣的写照-姑苏繁华图.” *Shi Lin 史林*. Vol. 5, 2003.

<sup>257</sup> “Tablet of Notices for Agents and Weavers and Prohibition for the Disturbing of Local Villain 杭州府仁和告示商牙机户并禁地棍扰害碑.” the fiftieth year of Kangxi, 1676. “Tablet of Hangzhou County to Warn Agents and Weavers 杭州府告示商牙机户店家人碑.” the fifty-fifth year of Kangzhou, 1676. In Chen Xuewen 陈学文. *Commodity Economy in Late Feudal China 中国封建晚期的商品经济*. Changsha: Hunan People’s Publishing House, 1989. and Fan Jinmin 范金民. *Study on Jiangnan Silk in the Ming and Qing Dynasties 明清江南丝绸史研究*. Nanjing: Jiangsu People’s Publishing House, 2016

of lower social classes were not allowed to wear silk, normally they could neither afford. To the Chinghua years of the middle fifteenth century (1465-1487AD), it was recorded that, “People tend to use things and wear clothes of higher social levels, such as wearing red satin weaved with gold thread.”<sup>258</sup> By the Jiajing (1522-1566AD) and Wanli (1573-1620AD) years, the commodity economy had developed extensively, the merchant class enriched rapidly, and the fashion of wearing silk had risen. In the early Qing Dynasty, the society entered a comparatively stable status, with abundance in materials and resources, a trend of admiring luxury commodities merged, which reflected primarily in the changes of clothing styles, silk became more and more popular in all social levels. In the Kangxi years, “from high rank officials to normal people, all wearing square scarf and clothes of gauze and satin in all kinds of patterns... Rich citizens were wearing satin as well, but only in some modest colours such as black or blue, not bright colours.”<sup>259</sup>

Regarding the silk fashion in the society, Tang Bin of Kangxi years, Yin Huiyi of Yongzheng years and Chen Hongmou in later Qianlong years, all promoted customary treaties to persuade people abandon the pursuit for luxury and return to a modest lifestyle. However, the trend was getting even more flourishing, by the Qianlong years, “it was already luxury to be dressed in satin and decorated with gold and silver jewellerys, people even wanted to wear clothes embroidered and brocaded with gold thread... Even people of lower social classes, who were hardly making a living, their wives and daughters wouldn't wear plain cotton nonetheless dressed with satin and decorated with gold.”<sup>260</sup>

Obviously, the price of silk was still much higher than other textiles, average people wore cotton normally, silk dresses were not for everyday wearing. A memorial to the throne of early Qianlong years recorded, “one *cun* [cùn 寸]<sup>261</sup> of silk costs the same as one *chi* [chǐ 尺] of cotton,

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<sup>258</sup> Yu Jideng 余继登. *Allusions and Records 典故纪闻*. (Ming Dynasty) Beijing: Zhonghua Publishing House, 1981.

<sup>259</sup> Ye Mengzhu 叶梦珠. *Yue Shi Pian 阅世编*. (Qing Dynasty) Shanghai: Shanghai Classics Publishing House, 1981.

<sup>260</sup> Chen Hongmou 陈宏谋 (Qing Dynasty), “Vol. 54, Customs 风俗条约”, *Collection of Beiyuan Hall 倍远堂文檄*, 1944 ed.

<sup>261</sup> Note: both *cun* and *chi* are measurements of longitude, one *cun* represents one-tenth of a *chi*.

people who wear cotton are one hundred times than who wear silk.”<sup>262</sup> Which indicates that, in the early Qing Dynasty, more and more people were consuming silk, but silk was still a luxury commodity which was not adopted in a general level. Generally speaking, the prosperous domestic silk market of early Qing dynasty could be reflected by the merchants merged into Jiangnan area from all around the country, and the detailed division of typology of silk textiles and silk shops. On one hand, the domestic consumption of silk textiles was promoted by the luxury trend; on the other hand, the highly developed commodity economy of silk products in Jiangnan area was a reciprocal causation of the prosperous private silk industry entangled with the production of the imperial silk factories.

## 5.2 Chinese silk products in the early globalization time

The route of Maritime silk trade was opened early to reach Korea, Japan and later Southeast Asian countries. Since the Tang Dynasty, important silk trade ports such as Guangzhou, Yangzhou, Mingzhou and Quanzhou etc. had been opened successively, the tribute system had been integrated into maritime trade, silk products could reach all Asia, even North Africa and Egypt, where transited to Europe.<sup>263</sup> Direct route from Europe to India and China was opened in the fifteenth century; since sixteenth century, Portuguese and Spanish merchant ships sailed to China, besides trading for tea and porcelain, a large number of raw silk and silk products were imported from China.

The memorials to the throne of the imperial archives of Qing Dynasty recorded the information of foreign ships been harboured in the south Chinese coast, mainly in Guangzhou, being an important port for foreign trade authorized by the Qing court. In the following table, it is listed records of foreign ships arrived to Guangzhou port in Kangxi years (1661-1722AD), basing on the memorials to the throne by the governor of Guangzhou, including the original

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<sup>262</sup> Yin Huiyi 尹会一. “Memoria to the Throne Encouraging Agriculture and Sericulture 敬陈农桑四务疏.” In He Changling 贺长龄, 魏源. *Wei Yuan. Qing Jing Shi Wen Bian 清经世文编*. (Qing Dynasty) Beijing: Zhonghua Publishing House, 1992.

<sup>263</sup> Fei Xin 费信. *The Overall Survey of the Raft 星涯槎览*. (Ming Dynasty) Beijing: Huawen Publishing House, 2019.

country of the ships, cargos loaded, quantity of silver carried, information of passengers and activities of purchasing commodities in China, etc.

Time	Port	Country of Origin	Cargos loaded	Silver loaded	Passengers
19th July 1715 (Kangxi 54 year)		Local Xiangshan merchant boat back from the Indian Ocean			2 foreigners Giuseppe Castiglione (郎宁石, a painter) and Giuseppe Da Costa (罗怀中, a doctor)
19th June to 5th August 1715 (Kangxi 54 year)		4 Boats of Western people used to resident in Xiangshan back from Indian Ocean trade	rough goods, medicine, shark fin, rosewood etc., no delicate goods		
July and August 1715 (Kangxi 54 year)	3 boats entered Guangzhou Port via Humen	Indonesia	medicine, spices		
		England	Biji satin, Duoluo wool, plumbago etc.		
		France	No goods	Loaded with foreign money to purchase goods in Guangzhou	
14th July 1716 (Kangxi 55)		Local Xiangshan merchant boat back from the Indian Ocean			2 foreigners: Karel Slavicek and Ignaz Kögler (mathematicians), also attached a foreign letter. Karel Slavicek is 38 years old, claiming to be astronomical and could play musical instrument; Ignaz Kögler is 36, claiming to be astronomical.
February to June 1716 (Kangxi 55)	Guangdong	6 French boats		Loaded with foreign silver to purchase goods in Guangzhou	
		2 English boats		Loaded with foreign silver to purchase goods in Guangzhou	
July 1716 (Kangxi 55)		1 English boat 2 Indonesian boats	Plumbago, rosewood, cotton, Duoluo wool, feather cloth, sandalwood, Suhe incense, mastic, myrrh, sagu, clock, small glass utensil, mirrors, cloves and diabergia etc.	Loaded with silver	
Annual total 1716 (Kangxi 55)		11 foreign boats		Loaded with more than 1 million liang silver, couldn't have enough goods supply in Guangdong, agent shops of different lines help to go to purchase in Jiangsu and Zhejiang	
June and July 1717 (Kangxi 56)		3 English boats 1 foreign boat from Pengbai	Duoluo wool, rosewood, pepper, plumbago, rattan goods etc.		no foreign tenants
May 1718 (Kangxi 57)	Guangdong	2 boats from the Atlantic	one boat loaded with grape wine, rough goods like ebony and seaweed etc. one boat for guard changing in Macao, without goods		no foreign tenants
June 1718		1 English boat	Loaded with Duoluo wool, foreign sarga textiles, foreign money etc.		
		4 foreign boat back from Indian Ocean trade of Local Yi people of Xiangshan	Loaded with pepper, cumin, betel nut, deer tendon, seaweed etc.		
May and June 1718		2 boats for Western military headmen changing shifts in Macao 1 English boat			
Jul 1718 (Kangxi 57)		2 English boats 1 French boat	Loaded with Duoluo wool, sarga textile, plumbago, silver money etc. Loaded with pepper, white rota, mastic etc.		
12th May 1719 (Kangxi 58)		1 French boat			including a French surgent, one technician who can burn enamel.
11th June 1718 (Kangxi 58)		1 English boat	Loaded with pepper, plumbago, shark fin etc.		
15th June 1719 (Kangxi 58)		1 English boat	Loaded with plumbago, Duoluo wool etc.		
July and August 1719 (Kangxi 58)		6 English boats 1 boat from Sulvdi	Loaded with foreign textiles, plumbago, Saussurea costus, Ipomoea pes-caprae, yellow wax etc.		
		10 foreign boats		Loaded with silver for purchasing goods	
27th August 1720 (Kangxi 59)					The pope sent Charles Maigrot as a messenger, with 24 retinues, including 2 writers, 1 clock maker, 1 astronomical Jesuit, 2 musicians, 1 therapeutic, 1 surgent, 1 pharmacist, plus 1 sculptor who arrived earlier, altogether 10, to be sent to serve in the court by the pope.

Sources: *First Historical Archives of China, Memorials to the throne by the governor of Guangzhou in Kangxi years.*

Chart 6: Records of foreign ships arrived Guangzhou port in Kangxi years

Kangxi period was a rather open time, the sea ban policy had been abolished due to the calm of civil trifles. The above table compiled from memorials to the throne by officials of

Guangzhou presented clearly the prosperousness of foreign trade, boats from south east Asia and Europe loading with silver arrived Guangzhou to purchase goods for long distance maritime trade. Among the demanded Chinese goods, silk textiles were undoubtedly one of the most important commodities, which could be seen from the gift list to Portuguese King Alfonso in 1678 (17<sup>th</sup> year of Kangxi). “Python satin 4 *pi*, Zhuang satin 4 *pi*, Wo Satin 4 *pi*, gold weaved satin 2 *pi*, glittering satin 6 *pi*, blue floral satin 6 *pi*, plain satin for clothing 6 *pi*, thin satin 18 *pi*, twill silk 18 *pi*, thin silk [juàn 絹] 4 *pi*, thin silk [luó 罗] 10 *pi*, 300 *liang* silver.”<sup>264</sup>

At the same time, the foreign boats brought to China what could be interested in the Chinese market, besides silver, the most demanded commodities, exotic and luxury goods from overseas also had their market in the Qing China as well, as listed in the table, including: grape wine, clocks, glassware, and foreign textiles, etc. The trend to admire and consume foreign products came from the imperial court, while Emperor Kangxi ordered many times in imperial edicts to recruit westerners with technicians with talents of music, astronomy or medical technique etc., due to his personal interest to western technologies and cultures. In 1715, the 54<sup>th</sup> year of Kangxi, Kangxi revised a letter to the Pope by Jesuits António Rodrigues and Matteo Ripa, “Hereby request that, the Pope would send very cultivated western talents with professional knowledge of astronomy, law, literature, medical and surgery technics.”<sup>265</sup> In 1718, the 57<sup>th</sup> year of Kangxi, he revised in red the memorial to the throne of Yangling, the supervisor of Guangdong and Guangxi provinces, “In the western passengers arrived, if there are people with various talents or medical knowledge, send to the court rapidly.”<sup>266</sup>

The exotic trend could also be a promotion for the interexchange of commodities and cultures between different geographic zones. For the purchasing of silk textiles by the foreign merchants, it must be noticed the methods of placing orders. In a memorial to the throne by Yang Lin, the governor of Guangdong, in the fifty-fifth year of Kangxi (1715), it was recorded:

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<sup>264</sup> First Historical Archives of China, eds. *Archives Concerning Western Catholic Missions from the Early to Mid-Qing Dynasty in China* 西洋天主教在华活动档案史料. Beijing: Zhonghua Publishing House, 2003.

<sup>265</sup> First Historical Archives of China, eds. *Archives Concerning Western Catholic Missions from the Early to Mid-Qing Dynasty in China* 西洋天主教在华活动档案史料. Beijing: Zhonghua Publishing House, 2003.

<sup>266</sup> First Historical Archives of China, eds. *Compilation of Memorials to the Throne of Kangxi Period* 康熙朝汉文朱批奏折汇编. Beijing: Archive Publishing, 1984.

“This year, there have been eleven foreign boats, carrying totally more than a million *liang* of silver, while they couldn’t purchase enough goods in Guangzhou, merchandisers of different shops would go to Jiangsu and Zhejiang provinces to order goods on behalf of them. I have placed a strict order to let the local governors inform the foreign traders, to restrain all sailors and fellows to behave well and also strictly prohibit the merchandisers of each shop not to deceive foreign clients, and make troubles.”<sup>267</sup>

It could be speculated that the orders were placed with samples, customized to the demands of the foreign consumers, just like the mode to the orders of porcelain in the same period indicated in a letter of a Jesuit Père Francois Xavier d’Entrecolles [yīn hóng xù 殷弘緒], respectively in 1712 and 1722, which revealed to the western world the secrets of the composition and manufacturing processes of Chinese porcelain. “The porcelain produced by the workshops of Jindezhen used to pay tribute to the court and supply the domestic market, products with less quality are used for export. These goods are shipped to Guangzhou for colour decoration in Guangzhou workshops, with customized decorative patterns provided by European buyers.” “It is unbelievable that workers could make porcelain according to designs from abroad.”<sup>268</sup> It could be seen that in the seventeenth century, the customization model of international trade had become common, global commodity trading had been developed to a fairly mature level, with large scale production of orders and fixed distribution channel. Foreign merchants were not just buying existing products in the market, but needed customized production with design met the demand of their customers, which all contributed to the earliest “original equipment manufacture of China”.

It could not only be found in the Chinese archives the information of purchasing orders, correspondingly, in the archive unit of “Audiencia de Filipinas” in the Archivo General de Indias in Sevilla, keeps the records of galleons sailed from Philippines to Acapulco, heavily loaded with products from China. Even though the cargo list were from years rather later than

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<sup>267</sup> First Historical Archives of China, eds. *Compilation of Memorials to the Throne of Kangxi Period* 康熙朝汉文朱批奏折汇编. Beijing: Archive Publishing, 1984.

<sup>268</sup> Jean-Baptiste Du Halde, eds. *Description de la Chine* 耶稣会士中国书简集. 中国回忆录. (1736) Henan: Da Xiang Publishing House, 2005.

my investigation period, it could really make a compensation to the restricted Kangxi period material. Furthermore, archives from different origins and languages could form an interesting crossing reference and avoid limitation of unilateral narrative.

For example, the shipping records from *Expediente sobre descarga en Acapulco de la fragata San Carlos Borromeo*<sup>269</sup> and *Registro de la fragata "San Felipe" (1783)*<sup>270</sup> include spices (black pepper), handmade crafts (combs), the majority of the listed oriental commodities were textile products in a large variety: blankets, handkerchiefs, silk materials, and silk stockings for both men and women, etc. Within the list there have been a large variety of silk, eg. damasco, sayasaya, gaza, muselina, lanquin, seda maso, seda torcida... etc. The origin of the products had been indicated as well in many cases, for instance, silk from Chanqueo (Changzhou), Lanquin (Nanjing), Suzhou, Canton, etc.

Items	Total price
265 pares de medias blancos de primera de Chanqueo para hombre a 1 peso	265 pesos
265 pares de medias blancos de primera de Chanqueo para hombre a 1 peso	265 pesos
720 pares de medias blancas de Chanqueo de segunda para hombre a 6 reales	540 pesos
935 pares de medias de hombre blancas primera de Chanqueo a 1 peso	935 pesos
1040 pares de medias de mujer de primera a 6 reales	780 pesos

Sources: *Archivo General de Indias, FILIPINAS, 936: Testimonio sobre la fragata San José y el paquebot San Carlos, El Filipino, and FILIPINAS 948: Registro de la fragata "San Felipe" (1783)*

#### Chart 7: Records of Chinese silk exportation

In the cargo lists, it could be found commodities adapt to western lifestyles, such as “medias”, for both men and women, which were obviously not commodities daily consumed by Chinese people in the Qing Dynasty. There were 92 records of “medias” in the cargo lists of the two boats of “San José” and “San Felipe”, being a large quantity. Those medias were obviously ordered to produce according to the demand of the clients, it could be inferred that

<sup>269</sup> Archivo General de Indias, FILIPINAS 936

<sup>270</sup> Archivo General de Indias, FILIPINAS 948

the international trade at that time had matured, although the exported products are all varieties demanded by European customers, they have reached a level of large order customization.

Cross-references from these archives suggest that in the early days of globalisation, foreign merchant ships carried imported curiosities popular with the Chinese imperial and scholarly classes, including silk, porcelain and handicrafts. The goods were well sorted and even produced to order on a large scale. Chinese silk weaving already played a key role in global trade, and these were complemented by silk weaving techniques and fashions led by the flourishing imperial silk mills and private silk weaving industries.



## **Part III.**

# **La Grande Fabrique of Lyon, Orders from the King**

## **Chapter VI. The Historical Development of the Grande Fabrique**

### **6.1 History**

Lyon has been renowned as the “city of silk” in Europe since Francois I and until the modern time, where the system of silk fabrication factories was more generally named as the “Grande Fabrique”. As numerous professions developed since the Ancien Régime, the activity of silk weaving has been greatly influenced by the centralized state power as well; which coincided with the situation in ancient China, where silk manufacture was significantly characterised by the imperial silk factories organized by the court. The initiation of the normalization and institutionalization of silk fabrication on Lyon could be counted from the fifteenth century, while a patent letter of the king especially authorised the execution of this production process.<sup>271</sup>

Being the holding city of the great annual fairs created since 1419,<sup>272</sup> Lyon had a monopoly over silk manufacture and trade for a long time. Yet in the fifteenth century, though French silk industry was developing, there was a large financial deficit due to the large proportion of silk fabrics imported from Italy. In order to reverse this situation, Louis XI (1423-1843AD) issued a letter of patent dated 23 November 1466 granting Lyon the privilege of weaving certain special fabrics.<sup>273</sup> The local town councillors were authorized to “give orders that the art of making gold and silk cloth be introduced into the city of Lyon, where it is already beginning, to bring to the said place masters,

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<sup>271</sup> Léon Dutil. “L’industrie de la Soie à Nîmes Jusqu’en 1789.” *Revue d’Histoire Moderne & Contemporaine*. vol. 10, no 4, 1908.

<sup>272</sup> André Pelletier, *Histoire de Lyon, des Origines à Nos Jours* (Lyon: Edition lyonnaises d’art et d’histoire, 2007)

<sup>273</sup> Richard Gascon. *Grand Commerce et Vie Urbaine au XVIIe Siecle. Lyon et ses Marchands. (environs de 1520 - environs de 1580) Volume I & II*. Paris: Ecole Pratique des Hautes Etudes, Sorbonne, 1971.

workers and others experienced in the work of the said silk, as well as in dyeing and other things in this regard.”<sup>274</sup> The intention to attract skilled Italian workers to Lyon by exempting various tax duties hasn’t been successful, as the Lyon consulate interested more in trading than developing the silk industry themselves. Therefore, Louis XI relocated the silk factory plan to Tours in 1470.<sup>275</sup>

At the time of Francois I (1494-1547AD), for economic and political reasons,<sup>276</sup> Lyon became a hub for foreign silk trading: merchants from Paris, Tours, Nimes, etc., were obliged to transport these precious commodities through Lyon, regardless of their origin being Marseille or Italy. In this circumstance, silk manufacturing was launched in Lyon city, whereas two Piedmont traders, Etienne Turquet and Barthelemy Naris, encouraged and promoted this process by convincing Francois I to sign patent letters to “establish in this city the trade of making gold, silver and silk cloth... which would be a great asset for this city and the whole kingdom”.<sup>277</sup> The privileges to fabricate certain textiles of silk, gold and silver and exemption from common charges for foreign silk weavers greatly attracted workers of silk fabricating field from abroad to set up in Lyon, therefore their professional know-how and advanced weaving tools could be transported to Lyon and contribute to the Lyonese silk industry. Subsequently, in 1540, a guild was formed of the workers in gold, silver and silk cloth.<sup>278</sup>

At the crossing of the sixteenth and seventeenth century, under Henry IV (1553-1610AD), the entire silk production industry had been expanded from weaving to the primary stage of sericulture, numerous mulberry trees being cultivated in Ardeche and Drome, the area south to Lyon.<sup>279</sup> At the same time, the advance in weaving techniques

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<sup>274</sup> M. Urbain Legeay. *Histoire de Louis XI*. London: Forgotten Books, 2018.

<sup>275</sup> Amable Sablon du Corail. *Louis XI: Le Joueur Inquiet*. Paris: Éditions Belin, 2011.

<sup>276</sup> Note: Francois I promoted the creation and establishment of Lyon silk production, not only for economic reasons, but also because of the war with Italy.

<sup>277</sup> Bernard Tassinari, *La soie à Lyon: de la Grande Fabrique aux textiles du xxie siècle* (Lyon: Éditions Lyonnaises d'Art et d'Histoire, 2005)

<sup>278</sup> Yves Lequin (dir.), Françoise Bayard et Mathilde Dubesset, “Un monde de soie: Les siècles d'or des fabriques lyonnaises et stéphanoises (XVIIIe-XIXe siècles)”, 500 Années Lumière: Mémoire Industrielle, Paris, Plon, 1991

<sup>279</sup> Gustave Fagniez. “L’Industrie en France sous Henri IV (1589-1610).” *Revue Historique*. 1883.

and equipment also facilitated production of more sophisticated and wider fabrics.<sup>280</sup> Gradually, Lyon silk began to compete with products of Tour even Italy.

The development of silk industry went progressively until the revocation of the Edict of Nantes in 1685, the restrictions to religious freedom provoked clandestine emigration of a large group of weavers, designers, manufacturers and bankers from Lyon, Tours and Nimes, who pursued refuge abroad with their professional know-how and capital.<sup>281</sup> “In the time when the manufactures of Lyon were in a flourishing state, there were 18,000 looms employed in silk fabrics; but they have fallen so much, that even in 1698, there were barely 4,000. There is no less decline in those of Tours: formerly there were 700 mills for reeling and preparing silk, 8,000 looms used to manufacture fabrics and 40,000 people employed in preparing and working the silk. All this number is now reduced to 70 mills, 1200 looms and 4000 workers.”<sup>282</sup> Leonese silk manufacturing had benefited from decisions of centralized state, however, suffered a long period of setback influenced by royal power as well, which later took almost a century for the rebuilding.

During the late seventeenth century, Lyon progressively recovered its production capacities and expanded manufacturing scale, the revival of the silk industry of Lyon owed its credit to Jean-Baptiste Colbert (1619-1683AD) who rigorously defined the organisation of this industry and profession. The regulations made by Colbert for the “Grande Fabrique de Soie” of Lyon in 1667, structured the industrial process, gave criteria to the products and set an original production model which divided the role of merchants from that of the manufacturer. Therefore, the term “Grande Fabrique” refers to various actors elaborated in the weaving industry.

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<sup>280</sup> Note: Looms could weave only fabric no wider than 55cm until a certain “grande tire” loom was developed by Dagon in the early seventeenth century.

<sup>281</sup> Emilie Beck Saiello. “L’affaire Buisson: un cas d’espionnage industriel au Siècle des Lumières. La ‘guerre de la soie’ entre Lyon et Naples.” *Studiolo*. n° 8, 2010.

<sup>282</sup> Diderot D’Alembert, eds. *L’Encyclopédie Diderot Et D’Alembert: L’Art De La Soie* (Bibliothèque de L’Image, 2002). In Emilie Beck Saiello. “L’affaire Buisson: un Cas d’espionnage Industriel au Siècle des Lumières. La ‘guerre de la soie’ entre Lyon et Naples.” *Studiolo*. n° 8, 2010.

The professions involved in the “Grande Fabrique” were classified following categories of loom assembly, tool maintenance, or creation processes, etc., including master merchants, weavers, gold and silver pullers, guimpiers, dyers, chinneurs, and so on.<sup>283</sup> Production was carried out basing on the model of a workshop, where the “master weaver” owned his loom, he is in business contact with a “merchant manufacturer” who would supply raw materials, place an order with the master weaver and ensures the marketing of the fabrics. It was also the merchant-manufacturer who decide the price of the finished fabric, which was the cause of many conflicts thereafter between master weavers and merchant manufacturers.

At the same time, the manufacturing procedure was also specified detailly with the royal decrees and regulations issued under the fluence of Colbert, which included, for instance, the width of fabric, the number of thread should be used, and criteria to meet the quality demand of royal orders; meanwhile, it was required to keep complete records of production-related documents,<sup>284</sup> which facilitated the retracing of the production process, improved the efficiency and quality of production, of course, facilitates the study of production situation at that time by future generations. Moreover, silkworm breeding was also encouraged to develop in the Colbertist policy,<sup>285</sup> to acquire raw materials of the silk industry and compete with foreign imports.

The Colbertist measures showed their effects before long on the Lyonese silk industry. “The Grande Fabrique had nearly 1,700 masters in 1621, more than 3,000 in 1660, who occupied 10,000 trades: activity tripled between 1665 and 1690. This growth continued throughout the 18th century and activity doubled between 1720 and 1760. Around 1780, more than half of Lyon’s population made a living from silk, which also

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<sup>283</sup> Pierre-Alain Four, “La soie à Lyon: une initiative du pouvoir royal”, *Millénaire 3*, Le Centre Ressources Perspectives du Grand Lyon. Sep. 2007

<sup>284</sup> Pierre-Alain Four, “La soie à Lyon: une initiative du pouvoir royal”, *Millénaire 3*, Le Centre Ressources Perspectives du Grand Lyon. Sep. 2007

<sup>285</sup> Emilie Beck Saiello. “L’affaire Buisson: un cas d’espionnage industriel au Siècle des Lumières. La ‘guerre de la soie’ entre Lyon et Naples.” *Studiolo*. n° 8, 2010.

made it the leading working-class city in France. In 1786, there were 14,000 weaving looms employing over 30,000 people.”<sup>286</sup>

Lyon was the second largest town of France, with a population of 143,000 by 1789. The Grande Fabrique “des étoffes de soie, d’or et d’argent” offered direct employment to almost a quarter of the population, besides, the guilds of velvet makers, dyers carders, throwers, silk stocking weavers, gold wire drawers, ribbon weavers, and gold lace makers had involved more labours, with only the last two lines accounted for more than six thousand workers. In the eighteenth century, the Grande Fabrique was in charge of fourteen thousand looms, which doubled the quantity of Louis XIV time.<sup>287</sup> “The silk guild was at the heart of Lyon’s economy. It was also the main nexus of its political organization.”<sup>288</sup> This booming prosperity and rapid development of the “Grande Fabrique” continued more than one and a half century until the Revolution of 1789 brought a serious crisis to the production capacity and volume.

Besides decrees and regulations concerning silk weaving profession issued with royal decisions, the royal power also contributed since the very beginning to the Lyonese silk industry by placing important orders for the court and central administrative system. In the time of Louis XIV, numerous places of royal dwellings, such as Versailles, were decorated with luxurious fabrics in many cases with silver and gold brocade made in Lyon. The fashion of Lyonese silk upholstery was not only popular in France, but also attracted the attention of all the European courts, for instance, Catherine II of Russia and Charles IV of Spain were both important clients of Lyonese silk, they furnished their palaces and dressed royal families and court nobles with products from Lyon.<sup>289</sup>

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<sup>286</sup> Pierre-Alain Four, “La soie à Lyon: une initiative du pouvoir royal”, *Millénaire 3*, Le Centre Ressources Perspectives du Grand Lyon. Sep. 2007

<sup>287</sup> Garden Maurice. *Lyon et les Lyonnais au XVIIIe Siècle*. Paris: Les Belles Lettres, 1970.

<sup>288</sup> Liliane Pérez. “Inventing in a World of Guilds: Silk Fabrics in Eighteenth-Century Lyon.” In S. R. Epstein and Maarten Prak, eds. *Guilds, Innovation and the European Economy*. Cambridge: Cambridge University Press, 2008.

<sup>289</sup> Pierre-Alain Four, “La soie à Lyon: une initiative du pouvoir royal”, *Millénaire 3*, Le Centre Ressources Perspectives du Grand Lyon. Sep. 2007

## 6.2 Literature review

The Grande Fabrique of Lyon was administrated by consular regulations and the municipal authority, applying the royal edicts. The compliance of the regulations was ensured by master guards chosen or elected by the “Community”, who controlled production, visited the workshops, and supervised the professional stages: apprenticeship, companionship, mastery, managed the community's money, judged disputes between members and... kept the records! All the registrations, permissions and consular orders were recorded, listed and carefully preserved at the Grande Fabrique, which was built in 1725 (the building still exists at 1, rue Emile Zola) and which housed offices, exhibition rooms and looms for examinations and a room for storing the archives. The community archives were transferred to the Hôtel de Ville in 1779 after the forced sale of the building following Turgot’s edict of 1776 and the seizure of the guilds’ assets.<sup>290</sup> Unfortunately, due to the epidemic, it was not possible to consult the archives in person during the writing of this thesis, but a large number of original documents are available on the website.

The subjects of the Grande Fabrique of Lyon and French silk production have been paid much attention in the academic field of Europe and worldwide, publications related to this topic are mostly aiming at the examination of factors that led to Lyon’s success, the role of the guilds, silk production techniques, various divisions of labours and social relationship between them, fashion and design, regulations on production, class struggling, and the impact of centralised power on national industry, etc.

Some social historians focused more specifically on the silk manufacturing of Lyon. Justin Godart thoroughly studied the history of the Grande Fabrique from the fifteenth century to the end of the eighteenth century, focusing on its administration, regulations and the social influence it had on the city.<sup>291</sup> Also a second publication was devoted to

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<sup>290</sup> Note: information based on the Archives Municipales, Fonds de la Grande Fabrique de soie 1563-1791.

<sup>291</sup> Justin Godart. *L'ouvrier en Soie: Monograohie deu Tisseur Lyonnais: Etude Historique, Economique et Sociale. Premiere Partie, La Réglementation du Travail: le Maitre Ouvrier en Draps Dór, D'argent et de Soie, de l'Etablissement de la Manufacture a Lyon (1466)*. Paris: A. Rousseau, 1899.

the Lyonnais weavers and their revolution.<sup>292</sup> He was not content with collecting legislative texts and workshop regulations, he had to find these weavers and merchants of the Lyon silk industry in their real lives, in the streets and at homes. He found the greatest variety of documents, including accounts and receipts, inventories, legal proceedings by administrators or unofficial advisers, and even songs of that time. His writings also dealt with the position of women in the silk weaving industry in Lyon, who were employed only in extremely arduous and unhealthy low-level jobs.<sup>293</sup>

Meanwhile, Etienne Pariset presented a precise and clear synthesis of the social and economic history of the Grande Fabrique, following the evolution of the Lyonnais industry since the 16th century; the author examines simultaneously the state of the industry in each period, including the silk market, the general economic situation affecting the industry, and finally, the internal organisation of the Lyonnais factories, focusing on the struggle between the master workers and the master merchants.<sup>294</sup>

Garden Maurice spent ten years in the archives of Lyon, researching millions of civil status records, including apprenticeship contracts, marriage contracts, wills and other notarial documents; his work is a comprehensive record of the historical and cultural evolution of the silk capital during the Age of Enlightenment, together with the demographic trends, the hierarchy of wealth and socio-professional groups, and their psychological structures.<sup>295</sup>

By the end of the twentieth century, economic approaches were applied on the research of commercial activities of the Lyonnais merchants and manufacturers. Carlo Poni analyses the relationship between Lyon and Paris from a design point of view, i.e., the communication between producer and designer, illustrating the reasons for the success of Grande Fabrique.<sup>296</sup> Carolyn Sargentson studied the business

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<sup>292</sup> Justin Godart. *Travailleurs et Métiers Lyonnais*. Lyon: Cumin et Masson, 1909.

<sup>293</sup> Justin Godart. *L'ouvrier en Soie: Monographie du Tisseur Lyonnais: Etude Historique, Economique et Sociale. Première Partie, La Réglementation du Travail: le Maître Ouvrier en Draps D'or, D'argent et de Soie, de l'Établissement de la Manufacture à Lyon (1466)*. Paris: A. Rousseau, 1899.

<sup>294</sup> Ernest Pariset. *Histoire de la Fabrique Lyonnaise: Etude sur le Régime Social et Economique de L'industrie de la Soie à Lyon, Depuis le XVIe Siècle*. Lyon: A. Rey, 1901.

<sup>295</sup> Garden Maurice. *Lyon et les Lyonnais au XVIIIe Siècle*. Paris: Les Belles Lettres, 1970.

<sup>296</sup> Carlo Poni, Darla Gervais, and Pierre Gervais, "Mode Et Innovation: Les Stratégies Des Marchands En Soie De

communication mode between the Parisian merchants and Lyonnais manufacturers as well;<sup>297</sup> Lesley Miller dedicated to more research on the designer and merchants of the silk industry.<sup>298</sup> Being the director of the Musée des Tissus de Lyon, Pierre Arizzoli-Clémentel has organised investigation on designers on the base of the museum collections.<sup>299</sup> Marie Bouzard also wrote a history of Lyonnais silks.<sup>300</sup>

Liliane Perez studies in *Inventing in a world of Guilds: Silk Fabrics in Eighteenth-century Lyon* the Lyonnaise silk weaving industry in the eighteenth century through the lens of technological innovation, the social status of inventors, and the innovative strategies developed by the most powerful silk guild – the Grande Fabrique and the Lyon municipal commune.<sup>301</sup>

Concerning the royal orders of the Grande Fabrique, Pierre Verlet initiated related investigation on the furnishing textures in the royal palaces.<sup>302</sup> Chantal Gastinet-Coural and Jean Coural studied the royal commissions made by the crown to a few Lyonnais manufacturers, basing on both archive documents and museum collections.<sup>303</sup> A dissertation of Moïra Dato also tries to reveal the background of some manufacturers contracted to the crown, studying if they share a similar profile or professional route, which lead to the obvious candidate suppliers for the royal orders.<sup>304</sup>

Another perspective in the study of Grande Fabrique is to focus on the impact of centralised regimes on the national economy, *Kangxi and Louis XIV: Dynastic Rulers, East and West* briefly compares the two monarchs of Kangxi and Louis XIV, the two

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Lyon Au XVIIIe Siècle." *Revue D'histoire Moderne Et Contemporaine* (1954-) 45, no. 3 (1998): 589-625. Accessed May 28, 2021.

<sup>297</sup> Carolyn Sargentson, *Merchants and Luxury Markets, The Marchands Merciers of Eighteenth Century Paris* (Londres: The Victoria and Albert Museum, 1996)

<sup>298</sup> Lesley Miller. "Jean Revel: Silk Designer, Fine Artist, or Entrepreneur?" *Journal of Design History*. Vol.8, No.2 (1995).

<sup>299</sup> Pierre Arizzoli-Clementel. *De Dugourc a Pernon: Nouvelles Acquisitions Graphiques pour les Musées, Centenaire du Musée des Tissus de Lyon (1890-1990)*. Lyon: Musée Historique des Tissus, 1990.

<sup>300</sup> Marie Bouzard. *La Soierie Lyonnaise du XVIIIe au XXe Siècle dans les Collections du Musée des Tissus de Lyon*. Lyon: Éditions Lyonnaises d'Art et d'Histoire, 1999.

<sup>301</sup> Liliane Pérez. "Inventing in a World of Guilds: Silk Fabrics in Eighteenth-Century Lyon." In S. R. Epstein and Maarten Prak, eds. *Guilds, Innovation and the European Economy*. Cambridge: Cambridge University Press, 2008.

<sup>302</sup> Pierre Verlet. *French Furniture of the 18th Century*. Virginia: University of Virginia Press, 1991.

<sup>303</sup> Jean Coural, Chantal Gastinel Coural. "La Fabrique Lyonnaise au XVIIIe Siècle : la Commande Royale de 1730." *Revue de l'Art*. No. 62, 1984.

<sup>304</sup> Dato Moïra. "Silks for the Crown: Five Partnerships of Merchant Manufacturers in Eighteenth-century Lyon." MRes thesis. <http://theses.gla.ac.uk/7970/> 2017



countries' economic situation under their administration, and how the silk industry was influenced by the central power respectively.<sup>305</sup> As to the effect of state macro-controlling to the national industry, A. Glaze. Enciso as well studied the activities, administration and organizational history of Guadalajara factory in Spain with rich data and content in his doctoral thesis, outlining the main status of industrial policy and its evolution from the Colbertist and mercantilist models to a pre-liberalism.<sup>306</sup>

The purpose of this chapter is to study the silk weaving industry in Lyon through archival documents and some of the above-mentioned papers or books, from the point of view of comparison with the Chinese imperial silk factories, to analyse the laws and regulations, production processes and organisation, commercial strategies of the Grande Fabrique of Lyon, and to draw out its characteristics.

## **Chapter VII. The Grande Fabrique under the Influence of Colbertism**

This chapter attempts to understand the operation of the Grande Fabrique as a whole, through several characteristics of the silk weaving industry in Lyon at the turn of the 17th and 18th centuries, including its laws and regulations, its mode of production, its collective innovation, its social division of labour and its response to imitation and competition. The laws and regulations formed the basis and framework of the Grande Fabrique, which also clearly defined the social division of labour in the silk industry, leading to more efficient production and better quality. The ensuing imitation of Lyon's products by other Western European countries in turn influenced the Grande Fabrique as well.

### **7.1 The Grande Fabrique system structured by regulations and the guild**

The achievements of the silk weaving industry in Lyon in the seventeenth and eighteenth centuries were praised as “to do justice to the French, i.e., Lyonnais, it must

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<sup>305</sup> Ken Wolf. “Kangxi and Louis XIV: Dynastic Rulers, East and West.” In Ken Wolf. *Personalities & Problems: Interpretive Essays in World Civilization*. New York: McGraw-Hill Humanities Social, 2004.

<sup>306</sup> Agustin Gonzales Enciso. *Estado e Industria en el Siglo XVIII: La Fabrica de Guadalajara*. Madrid: Fundacion Universitaria Espanola, 1980.

be admitted that they have brought more perfection and charm to silk fabrics in fifty years than the Greeks and Venetians did in seven centuries”.<sup>307</sup> Carlo Poni investigated in depth the cause for the outstanding and continuous accomplishment of Lyon between the 17th and 18th centuries, and revealed that it was founded on: “a rich and coherent superstructure, the strong pre-eminence of software over hardware, an inexhaustible capacity for invention, the ability to make decisions at the right moment, the management of information (which was sometimes suppressed, sometimes encouraged), the role of culture, taste and the imagination, and the link with Paris... Technological innovation is also on this wavelength”.<sup>308</sup> The integrated model and value system of the Grande Fabrique, as well as its legal basis, production processes, design, fashion tastes, etc., were the key elements contributed to the success of the Grande Fabrique, which was difficult to compete or replicate elsewhere.

Throughout the history of the Grande Fabrique, when and how did this mode of production come about? Such an ancient human activity as silk production has evolved in response to social, technological and economic developments, the question is one that cannot be answered by any particular initial moment. “Economic, social and technological transformations and innovations, and above all the complex transformations that affect mentalities, rooted practices and modes of production, can never be dated with precision; they do not arise from nothing, they are not the fruit of rootless intellectual creativity.”<sup>309</sup> One characteristic of the Lyon silk industry, however, is that its development did not follow the general logic of any other ancient industry, as if it were a creation that had “fallen from above” through the influence of royal power, and that it commenced in a state of dichotomy between trade and production.

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<sup>307</sup> Carlo Poni, Darla Gervais, and Pierre Gervais, "Mode Et Innovation: Les Stratégies Des Marchands En Soie De Lyon Au XVIIIe Siècle." *Revue D'histoire Moderne Et Contemporaine (1954-)* 45, no. 3 (1998): 589-625. Accessed May 28, 2021.

<sup>308</sup> Carlo Poni, Darla Gervais, and Pierre Gervais, "Mode Et Innovation: Les Stratégies Des Marchands En Soie De Lyon Au XVIIIe Siècle." *Revue D'histoire Moderne Et Contemporaine (1954-)* 45, no. 3 (1998): 589-625. Accessed May 28, 2021.

<sup>309</sup> Carlo Poni, Darla Gervais, and Pierre Gervais, "Mode Et Innovation: Les Stratégies Des Marchands En Soie De Lyon Au XVIIIe Siècle." *Revue D'histoire Moderne Et Contemporaine (1954-)* 45, no. 3 (1998): 589-625. Accessed May 28, 2021.

The silk industry in Lyon was constructed above the framework of several successive regulations. In 1596, the training of apprentices, journeymen and masters was defined, supplemented by an additional regulation in 1619. Colbert's regulation in 1667 distinguished between master-workers who weaved and master-merchants who marketed.<sup>310</sup> The importance of production regulations is even mentioned in the spy business letters exchanged between France and Italy out of competition for production in the silk industry. For the establishment of competitive silk manufacture in Italy, the regulations of the Lyon Grande Fabrique was attached, along with notes for assembly of the machines.<sup>311</sup>

First of all, it has to be mentioned the patent letter of the King granting the two Piedmont merchants' privileges in 1536, for their contribution of bringing foreign weavers to Lyon, which was the base for the rapid development of the manufacture of gold, silver and silk fabrics.<sup>312</sup>

Colbert's mercantilist policy strongly reinforced the development of French industrial production. In 1667, Jean-Baptiste Colbert launched several orders on the "Grande Fabrique de Soie" in Lyon. These decrees and regulations strictly supervised the manufacturing process by detailing the quality standards expected for royal orders and by specifying, for example, the width of the fabrics or the number of threads should be adapted, they also made it compulsory to keep manufacturing books.<sup>313</sup>

More protocols have been issued on quality control and manufacture process. Due to the decline of quality caused by rapid market differentiation and annual change of fashion, the regulation of 1737 set out precisely the number of spans, the width of cloth and sometimes the weight that each cloth should have per aune of length, thus conforming to the spirit of the Regulations and Statutes of 1720. However, these

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<sup>310</sup> Note: Information from Archives municipales, Fonds de la Grande Fabrique de soie 1563-1791

<sup>311</sup> Emilie Beck Saiello. "L'affaire Buisson: un cas d'espionnage industriel au Siècle des Lumières. La 'guerre de la soie' entre Lyon et Naples." Studiolo. n° 8, 2010.

<sup>312</sup> Bernard Tassinari, *La soie à Lyon: de la Grande Fabrique aux textiles du xxie siècle* (Lyon: Éditions Lyonnaises d'Art et d'Histoire, 2005)

<sup>313</sup> Marie Bouzard. *La Soierie Lyonnaise du XVIIIe au XXe Siècle dans les Collections du Musée des Tissus de Lyon*. Lyon: Éditions Lyonnaises d'Art et d'Histoire, 1999.

quality-enhancing regulations were later opposed and the regulation in 1744 reduced the number of spans, width and weight of many fabrics.<sup>314</sup> The regulation of 1744 also preserved the limitation of at most four looms per shop, except for a fifth one of Falcon's "new mechanism", which has been the most common and oldest conception of trade regulations, and was denounced in 1786 by a royal edict.<sup>315</sup>

In Colbert's regulation of 1667, a new 'policy' was also established for debts owed by master craftsmen to master merchants, which defined strict obligations on the part of the master craftsmen working under contract for a master merchant: the master worker must settle his debts with his former contractor by withholding no more than one eighth of the contracted amount, which was a term for the benefit of merchants. Another constraint imposed progressively in a regulation in 1702: the master craftsman could only take work from a second master merchant with the consent of the one for whom he was already working, even if he had performed his work normally. Though later in 1769 this measure was relieved by agreement between master workers and master merchants.<sup>316</sup> The Colbert regulation also retroactively incorporated into the community the merchants who were not masters but who had worked and had others work before 1 January 1665.<sup>317</sup> In many circumstances, the factory regulations restricted working freedom and set obligations for members involved in the Grande Fabrique, including weavers, masters and journeymen etc.

The twists and turns in the development of the Grande Fabrique regulations reveal that they are often biased in favour of the master merchants, such as the 1667 and 1744 regulations; though the 1737 one was more favourable to the interests of master workers. A transfer in power took place in the Grande Fabrique and the merchants became the

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<sup>314</sup> Carlo Poni, Darla Gervais, and Pierre Gervais, "Mode Et Innovation: Les Stratégies Des Marchands En Soie De Lyon Au XVIIIe Siècle." *Revue D'histoire Moderne Et Contemporaine* (1954-) 45, no. 3 (1998): 589-625. Accessed May 28, 2021.

<sup>315</sup> Justin Godart. *L'ouvrier en Soie: Monograohie deu Tisseur Lyonnais: Etude Historique, Economique et Sociale. Premiere Partie, La Réglementation du Travail: le Maitre Ouvrier en Draps Dôr, Dârgent et de Soie, de l'Établissement de la Manufacture a Lyon (1466)*. Paris: A. Rousseau, 1899.

<sup>316</sup> Justin Godart. *L'ouvrier en Soie: Monograohie deu Tisseur Lyonnais: Etude Historique, Economique et Sociale. Premiere Partie, La Réglementation du Travail: le Maitre Ouvrier en Draps Dôr, Dârgent et de Soie, de l'Établissement de la Manufacture a Lyon (1466)*. Paris: A. Rousseau, 1899.

<sup>317</sup> Hillau Bernard. "Progrès Technique et Acteurs du Changement dans la Soierie Lyonnaise au XVIIIe Siècle." *Formation Emploi*. N.64, 1998

new elites, which could be evidenced by the exclusion of master workers from access to the dignities of brotherhood, and a letter from the master merchants to the director general of finance in 1789 indicating that the 400 merchants of Lyon had a fortune of 60 million.<sup>318</sup>

Nevertheless, it was also regulated the restriction of apprenticeship, particularly, the number of apprentices per shop was limited, at the same time, the masters' sons were granted special advantages for the apprenticeship, which could be considered as a defence to the traditional monopoly of the master craftsmen, just as in the time of the old regime.<sup>319</sup>

The many rules and regulations of the Grande Fabrique have had no shortage of positive effects on production: the separation of production and sales has led to a more refined division of labour; the restrictions on the free movement of work have, to a certain extent, ensured production stability. Although, in Godart's view, "The factory regulations were more a weapon for class struggle than a wise law to prevent conflict and ensure the perfection of work."<sup>320</sup>

The success of the Grande Fabrique is also due in large part to constant technological innovation and promotion. During the 18th century, the Fabrique authorities set up support systems for innovation that allowed the whole sector to benefit from numerous inventions. Despite the impression that guilds mostly hinder productivity innovation, "because of their alleged secrecy, conservatism and inherited know-how, the strict rules for quality standards, and the barriers between trades,"<sup>321</sup>

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<sup>318</sup> Justin Godart. *L'ouvrier en Soie: Monograohie deu Tisseur Lyonnais: Etude Historique, Economique et Sociale. Premiere Partie, La Réglementation du Travail: le Maitre Ouvrier en Draps D'or, D'argent et de Soie, de l'Établissement de la Manufacture a Lyon (1466)*. Paris: A. Rousseau, 1899.

<sup>319</sup> Hillau Bernard. "Progrès Technique et Acteurs du Changement dans la Soierie Lyonnaise au XVIIIe Siècle." *Formation Emploi*. N.64, 1998.

<sup>320</sup> Justin Godart. *L'ouvrier en Soie: Monograohie deu Tisseur Lyonnais: Etude Historique, Economique et Sociale. Premiere Partie, La Réglementation du Travail: le Maitre Ouvrier en Draps D'or, D'argent et de Soie, de l'Établissement de la Manufacture a Lyon (1466)*. Paris: A. Rousseau, 1899.

<sup>321</sup> Liliane Pérez. "Inventing in a World of Guilds: Silk Fabrics in Eighteenth-Century Lyon." In S. R. Epstein and Maarten Prak, eds. *Guilds, Innovation and the European Economy*. Cambridge: Cambridge University Press, 2008.

“French guilds were ‘open technique institutions’ that taught, demonstrated, and bought new equipment.”<sup>322</sup>

Following the tradition of the European guilds of private incentive mechanism, for instance, exclusive privileges which is like patent in the modern time, and the obligation to spread new knowledge within the Guild,<sup>323</sup> The Grande Fabrique also provided funding to stimulate technological innovation and its dissemination, “guilds offered resources to inventors within a public, collective management of innovation that included technical expertise, funding of new equipment, and protection against frauds and imitations.”<sup>324</sup> “Technology was ‘politicised’.”<sup>325</sup> “Although they criticised guilds as conservative, their innovation policies relied in practice on the guilds themselves. In eighteenth-century France, Lyon’s Grande Fabrique was a model and laboratory for establishing a national system of innovation management.”<sup>326</sup>

## 7.2 Division of labour in the Grande Fabrique

As indicated by Adam Smith: division of labour has caused a greater increase in production than any other factor.<sup>327</sup> “If the worker who has to make the part also wanted to assemble the loom, he would spend a lot of time doing so and would assemble it badly.” The achievements of the Grande Fabrique in Lyon, achieved through long practice and a meticulous division of labour, are difficult to surpass; the foreign silk weaving industry, in its attempts to imitate the fashion samples released by Lyon, is only struggling “in the night of darkness”.<sup>328</sup>

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<sup>322</sup> L. Dolza, L. Hilaire-Pérez. “Inventions and Privileges in the Eighteenth Century: Norms and Practices. A Comparison between France and Piedmont.” *History of Technology*. 24 (2002), 21–44

<sup>323</sup> C. M. Belfanti, ‘Corporations et brevets: les deux faces du progrès technique dans une économie pré-industrielle (Italie du Nord, siècles XVIe-XVIIIe)’, in Hilaire-Pérez and Garçon (eds.), *Les chemins de la nouveauté*, 56–77; Belfanti, ‘Guilds, Patents, and the Circulation of Technical Knowledge. Northern Italy during the Early Modern Age’, *Technology and Culture* 45 (2004), 569–89.

<sup>324</sup> Liliane Pérez. “L’Invention Technique au Siècle des Lumières.” *Revue D’histoire Moderne et Contemporaine*. Vol. 51, Numéro 2, 2004.

<sup>325</sup> Steven L. Kaplan. *Les Ventres de Paris. Pouvoir et Approvisionnement dans la France d’Ancien Régime*. Paris: Fayard, 1988.

<sup>326</sup> Liliane Pérez. “Inventing in a World of Guilds: Silk Fabrics in Eighteenth-Century Lyon.” In S. R. Epstein and Maarten Prak, eds. *Guilds, Innovation and the European Economy*. Cambridge: Cambridge University Press, 2008.

<sup>327</sup> Adam Smith. *The Wealth of Nations*. London: W. Strahan and T. Cadell, 1776.

<sup>328</sup> Adamoli Fils. “Lettre à M. Vial”, cit., p. 76-77, 93. In Carlo Poni, Darla Gervais, and Pierre Gervais. “Mode Et Innovation: Les Stratégies Des Marchands En Soie De Lyon Au XVIIIe Siècle.” *Revue D’histoire Moderne Et Contemporaine* (1954-) 45, no. 3 (1998) : 589-625. Accessed May 28, 2021.

Within the scope of Grande Fabrique's operations, those involved in the silk weaving industry can be broadly categorised according to the responsibilities, in particular, their relationship with the market. First of all, the manufacturers, also called master merchants, were those who are in direct contact with the market and normally own assets; Secondly, workers or normal weavers, who in many cases weaved at home and completed the work by piece for the manufacturers, from whom they received weaving materials and designs; In between, there were master workers, who were independent weavers working on their own accounts, and maintaining a direct relationship with the market like the merchants.<sup>329</sup>

The terminology of the "Grande Fabrique" does not specify a centralised silk factory, but the collective description of the entire production framework as a whole, where numerous weavers worked at home or in the workshops with normally two to four looms. The master workers would receive orders from the manufacturers (master merchants), who would provide weaving materials and a prepayment, with which the master workers could hire other co-workers such as apprentices, journeymen and string pullers etc.<sup>330</sup>

As Carlo Poni showed in a chart the breakdown of labours and statistics for Grande Fabrique in 1732, for example, the manufactures were obviously only a small percentage, less than one hundred; the weavers were numerous, about eight thousand; and the master weavers were about seven to eight hundred in 1732.<sup>331</sup> From the approximate data in the chart for 1732, it is possible to get a glimpse of the breakdown of personnel and the overall framework structure of the Grande Fabrique at the turn of the seventeenth and eighteenth centuries, and to get a general impression of the entire production process.

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<sup>329</sup> Carlo Poni, Darla Gervais, and Pierre Gervais, "Mode Et Innovation: Les Stratégies Des Marchands En Soie De Lyon Au XVIIIe Siècle." *Revue D'histoire Moderne Et Contemporaine* (1954-) 45, no. 3 (1998): 589-625. Accessed May 28, 2021.

<sup>330</sup> Carlo Poni, "Proto-Industrialization: Rural and Urban", *Review*, IX, 1985.

<sup>331</sup> Carlo Poni, Darla Gervais, and Pierre Gervais, "Mode Et Innovation: Les Stratégies Des Marchands En Soie De Lyon Au XVIIIe Siècle." *Revue D'histoire Moderne Et Contemporaine* (1954-) 45, no. 3 (1998): 589-625. Accessed May 28, 2021.

Normas de organización de la Comunidad de Comerciantes y Maestros Artesanos (1732)	
Grande Fabrique	
Putting out system	Kauf system (petite fabrique)
Marchands fabricants (putting out entrepreneurs)  Environ 70  Maitres ouvriers (independent weavers)  Environ 8000	Maitres marchands (independent weavers)  Environ 700
Source : Mémoire des Maitres Gardes. Access to the market was only allowed to merchant manufacturers and master merchants, and was forbidden to master workers.	

Sources : table from Carlo Poni, Darla Gervais, and Pierre Gervais, "Mode Et Innovation: Les Stratégies Des Marchands En Soie De Lyon Au XVIIIe Siècle." *Revue D'histoire Moderne Et Contemporaine (1954-)* 45, no. 3 (1998): 589-625. Accessed May 28, 2021

Chart 8: Rules of organisation of the community of merchants and master craftsmen (1732)<sup>332</sup>

The classification between the various trades in the silk weaving industry is clear and the conversion between them is strictly limited by regulations. The ordinary weavers, who made up the largest proportion of the population, obtained the raw materials and designs needed for production from the merchants to accomplish their orders. If they wished to register as merchants and set up their own business to produce on their own account, they were required to pay “a sum of 300 livres, reduced to 200 livres for their sons” for this<sup>333</sup>. This regulatory barrier contributed to the coffers of the Grande Fabrique community, nevertheless severely hindered the professional and social mobility of workers, and reinforced the continuing social stratification.

<sup>332</sup> Note: table from Carlo Poni, Darla Gervais, and Pierre Gervais, "Mode Et Innovation: Les Stratégies Des Marchands En Soie De Lyon Au XVIIIe Siècle." *Revue D'histoire Moderne Et Contemporaine (1954-)* 45, no. 3 (1998): 589-625. Accessed May 28, 2021.

<sup>333</sup> Carlo Poni, Darla Gervais, and Pierre Gervais, "Mode Et Innovation: Les Stratégies Des Marchands En Soie De Lyon Au XVIIIe Siècle." *Revue D'histoire Moderne Et Contemporaine (1954-)* 45, no. 3 (1998): 589-625. Accessed May 28, 2021.



The success of the Grande Fabrique is due in large part to its efficient and well organised system of operation, with good communication between the marketing segments ensuring rapid and accurate communication between design and production. “Paris fashion made in Lyon”,<sup>334</sup> this expression explains the design, production and marketing landscape of the French fashion industry at the time. The silk weaving industry in Lyon belonged not only to Lyon but also to Paris. Many merchants from Lyon owned shops or workshops in Paris. For example, Claude Louis Couchard, a merchant manufacturer in Lyon, was at the same time “master of the six corps” in Paris and lived in rue Saint-Honoré.<sup>335</sup> Paris is also the distribution centre for Lyon’s silk products, and most of the silk products sold abroad are shipped from here. Of the 9,000 pieces of silk that entered Paris in January 1779, 7,500 came from Lyon, 500 from Tours and 300 from Avignon.<sup>336</sup> In addition to merchants and brokers, another important role in establishing links between Paris and Lyon was that of draughtsman, most of whom are also businessmen or partners of businessmen. This dual professional status also explains the decisive role of the draughtsman in the production process.<sup>337</sup>

Becoming a draughtsman required long and expensive training, including learning to draw and an internship in the studio of a painter who specialises in painting flowers. In addition to this, “immersion in the atmosphere of the capital of elegance, luxury and refinement-where he conversed with dressmakers, fashion designers, goldsmiths and embroidery merchants - made his taste more mature and refined, his art more civilised”. The draughtsman’s visits to the large warehouses, which were mostly owned by the largest merchants in Paris who were also the biggest clients of the Grande Fabrique,

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<sup>334</sup> Chez Jean de Ville., Mémoire Sur L'envoi Des Échantillons de la Fabrique de Lyon, 1761 cit. from, Carlo Poni, Darla Gervais, and Pierre Gervais, "Mode Et Innovation: Les Stratégies Des Marchands En Soie De Lyon Au XVIIIe Siècle." *Revue D'histoire Moderne Et Contemporaine* (1954-) 45, no. 3 (1998): 589-625. Accessed May 28, 2021

<sup>335</sup> L. Guéneau. “Paris, les Industries et le Commerce de la Soie et des Soieries à la Fin de l’Ancien Régime.” *Revue d’Histoire Moderne & Contemporaine*. Vol.4, 1926. In Carlo Poni, Darla Gervais, and Pierre Gervais. “Mode Et Innovation: Les Stratégies Des Marchands En Soie De Lyon Au XVIIIe Siècle. ” *Revue D’histoire Moderne Et Contemporaine*. (1954-) 45, no. 3 (1998): 589-625. Accessed May 28, 2021

<sup>336</sup> L. Guéneau. “Paris, les Industries et le Commerce de la Soie et des Soieries à la Fin de l’Ancien Régime.” *Revue d’Histoire Moderne & Contemporaine*. Vol.4, 1926. In Carlo Poni, Darla Gervais, and Pierre Gervais. “Mode Et Innovation: Les Stratégies Des Marchands En Soie De Lyon Au XVIIIe Siècle. ” *Revue D’histoire Moderne Et Contemporaine*. (1954-) 45, no. 3 (1998): 589-625. Accessed May 28, 2021

<sup>337</sup> Carlo Poni, Darla Gervais, and Pierre Gervais, "Mode Et Innovation: Les Stratégies Des Marchands En Soie De Lyon Au XVIIIe Siècle." *Revue D'histoire Moderne Et Contemporaine* (1954-) 45, no. 3 (1998): 589-625. Accessed May 28, 2021

had a decisive influence on the seasonal fashion for silk weaving. Through these visits, the production department and the customer's needs were fluidly communicated and, through the draughtsman's expertise, directly and accurately documented and reflected in the product design in a way that no other position or agents could replace.<sup>338</sup>

The silk industry in Lyon covered all stages of the manufacture from raw silk processing to sales of silk fabrics: spinning, pattern designing, weaving, organizing and marketing, the “Grande Fabrique” being the name given to this entire range and process. The people involved are divided into merchants, master merchants and general weavers, according to the market and production chain. In addition to this, there are a variety of jobs in production, including apprentice weavers, journeymen and some simple labours for short hours. One example for the quantitative studies of silk weavers in Grande Fabrique in the early modern time was of Justin Godart, factual rather than theoretical studies restructuring the history of the period. “The number of workers in the profession, estimated from the census rolls of the factory, increased fivefold between 330 in 1575 and 1698 in year 1621, and almost doubled between 1621 and 1660, reaching 3019.”<sup>339</sup>

The freedom of work, transitions and crossings between divisions of labour and social classes, especially conditions for access to the master’s degree relating to both administrative regulations and professional knowledge was strictly limited, as Justin Godart said: “In Lyon, from the sixteenth century onwards, the freedom of work became increasingly restricted and the regulations were, for the benefit of the communities, what the jurandes and masteries were, in other towns, for the benefit of the royalty.”<sup>340</sup>

In the 1707 decree, an annual fee of 12 livres was detailed for weavers wishing to set up their own business, and by 1712 the fee had risen to 300 livres, setting an almost

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<sup>338</sup> Carlo Poni, Darla Gervais, and Pierre Gervais, "Mode Et Innovation: Les Stratégies Des Marchands En Soie De Lyon Au XVIIIe Siècle." *Revue D'histoire Moderne Et Contemporaine* (1954-) 45, no. 3 (1998): 589-625. Accessed May 28, 2021

<sup>339</sup> Justin Godart. *L'ouvrier en Soie: Monograohie deu Tisseur Lyonnais: Etude Historique, Economique et Sociale. Premiere Partie, La Réglementation du Travail: le Maitre Ouvrier en Draps Dôr, Dârgent et de Soie, de l'Etablissement de la Manufacture a Lyon (1466)*. Paris: A. Rousseau, 1899.

<sup>340</sup> Justin Godart. *L'ouvrier en Soie: Monograohie deu Tisseur Lyonnais: Etude Historique, Economique et Sociale. Premiere Partie, La Réglementation du Travail: le Maitre Ouvrier en Draps Dôr, Dârgent et de Soie, de l'Etablissement de la Manufacture a Lyon (1466)*. Paris: A. Rousseau, 1899.

unbridgeable threshold for the average weaver wishing to become an independent merchant.<sup>341</sup> To become a master merchant, in addition to paying a fee, weavers were required to serve as journeymen for a period of time after completing their apprenticeship. At the end of the 17th century, the municipal consulate of the time also required all journeymen to pass the master craftsman's examination, which included a loom test, preparation for the loom and fabric manufacture. These rules were included in the 1737 and 1744 regulations.<sup>342</sup>

Apprenticeship was the only way to become a master, except for the son of a master who could follow in his father's footsteps. It is not impossible for an ordinary weaver to go from being an apprentice to becoming a master merchant, it is just very difficult and one narrow route is to become a self-employed master. A consular ordinance of 1712 divided the masters of Grande Fabrique into three categories: master merchants, masters working on their own account and master workers working under contract.<sup>343</sup> The eighteenth-century statutes provide for this in detail. Even if a weaver's skill was recognised by the merchants, he was not free to be promoted to master.<sup>344</sup>

The Colbert statute of 1667 allowed masters with a certain financial base to join the ranks of the merchants, which in a way hurt the feelings of the ordinary masters.<sup>345</sup> The transformation in status between master, merchant and other positions continued to develop in conflict until 1744, when masters and artisans went on strike to fight for equality with merchants within the craft community.<sup>346</sup>

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<sup>341</sup> Bernard Hillau, "rogères technique et acteurs du changement dans la soierie lyonnaise au XVIIIe siècle", *Formation Emploi*, Vol. 64, 1998.

<sup>342</sup> Justin Godart. *L'ouvrier en Soie: Monograohie deu Tisseur Lyonnais: Etude Historique, Economique et Sociale. Premiere Partie, La Réglementation du Travail: le Maitre Ouvrier en Draps Dór, D'argent et de Soie, de l'Etablissement de la Manufacture a Lyon (1466)*. Paris: A. Rousseau, 1899.

<sup>343</sup> Bernard Hillau, "rogères technique et acteurs du changement dans la soierie lyonnaise au XVIIIe siècle", *Formation Emploi*, Vol. 64, 1998.

<sup>344</sup> Justin Godart. *L'ouvrier en Soie: Monograohie deu Tisseur Lyonnais: Etude Historique, Economique et Sociale. Premiere Partie, La Réglementation du Travail: le Maitre Ouvrier en Draps Dór, D'argent et de Soie, de l'Etablissement de la Manufacture a Lyon (1466)*. Paris: A. Rousseau, 1899.

<sup>345</sup> Bernard Hillau, "rogères technique et acteurs du changement dans la soierie lyonnaise au XVIIIe siècle", *Formation Emploi*, Vol. 64, 1998.

<sup>346</sup> Garden Maurice. *Lyon et les Lyonnais au XVIIIe Siècle*. Paris: Les Belles Lettres, 1970.

### 7.3 The fashion strategy of the Grande Fabrique

Carlo Poni has divided the silk weaving industry in early modern time Europe into three centres: first, the leading centre of Lyon, dedicated to the production of annually fashionable limited styles. The Grande Fabrique, its production system produced a range of fabric products simultaneously each year and released them to the market. The second section includes production centres for imitating Lyon fabric products, particularly in terms of colour and design. These production companies are intended for import substitution and had a greater connection with the migration of Lyon weavers to other countries such as England and the Netherlands caused by the Nante decree. The third section contains production centres on the fringes of the fashionable fabrics market, often dedicated to the production of traditional fabrics that do not change according to mode and are therefore less influenced by the fashions of the Lyon silk weaving industry.<sup>347</sup>

This is further evidence of the centrality of the Grande Fabrique to the European silk weaving industry, which owes its success to its unique political and geographical position, the excellent configuration of the production system and the thorough division of labour throughout the silk weaving industry; fashion, however, is another factor that cannot be ignored. The “fashion empire”, an innovative word and blueprint drawn up by Colbert, was to France at the time what the silver mines of Potosi were to Spain.<sup>348</sup> The annual fashion launches in Lyon brought powerful dynamics to the European silk market and thus created new hierarchies of power within the industry, resulting in the three segments of the European silk industry mentioned above.

From the end of the 17th century onwards, fashion became a unique competitive strategy in Lyon, where merchants consciously and extensively adopted annual product differentiation, “façonnés” as a weapon against international competition, and this new

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<sup>347</sup> Carlo Poni, Darla Gervais, and Pierre Gervais, "Mode Et Innovation: Les Stratégies Des Marchands En Soie De Lyon Au XVIIIe Siècle." *Revue D'histoire Moderne Et Contemporaine* (1954-) 45, no. 3 (1998): 589-625. Accessed May 28, 2021

<sup>348</sup> Carlo Poni, Darla Gervais, and Pierre Gervais, "Mode Et Innovation: Les Stratégies Des Marchands En Soie De Lyon Au XVIIIe Siècle." *Revue D'histoire Moderne Et Contemporaine* (1954-) 45, no. 3 (1998): 589-625. Accessed May 28, 2021

mode of production dynamically influenced the entire international market and intensified competition. The success of Lyon's fashion strategy in the market was largely due to the tastes and business savvy of executive group of the Grande Fabrique, the merchant entrepreneurs. It was they who determined the quality of the raw materials, the style of the design, the marketing of the finished product and the taste of the whole industry.

“Taste, like fragile beauty has only one season, like graces it is not subject to any rule, and is not acquired by cold imitation... In the fashioned world, the success of our factory is based solely on taste. It is by this that it is sustained despite envy and rivalry.”<sup>349</sup> How were tastes developed? “Either by working on the loom or by staying in the shop of a custom-made worker.”<sup>350</sup> This “talent, science and sensitivity” is not only reflected in the mastery of silk production techniques, but also in the businessman's commercial skills, including communication with international customers, anticipating their needs, inviting them to visit the Lyon warehouse, giving them confidence in the lucrative profits and prompting them to place an early deposit, as well as taking advantage of good interest rates in order to make more profit.<sup>351</sup> It was this taste and business talent that ensured the success of the fashion strategy in Lyon, which was only acquired through a long apprenticeship alongside the merchant manufacturers in the warehouses.

French renovative fashion design has inevitably given rise to imitation piracy and stolen designs among international competitors because of the profit motive, even some of the merchants of Paris were involved in this illegitimate trade. The whole process of piracy began when a merchant bought a piece of fabric of a certain design, copied and

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<sup>349</sup> Chez Jean de Ville., *Mémoire Sur L'envoi Des Échantillons de la Fabrique de Lyon, 1761* cit. from, Carlo Poni, Darla Gervais, and Pierre Gervais, "Mode Et Innovation: Les Stratégies Des Marchands En Soie De Lyon Au XVIIIe Siècle." *Revue D'histoire Moderne Et Contemporaine* (1954-) 45, no. 3 (1998): 589-625. Accessed May 28, 2021

<sup>350</sup> *Mémoire pour les Maîtres Marchands d'Etoffes de Soye, d'Or et d'Argent de la Ville de Lyon, n.d. (after 1737)*, pp. 19-20 (A.M.L., Chappe, HH 133). In Carlo Poni, Darla Gervais, and Pierre Gervais. "Mode Et Innovation: Les Stratégies Des Marchands En Soie De Lyon Au XVIIIe Siècle." *Revue D'histoire Moderne Et Contemporaine*. (1954-) 45, no. 3 (1998): 589-625. Accessed May 28, 2021.

<sup>351</sup> Carlo Poni, Darla Gervais, and Pierre Gervais, "Mode Et Innovation: Les Stratégies Des Marchands En Soie De Lyon Au XVIIIe Siècle." *Revue D'histoire Moderne Et Contemporaine* (1954-) 45, no. 3 (1998): 589-625. Accessed May 28, 2021

sent the duplicons to certain masters in Lyon who were willing to produce for him. In this way, by adopting lower priced raw fabric materials, the cost of design was eliminated, yet the product could be sold for almost the same price as the original design fabric.<sup>352</sup>

In the production system of the Grande Fabrique, piracy and counterfeiting were actually anticipated and pre-empted, and even instead exploited by the strategic marketing system.<sup>353</sup> As one merchant wrote in a letter of 1761: “Competition...has forced us to seek preference... Taste has had to improve more rapidly, renew itself entirely and vary whenever we have been imitated...Let the foreigner copy us for another hundred years, he will not train designers. It is our taste and our imagination that he lacks: imitation extinguishes one and does not give the other. How can it give this taste which reigns this year, and which fashion, a general convention and caprice will destroy next year?”<sup>354</sup>

The absolute secrecy surrounding the release of a new annual design was a precaution against piracy and a promotion ploy, as is the case with today’s new product launches. Preferential treatment of large wholesalers in the marketing process is also a means of preventing piracy, e.g., orders placed directly in Lyon’s shops or warehouses can be better served. Another way to combat piracy is to diversify product design, parallel to the modern way of “differentiation of production”<sup>355</sup>, making subtle changes to the product to suit the preferences of customers in different regions. “For the German and English markets, light colours were used; for trade with Spain, a few black threads

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<sup>352</sup> Mémoire pour les Maîtres Marchands d’Etoffes de Soye, d’Or et d’Argent de la Ville de Lyon, n.d. (after 1737), pp. 19-20 (A.M.L., Chappe, HH 133). In Carlo Poni, Darla Gervais, and Pierre Gervais. “Mode Et Innovation: Les Stratégies Des Marchands En Soie De Lyon Au XVIIIe Siècle.” *Revue D’histoire Moderne Et Contemporaine*. (1954-) 45, no. 3 (1998): 589-625. Accessed May 28, 2021.

<sup>353</sup> Carlo Poni, Darla Gervais, and Pierre Gervais, "Mode Et Innovation: Les Stratégies Des Marchands En Soie De Lyon Au XVIIIe Siècle." *Revue D'histoire Moderne Et Contemporaine* (1954-) 45, no. 3 (1998): 589-625. Accessed May 28, 2021

<sup>354</sup> Chez Jean de Ville., Mémoire Sur L'envoi Des Échantillons de la Fabrique de Lyon, 1761 cit. from, Carlo Poni, Darla Gervais, and Pierre Gervais, "Mode Et Innovation: Les Stratégies Des Marchands En Soie De Lyon Au XVIIIe Siècle." *Revue D'histoire Moderne Et Contemporaine* (1954-) 45, no. 3 (1998): 589-625. Accessed May 28, 2021

<sup>355</sup> Carlo Poni, Darla Gervais, and Pierre Gervais, "Mode Et Innovation: Les Stratégies Des Marchands En Soie De Lyon Au XVIIIe Siècle." *Revue D'histoire Moderne Et Contemporaine* (1954-) 45, no. 3 (1998): 589-625. Accessed May 28, 2021

were added to the loom. Sometimes, to a design of French taste, some requirement by specific markets were added".<sup>356</sup>

The strategy of fashion and taste was a success, while the quality of the fabrics failed instead. The constant differentiation of products and annual fashion launches led to a deterioration in quality, as there was no longer a need to produce durable fabrics. This decline in quality, however, was seen as another facet of the fashion strategy, which took a vertical product layering approach to meet the needs of the market at different levels while maintaining high quality production at the same time.

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<sup>356</sup> Chez Jean de Ville., *Mémoire Sur L'envoi Des Échantillons de la Fabrique de Lyon, 1761* cit. from, Carlo Poni, Darla Gervais, and Pierre Gervais, "Mode Et Innovation: Les Stratégies Des Marchands En Soie De Lyon Au XVIIIe Siècle." *Revue D'histoire Moderne Et Contemporaine (1954-)* 45, no. 3 (1998): 589-625. Accessed May 28, 2021

## Part IV

### Connections and Comparisons between Chinese Imperial Silk Factories and French Court Supplying Silk Factories

After giving brief description to the historical development and production processes of the Chinese Imperial Silk Factories and French court-supplying silk factories at the crossing of the seventeenth and eighteenth centuries, this part of the dissertation intends to reveal through contemporaneous comparisons, how two societies in the world at the beginning of globalization, distant from each other, were closely linked through the exchange of goods, technology and culture. Through the missionaries, a unique group of people who helped to bring about communication across long distances in the early modern world, modern Western scientific information flowed into China, while Chinese culture, technology, geography and history, among other things, were translated and introduced to the West. During the reign of Louis XIV, the missionaries sent to the court of the Kangxi Emperor were known as “the king’s mathematicians”<sup>357</sup>, and they carried out various field studies in China among the scholarly and popular classes with a series of specific missions issued by the court and the Royal Academy of Sciences.

Here, it will retrace the journey and research of the missionaries in China, looking at their investigation projects, correspondence, translations of Chinese classics, and publications to find hints of their promotion of the spread of Chinese silk production techniques to the West, and in particular, whether they had taken advantage of their post as missionaries to have a close study of the Chinese imperial silk factories, either directly or indirectly. Thus, arguing for the hypothesis of this thesis that whether Louis XIV’s court-supplying silk factories took their cue from the imperial silk factories of the Kangxi emperor, and whether the missionaries’ study of Chinese silk and its fabrication contributed to the “fashion kingdom” of France advocated by Colbert. In the meantime, in the following chapters, it will compare and contrast the differences

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<sup>357</sup> Yves de Thomaz de Bossiere. *Jean Francois Gerbillon. SJ, One of the Five Mathematicians Sent by Louis XIV to China (1654-1707)* 耶稣会士张诚路易十四派往中国的五位数学家之一. Henan: Daxiang Publishing House, 2009.



and similarities between the imperial silk factories of the Kangxi emperor and the court-supplying silk factories of Louis XIV, in terms of national economic political environments, production procedures managed through regulations, official management systems, etc., based on specific studies of the Chinese Imperial Silk Factories and French court-supplying silk factories in the previous two sections. This will further substantiate the thesis's conjectures and identify the links and influences between the silk factories of France and China in that epoch.

## **Chapter VIII. Connections through the Missionaries**

It is not by chance but because of the coincidental connections and comparability between the two monarchs that this thesis has chosen to compare silk production in the Kangxi period with that of Louis XIV. They were from almost the same era, been placed together and compared with each other once in an exhibition of “the Forbidden City of Kangxi (1662-1722)” in the National Museum of Versailles in 2004. In fact, they had many characteristics in common, even shared similar fate; Being both authoritarian rulers with a long reign since their childhood, they lived in magnificent palaces, admired the culture, technology and science of each other, and exchanged gifts through the Jesuits. Joachim Bouvet [bái jìn 白晋] on one occasion described Kangxi to Louis XIV as almost Christian, possibly because the Jesuits were trying to make a connection between the two monarchs. The Jesuits sent by France to the Kangxi court at the turn of the seventeenth and eighteenth centuries surely too on the role of messengers between the two countries, serving as a bridge for the exchange of information.

### **8.1 The Jesuits' experience in Kangxi time**

To ensure the continuity of the missionary work, Ferdinand Verbiest [nán huái rén 南怀仁] sent his fellowman Philippe Couplet [bǎi yìng lǐ 柏应理] back to Europe in 1683 to recruit missionaries proficient in mathematics and astronomy. Philippe Couplet impressed Louis XIV through the help of the state secretary Colbert, who was then French Minister of State for the Navy and also supervised French science, art, and craftsmanship. Louis XIV was convinced that France could expand its influence through the Jesuits in Asia, especially in China, where

France was already left behind by Spain, Portugal, Netherland and England. At that time, the courts of Versailles advocated sending missionaries to China.<sup>358</sup>

At the same time, also under the influence of Louis XIV's confessor, Father La Chaise, the French missionaries began to try to preach in Siam. In 1685, Louis XIV sent a mission to the King of Siam, accompanied by a number of mathematicians and astronomers, and some of these scientists (Gerbillon, Le Comte, Visdelou, Bouvet) went on to China. The Siamese mission returned to France the following year and brought with it numerous valuable gifts: gold and silver vases, furniture, tortoiseshell objects, agathas, jades, carpets, silk fans and lanterns, lacquered screens, and so on. All these testify to the benefits of trading with the East, and the missionaries at court clarify that these products originated in China. The propaganda and defence of China by the missionaries also earned them the title of "jealous guardians of the cult of chinoiserie".<sup>359</sup> This dispatched visit provoked a great response, with the theme appearing in sculptures and paintings.<sup>360</sup>

Therefore, six Jesuits being talented in mathematics and entitled communication fellow of the Paris Academy of Sciences were sent to the Chinese emperor Kangxi. The six Jesuits' trips to China were well planned, with research programs and the finest equipment of that time; They set off with a special list of "Outline of the Survey of the Chinese Empire" prepared by the members of the Royal Academy of Sciences. This list of thirty-four questions covers almost all areas of China: chronicles, geography, mathematics, astronomy, medicine, philosophy, plants, animals, architecture, art of war, justice, religion, craftsmanship and tradition ... with the aim to measure the land and draw a more accurate map of the world.<sup>361</sup>

One of the tasks of the Royal Academy of Sciences, founded by Colbert in 1666, was extensive worldwide information gathering in all areas, which was also linked to the project of sending missionaries to expand their influence to the East.<sup>362</sup> Father Jean de Fontaney, one

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<sup>358</sup> Yves de Thomaz de Bossiere. Jean Francois Gerbillon. SJ, One of the Five Mathematicians Sent by Louis XIV to China (1654-1707) 耶稣会士张诚路易十四派往中国的五位数学家之一. Henan: Daxiang Publishing House, 2009.

<sup>359</sup> Hugh Honour. *Chinoiserie*. London: John Murray Publishers, 1974.

<sup>360</sup> Marx Jacques. "De la Chine à la Chinoiserie. Échanges Culturels entre la Chine, l'Europe et les Pays-Bas Méridionaux (XVIIeXVIIIe siècles)." *Revue Belge de Philologie et d'Histoire*. Tome 85, fasc. 3-4, 2007.

<sup>361</sup> Yves de Thomaz de Bossiere. Jean Francois Gerbillon. SJ, One of the Five Mathematicians Sent by Louis XIV to China (1654-1707) 耶稣会士张诚路易十四派往中国的五位数学家之一. Henan: Daxiang Publishing House, 2009.

<sup>362</sup> Hahn Roger. *The Anatomy of a Scientific Institution: The Paris Academy of Sciences, 1666-1803*. California:

member of the French missionaries' group, recounted a conversation between Colbert and him before their departure to China. The minister gave a generous statement:

“Father, isn't science worthy of you to cross the sea, stay away from your motherland, relatives and friends, and live in another country? Devout priests often travel a long distance to teach non-Christian people. I hope you could take this opportunity to conduct a lot of surveys and investigations in the local area while spreading the gospel, which will greatly improve our scientific knowledge and art.”<sup>363</sup>

During the stay of the Jesuits missionaries, a lot of observations were sent to the Royal Academy of Paris. The Jesuits migrated and stayed in various provinces to conduct necessary surveys in the dozens of cities they stayed, including Ningbo, Nanjing, Shanghai, Xi'an, Nanchang, Chaozhou, Guangzhou, Beijing, Yinchuan and other places. For instance, in a letter of Jean-François Gerbillon [zhāng chéng 张诚] and Joachim Bouvet [bái jìn 白晋] to the gentlemen of the Royal Academy of Paris in 1691, they introduced their work and Chinese language study, at the same time they included unique observation records of north China and a very accurate map of Mongolia area. Meanwhile, the observations sent to the Royal Academy of Sciences were all encompassing, including natural history, Siamese elephants, various species of fish in the Gulf of Siam (both described and illustrated), observation records of the Bactrian camel, and even an anatomy of a tiger, etc. They plan to do more in-depth research on various practical medical books and natural history books in China after mastering Chinese proficiently. Jean-François Gerbillon (Zhang Cheng) asked the gentlemen of the Royal Academy of Paris to clearly inform them what they were most interested in.<sup>364</sup>

In order to impress the Chinese emperor and carry out the investigation tasks, the six scholars communicated with Giovanni Domenico Cassini, the first director of the Paris Observatory for the preparation of the journey. In accordance with the king's order, they were equipped with the latest invented precision scientific instruments, especially astronomical

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University of California Press, 1971.

<sup>363</sup> Yves de Thomaz de Bossiere. *Jean Francois Gerbillon. SJ, One of the Five Mathematicians Sent by Louis XIV to China (1654-1707)* 耶稣会士张诚路易十四派往中国的五位数学家之一. Henan: Daxiang Publishing House, 2009.

<sup>364</sup> Yves de Thomaz de Bossiere. *Jean Francois Gerbillon. SJ, One of the Five Mathematicians Sent by Louis XIV to China (1654-1707)* 耶稣会士张诚路易十四派往中国的五位数学家之一. Henan: Daxiang Publishing House, 2009.

instruments, telescopes, compasses, spirit levels, thermometers, barometers, and wall clocks that represented the most advanced technological achievements of that era. In addition to science, missionaries also brought cultural and artistic works to China; they carried with them engravings of French views like the Louvre, Versailles, and exquisite books to be presented as gifts to emperor Kangxi. This original religious group later became the backbone of the well-known French Jesuit Mission in Beijing.<sup>365</sup>

Catholic missions in Asia were first carried out under the patronage of Portugal, from the sixteenth century onwards, missionaries, led by Matteo Ricci (1552-1610AD), played an important role in the cultural exchange between China and Europe. Being a pioneer missionary to China, Matteo Ricci “understood the importance of intellectual activity and the power of the mandarins in that country”<sup>366</sup>. In addition, he was appreciated by the centres of power because of his proficiency in modern knowledge such as astronomy and mathematics. In the 17th century, with the decline of Portuguese maritime power, France, like others, sought to expand its influence and trade in Asia... Some Jesuits in China sought patronage from the court outside Portugal, while insisting on the need to send missionaries versed in science to keep the emperor’s favour. It is well known that from the early days of the Jesuit mission in China, scientific and technological knowledge played an important role in the missionaries’ contacts with the literary elite.<sup>367</sup> The idea that the advancement of scientific knowledge favoured the emperor was widespread. The French missionaries followed Matteo Ricci, showed the greatest flexibility in their missionary work to enter the ruling class, and attracted Chinese people with western science. On the other hand, they translated some Chinese classics, including Confucian classics, therefore French people could understand and appreciate Chinese philosophical ideas. They were bondages of culture, diplomacy and religion between the two countries.

The reign of Kangxi emperor was a golden age for the missionaries, as Kangxi was an open-minded monarch, he granted the missionaries land to build churches and residencies.

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<sup>365</sup> Yves de Thomaz de Bossiere. *Jean Francois Gerbillon. SJ, One of the Five Mathematicians Sent by Louis XIV to China (1654-1707)* 耶稣会士张诚路易十四派往中国的五位数学家之一. Henan: Daxiang Publishing House, 2009.

<sup>366</sup> Bernard Brizay, *La France en Chine, Du XVII siècle a nos jours 法兰西三百年* (Shanghai: Shanghai Far East Publishing House, 2014)

<sup>367</sup> Standaert Nicolas, eds. *Handbook of Christianity in China*. Volume 1. Leiden: Brill Academic Publishers, 2000.

When the French built the first Christian chapel in Beijing between 1699 and 1703, Kangxi himself wrote the inscription “The royal gift from the emperor: Temple of god”. Louis XIV sent the “Amphitrite” boat to load the entire set of gold and silver wares, luxurious decorations and various exquisite sacrificial instruments required by the church altar.<sup>368</sup> The gifts and goods from China brought back to France by Amphitrite have caused a great deal of excitement “it resulted in a monster sale of Chinese articles in Paris (more than 8000 pieces). The whole court was carried away by enthusiasm for the products of the Far East.<sup>369</sup> On the other side, “the emperor Kang-hi had welcomed with singular kindness the Jesuit monks, who, with the help of some armillary spheres, barometers, thermometers, and spectacles that they had brought from Europe, obtained from Kang-hi the public tolerance of the Christian religion.”<sup>370</sup>

On the other hand, what kind of duties and status were given to these Jesuits at the court of Kangxi period? In addition to their obligations of evangelisation, the daily work of the Jesuits of Louis XIV included as well astronomical observations, information gathering and acting as envoys between the two countries, even though they do not have the titles of ambassadors. Though the dispatching of envoys between two countries presupposed that they were on an equal footing, nevertheless the Qing Empire held itself out as a “heavenly dynasty”, “a foreign prince sending gifts to the emperor was above all perceived as a tributary pledging allegiance to China’s suzerain power; this was taken for granted. Missionaries were also seen as preachers of a sect [jiào 教] among others.”<sup>371</sup>

Since the Ming Dynasty, Western missionaries have been included in the Astronomical Bureau [qīn tiān jiān 钦天监] set up by the court, where there were Portuguese missionaries who served as Administrators of the Calendar before the arrival of the French missionaries. As scholars, the French missionaries did not hold any formal positions in the bureaucracy.<sup>372</sup> “The

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<sup>368</sup> Bernard Brizay, *La France en Chine, Du XVII siècle a nos jours 法兰西三百年* (Shanghai: Shanghai Far East Publishing House, 2014)

<sup>369</sup> Paul Pelliot. *L'origine des Relations de la France avec la Chine. Le Premier Voyage de Amphitrite en Chine*. Paris: Hachette BNF, 2021.

<sup>370</sup> Voltaire, Georges Avenel, eds. *Oeuvres Complètes De Voltaire V6*. (1869) Montana: Kessinger Publishing, 2010. In Jami Catherine. “L’empereur Kangxi et les Sciences: Réflexion sur l’Histoire Compare.” *Études Chinoises*. n°25, 2006.

<sup>371</sup> Jami Catherine. “L’empereur Kangxi et les Sciences : Réflexion sur l’Histoire Compare.” *Études Chinoises*. n°25, 2006.

<sup>372</sup> Landry-Deron, Isabelle. “Les Mathématiciens Envoyés En Chine Par Louis XIV En 1685.” *Archive for History*

presence of a Jesuit in the civil service since the beginning of the dynasty ensured a certain protection for missionaries working in the provinces.”<sup>373</sup> At the Qing court, teachers of the emperors and princes were known as Grand Masters [tài shī 太师], whereas the missionaries were not given this title, even though they also taught the emperor modern western science. Missionaries had access to the court to teach and discuss with the emperor scientific knowledge and the arts from the West, which were the main reasons for the emperor’s attention and were well known to the missionaries.

From the view point of the Qing court, the opportunity for missionaries to meet the emperor on a daily basis was already a great honour. As was experienced by Jean-Denis Attiret, a western painter at court during the Qianlong period: “It was considered, according to him, that to be admitted in the presence of the emperor, to be able to speak to him, was a supreme reward, of which he should be satisfied.”<sup>374</sup> The novel Western scientific skills possessed by the missionaries did not have the same status as the classical Confucian culture which was closely linked to the Chinese imperial examination system, and the Qing imperial family, as Manchus, believed in the cultural and intellectual hierarchy of the Han people whom they had conquered. “In short, while the Jesuits insist in their correspondence on the unprecedented favour they enjoyed with the emperor, the Chinese sources show them integrated into institutions that predate them. The emperor certainly arranged these institutions to suit him, but hardly needed to change them to make room, albeit modest, for those he chose to take into his service without them being civil servants. In such an institutional setting, the emperor's informal and familiar attitude towards them, which they liked to emphasise, reveals not a particular sympathy for them or their religion, but rather the fact that their status did not require the application of a strict ritual.” The Jesuits mentioned in their writings that Kangxi emperor “wanted to follow the example of Louis XIV” or that he “believed in the superiority of Christianity, which gave

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*of Exact Sciences*. 55, no. 5 (2001): 423–63.

<sup>373</sup> Jami Catherine. “L’empereur Kangxi et les Sciences : Réflexion sur l’Histoire Compare.” *Études Chinoises*. n°25, 2006.

<sup>374</sup> Marx Jacques. “De la Chine à la Chinoiserie. Échanges Culturels entre la Chine, l’Europe et les Pays-Bas Méridionaux (XVIIeXVIIIe siècles).” *Revue Belge de Philologie et d’Histoire*. Tome 85, fasc. 3-4, 2007.

rise to modern scientific culture”, though it was never considered in this way from the Chinese side.<sup>375</sup>

What was the background of these exchanges of culture, technology and goods through the bridge of the Jesuits? The strategy of the Western missionaries was based on “an encyclopaedic investigation of Chinese realities, which met on the one hand with the Bibliotheken strategie of the Jesuits, and on the other hand with the local tradition. This was not Spanish America; the native culture was extremely refined; it could not be destroyed, it had to be dealt with.”<sup>376</sup> On the Chinese side, as it was said in *Royal Decree of the Qianlong Emperor to the King of England and Wales*, “The Heavenly Empire is rich in all kinds of products and has everything to offer, so we do not borrow goods from foreigners in order to exchange them.”<sup>377</sup> China did not feel the need to communicate with the outside world, indeed, because of its vast geography and the extreme diversity of its products, it was economically self-sufficient in terms of goods. Moreover, since ancient times, the Middle Kingdom considered itself to be the centre of the world and the orthodox and exemplary civilisation, and other nations were supposed to show subordination and admiration.

The first officially sanctioned trade between China and foreign countries began in the context of “tribute”, i.e., the idea that “foreign states”, i.e., vassal states, should regularly send missions to pay tribute to the emperor (often the products of the emissary’s country) in order to demonstrate their subservient and subordinate status and their desire for the splendid civilisation of the Celestial Empire. It was not the value of the tribute that mattered, but its moral and subservient significance; and it was in this way that the dynasty made its prestige known abroad by rewarding its ambassadors with gifts often of far greater value than the tribute. This even led to some neighbouring countries as well as Western countries competing for the opportunity to pay tribute, for example, it was recorded in the thirteenth year of the Shunzhi era (1656) the document approving the Dutch tribute: “Also, the Dutch state was instructed to

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<sup>375</sup> Jami Catherine. “L’empereur Kangxi et les Sciences : Réflexion sur l’Histoire Compare.” *Études Chinoises*. n°25, 2006.

<sup>376</sup> Marx Jacques. “De la Chine à la Chinoiserie. Échanges Culturels entre la Chine, l’Europe et les Pays-Bas Méridionaux (XVIIeXVIIIe siècles).” *Revue Belge de Philologie et d’Histoire*. Tome 85, fasc. 3-4, 2007.

<sup>377</sup> The First Historical Archives of China, eds. *A compilation of Archival Material on the Visit of British Ambassador Macartney to China* 英使马夏尔尼访华档案史料汇编. Beijing: The First Historical Archives of China, 1996

admire the righteousness and sincerity of the country and to sail to pay tribute, and considering its dangerous and long-distance roads, it was ordered to come to the court once every eight years as a sign of sympathy for the distant people.”<sup>378</sup>

The diplomatic courtesy of tribute was also often associated with commercial activities, and these were mainly found around ambassadorial residences and border areas in coastal port cities such as Guangzhou. This was officially tolerated, due to its creed of autonomy, and was also beneficial to the local bureaucracy and trade, all of which helped to create a complete system of commodity exchange between China and the West in the seventeenth and eighteenth centuries when they were so far apart. The first globalised trade was thus an exchange of tribute and bounties, “the result is a striking mix of condescending economic liberalism and intellectual imperialism.”<sup>379</sup>

## 8.2 The missionaries’ correspondence and related works

Until the end of the seventeenth century, China remained unknown to the western world, the limited understanding of China was still full of imagination and fantasy. Athanasius Kircher, a Jesuit scholar at the crossroads of the Renaissance and Baroque periods, had never been to China, but he assembled and collated all the information published by travellers and missionaries with a view to compiling an encyclopaedia. It contains a wealth of information, sometimes realistic, sometimes legendary, from Pliny’s *Natural History*, from the narratives of medieval travellers who ventured into Asian trails, mixed with true stories told by missionaries, and descriptions of various strange or unexplained phenomena. Kircher’s book “is full of wisdom and folly at the same time”<sup>380</sup>, It was very popular throughout the 17th century and would remain a major source of information about China for a long time to come. It has been noted that a year after the publication of the book, Louis XIV, mesmerised by the prints and

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<sup>378</sup> Yun Lu 允祿, eds. “Vol. 104 Ministry of Rites. Tribute.” *Collected Status of Yongzheng Period of Qing Dynasty 雍正朝大清會典*. Nanjing: Phoenix Publishing House, 2016.

<sup>379</sup> Marx Jacques. “De la Chine à la Chinoiserie. Échanges Culturels entre la Chine, l’Europe et les Pays-Bas Méridionaux (XVIIeXVIIIe siècles).” *Revue Belge de Philologie et d’Histoire*. Tome 85, fasc. 3-4, 2007.

<sup>380</sup> René Etiemble. *L’Europe Chinoise Tome 2-De la Sinophilie à la Sinophobie*. Paris: Gallimard, 1988.



descriptions showing the luxurious surroundings of the Asian rulers, covered the walls of his Versailles flat with sumptuous fabrics imported from China.<sup>381</sup>

By the end of the eighteenth century, an oriental trend became popular in the cultural and literary field in France. In the foreword of the “Description of China”, Du Halde wrote: “There is no doubt that our most accurate knowledge of China comes only from missionaries.”<sup>382</sup> The missionaries changed people’s view on China, they could be regarded as the earliest sinologists in the world. Due to their unique western perspective, the notes, letters and books they wrote based on personal experiences and observations were a great compensation to the Chinese historical records and were essential for academic study. Among these works, Ricci’s journey, “Histoire de l’expédition chrétienne au royaume de la Chine”.<sup>383</sup> After this, Father Nicolas Trigault published a second important work in Latin, “C’était la Chine”. Father Alvare de Semedo published a general history of China in 1642, in which he examined some basic Confucian beliefs.<sup>384</sup>

As a result of the French missionaries sent by Louis XIV, at the turn of the seventeenth and eighteenth centuries saw the emergence of more works that attracted Western attention to China. Philippe Couplet [bǎi yìng lǐ 柏应理] presided over the compilation of *The Philosophy of Confucius*.<sup>385</sup> *Nouveaux Memoires sur l’État présent de la Chine /New Memories on the Present State of China* is a book of Louis le Comte [lǐ míng 李明], describing his long-term stay in China, which covers a wide range of topics, including descriptions of the climate, city view, hydrology and crops, etc. It also has profound literature, philosophy and morality contains, discussing the issue of religion and China’s attitude to internal and external trade, also the tax

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<sup>381</sup> Gruber, Alain, *Chinoiserie. L’influence de la Chine sur les Arts en Europe XVII - XIX Siècle. Catalogue d’Exposition.* op. cit., p. 234-35. In Marx Jacques. “De la Chine à la Chinoiserie. Échanges Culturels entre la Chine, l’Europe et les Pays-Bas Méridionaux (XVIIeXVIIIe siècles).” *Revue Belge de Philologie et d’Histoire.* Tome 85, fasc. 3-4, 2007.

<sup>382</sup> Jean-Baptiste Du Halde, eds. *Description de la Chine 耶稣会士中国书简集. 中国回忆录.*(1736) Henan: Da Xiang Publishing House, 2005.

<sup>383</sup> Matteo Ricci, Nicolas Trigault. *Histoire de l’Expédition Chrétienne au Royaume de la Chine: 1582-1610.* Paris: Desclée, 1978.

<sup>384</sup> Alvare de Semedo. *The History of that Great and Renowned Monarchy of China.* London: E. Tyler for I. Crook, 1655.

<sup>385</sup> Philippe Couplet. *Confucius Sinarum Philosophus, sive, Scientia Sinensis Latine Exposita. Confucius, Philosopher of the Chinese, or, Chinese Knowledge Explained in Latin.* Paris: Daniel Horthemels, 1687.

system.<sup>386</sup> *Edifying and curious letters of some Missioners of the Society of Jesus from foreign missions* has been especially significant for Europe to open up to foreign cultures during the Enlightenment, especially for the Chinese culture. These letters greatly promoted the European trend to pursuit Chinese commodities, including the famous “chinoiserie”. In the letter of Jean-Denis Attiret, he described the Summer Palace and the royal garden of the Chinese emperor, which caused a fashion of “Chinese garden” in Europe.<sup>387</sup> The compilation *Description of China* of Du Halde provides a lot of information on all aspects of China: the emperor and his ruling art, the army and politics, the upper society, agriculture and handicrafts, spiritual morality and religion, festivals and celebrations, science and medicine, business and communication, language and writing, etc.<sup>388</sup>

*Memoires Concernant les Chinois (1776-1814AD)* is the fruit of a correspondence maintained for ten years between French missionaries and two Chinese who once lived in France studying the science of Europe before returning to China in 1765, taking back memoirs and surveys of all subjects they wanted to understand. From the first volume and repeated in the rest of the collection, an obvious attempt was to answer three major questions that fascinated the scholars during the starting phase of European Sinology by the end of the Age of Enlightenment, including the origin of the Chinese, Chinese chronology and Chinese characters.<sup>389</sup> Although this collection is rather later than the time period studied in this thesis, it covers the exchange of studies between China and the West on silk craftsmanship, such as French missionaries’ research on Chinese mulberry trees and wild silkworms and a visit by the two Chinese to the Grande Fabrique of Lyon in the reign of Louis XVI.

At the turn of the seventeenth and eighteenth centuries, the letters, journals, translations and works of the missionaries undoubtedly opened a window for the West, which knew little about China, and made it possible to study and understand the culture, technology and philosophy of the East. In France, however, it formed also a part of Colbert’s global

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<sup>386</sup> Louis le Comte. *Nouveaux Memoires sur l'Etat Present de la Chine*. (1697) London: Forgotten books, 2018.

<sup>387</sup> Compagnie De Jesus, *Lettres édifiantes et curieuses, écrites des missions étrangères* (Ed. 1819) (California: Creative Media Partners, 2019)

<sup>388</sup> Jean-Baptiste Du Halde, eds. *Description de la Chine 耶稣会士中国书简集. 中国回忆录*.(1736) Henan: Da Xiang Publishing House, 2005.

<sup>389</sup> Amiot, Jean-Joseph-Marie (and others). *Mémoires Concernant L'histoire, Les Sciences, Les Arts, Les Moeurs, Les Usages, &c. Des Chinois: Par Les Missionnaires De Pékin*. Paris: Chez Nyon, 1789.

information-gathering project, completing the list of surveys drawn up by the Royal Academy of Sciences. The information on Chinese culture, technology, politics and economics, reported or disseminated by the missionaries, should have been as useful to Colbert's mercantilist strategy as the information gathered in other countries of the world. Did the information concerning Chinese silk production and the imperial silk factories also contribute to the establishment of the court-supplying silk factories that were then emerging in France, or even to the conception of the whole "fashion kingdom" industry? In the next section, the influence between East and West brought about by the activities of the missionaries will be further elaborated.

### **8.3 The influence of Jesuits between East and West**

What impact did the missionaries have on the West as cultural links between East and West, or as "cultural smugglers"<sup>390</sup>? The exchange of culture, art and goods between the East and the West, led especially by the missionaries, from the court onwards. As well as the opening up of the sea routes linking East and West from the sixteenth century onwards and the establishment of various East India companies, Eastern goods, especially silk and porcelain, were transported in large quantities to the Western world. All these intense cultural and commercial exchanges led to a fascination with China. A Chinese-inspired style "chinoiserie" emerged in art, aesthetics and industry; this was particularly evident in the most popular exports such as ceramics and silk. Such a trend swept through Europe from the seventeenth century onwards, particularly at court. Marx Jacques understands chinoiserie as a European style resulting from the collision of two cultures, East and West. "Revaluation of an aesthetic category in the strict sense of the term, chinoiserie is to be understood as a European style of decoration, the origin and development of which are part of a whole series of artistic exchanges between civilisations that are very far apart and fundamentally different in their perception of the world, but which nonetheless met with a certain degree of success in the 17th and 18th centuries."<sup>391</sup>

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<sup>390</sup> Marx Jacques. "De la Chine à la Chinoiserie. Échanges Culturels entre la Chine, l'Europe et les Pays-Bas Méridionaux (XVIIeXVIIIe siècles)." *Revue Belge de Philologie et d'Histoire*. Tome 85, fasc. 3-4, 2007.

<sup>391</sup> Marx Jacques. "De la Chine à la Chinoiserie. Échanges Culturels entre la Chine, l'Europe et les Pays-Bas Méridionaux (XVIIeXVIIIe siècles)." *Revue Belge de Philologie et d'Histoire*. Tome 85, fasc. 3-4, 2007.

It is fair to say that Louis XIV grew up in an environment where Chinese goods were fashionable. “In France, Chinese fashion was already beginning to appear at the time of Mazarin, during the king’s youth. We know what Chinese objects were present at the court of Versailles thanks to the royal inventories, which nevertheless pose some difficulties, insofar as, for example, the expression ‘façon de la Chine’ used by the editors does not always make it possible to clearly distinguish whether the object in question is from China or an imitation. But we know that Mazarin was a keen collector of Chinese objects; that Louis XIV used Chinese furniture or furniture arranged in the Chinese style for his personal use: in *Les Amours de Psyché et de Cupidon* (1669), La Fontaine speaks of the king’s cabinet decorated with Chinese cloth ‘full of figures which contain all the religion of that country’”.<sup>392</sup>

Life at court under Louis XIV was full of Chinese elements. “The king took his broth in a large cup of very fine porcelain decorated with two snake handles; there were Chinese vases in the royal pharmacy. There may have been an ideological assumption behind this habit: Chinese objects were known to come from a vast empire; the French king could imagine himself in the role of the Son of Heaven. A similar intention seems to have inspired Höroldt in Meissen: on a large vase, lost since the Second World War, he had depicted the Elector of Saxony on a dais, crowned, dressed in an ermine coat, but surrounded by Chinese courtiers, and receiving tribute.”<sup>393</sup> We also know that Louis XIV was an admirer of oriental art, and that he lived from childhood in furniture decorated with Chinese figures. A passionate collector, he owned a whole series of blue and white porcelain and other objects. The same passion was shared by Monsieur Philippe de France, brother of the king (1640-1701) and Madame de Maintenon, the Duchess of Orleans, the Dukes of Berry, Chartres, etc. “We shall see ambergris, beautiful works of varnish, and fine porcelain from this divine land or rather from this paradise”.<sup>394</sup>

Of course, the transfer of culture and goods was a two-way street, Western technology and imported goods were also very popular in China. In two distant societies, the fashion brought

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<sup>392</sup> Jean de La Fontaine. *Les Amours de Psyché et de Cupidon*. Paris : Flammarion, 2011. In: Marx Jacques. “De la Chine à la Chinoiserie. Échanges Culturels entre la Chine, l’Europe et les Pays-Bas Méridionaux (XVIIe-XVIIIe siècles).” *Revue Belge de Philologie et d’Histoire*. Tome 85, fasc. 3-4, 2007.

<sup>393</sup> Ulrich Pietsch. “Chinoiserie à Dresde.” In Collectif. *Pagodes et Dragons: Exotisme et Fantaisie dans l’Europe Rococo 1720-1770*. Paris: Paris Musees, 2007.

<sup>394</sup> H. BeJerytch-Stankevitich. *Le Gout Chinois en France au Temps de Louis XIV*. Genève: Slatkine Reprints, 1970.

about by mutual exchange soon spread from the royal and aristocratic classes to the whole of society. Exotic goods such as wine, glassware, clocks, etc. became the new favourites of the Chinese scholarly classes, while Chinese porcelain and silk became even more popular in the West. Chinese decorations, paintings and colours were incorporated into Western architecture, gardens and household commodities. Imitations of Chinese fabrics appeared in Paris and Lyon, and were even sold as authentic. The market has seen a number of replications of oriental styles, such as damask fabrics known as “bizarre”, whose decorative motifs combine inspiration from various fields and evoke travel reports from the East: displays of Chinese characters, stone bridges, pagodas with bells, imaginary Chinese figures, umbrellas and so on, with elements of oriental meaning.<sup>395</sup> Such textiles unquestionably stemmed from the imagination and yearning for the East caused by the popularity of Eastern goods in the West and the introduction of Eastern culture in the West; the missionaries played a large part in promoting this.

In addition to textiles, it is important to mention porcelain. As Anne Gerritsen has argued in her book, blue and white porcelain was the ultimate global commodity. Chinese porcelain was in demand by consumers throughout East and South-East Asia, the Indian Ocean including the African coast, the Americas and Europe. The kilns in and around Jingdezhen made porcelain almost all over the world and had a profound impact on global consumption, which in turn shaped local production techniques. The imperial kilns in Jingdezhen produced ceramics for the court, while nearby private kilns produced for the global market, and Anne Gerritsen argues that through the manufacture and consumption of porcelain from Jingdezhen, China participated in the early modern world. In my view, this is precisely the same as the position of Chinese silk in the early global market.<sup>396</sup>

In the field of porcelain, the missionaries as well played a significant role as informers. The two well-known letters of father Père Francois Xavier d’Entrecolles (1662-1741), who was considered an industrial spy, dated September 1, 1712 and January 25, 1722, were as well typical reports of the results of missionaries’ expeditions and investigations in China, which

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<sup>395</sup> Madeleine Jarry. *Chinoiseries: Le Rayonnement du Goût Chinois sur les Arts Décoratifs des XVIIe et XVIIIe Siècles*. Fribourg: Academic Press Fribourg, 1981.

<sup>396</sup> Anne Gerritsen. *The City of Blue and White: Chinese Porcelain and the Early Modern World*. Cambridge: Cambridge University Press, 2020. doi:10.1017/9781108753104

revealed to the west the secrets of the composition and manufacturing process of Chinese porcelain. The letter of 1712 covers the composition, varieties and methods of making porcelain in Jingdezhen, with particular reference to the binary formula of kaolin plus porcelain stone. In a second letter of 1722 many new processes are described, such as the function of talc, the recipe for aubergine glaze, the method of making glazed red, the control of fire in the kiln, the method of baking flowers in coloured porcelain, and so on.<sup>397</sup>

Père Francois Xavier d'Entrecolles not only described it by writing, but also sent samples of kaolin back to Europe. The letters record in detail the geographical location and population of Jingdezhen, count the number of porcelain kilns in the town, and describe the distribution of finished porcelain products. "The various stages of porcelain manufacture are also described in detail in the 22 plates of an album illustrating a History of the Manufacture of Chinese Porcelain which Father Jean-Joseph-Marie Amiot sent to the Controller General of Finance Henri-Léonard Bertin, Minister of Louis XV."<sup>398</sup>

Such detailed reporting would have been common in all aspects of the missionaries' correspondence and studies. Not only were the missionaries motivated by curiosity, they carried research mandates from the court and the Royal Academy of Sciences, and used their favourable missionary status to learn a great deal of information they needed among the Christians. Meanwhile, they also consulted Chinese books and local chronicles extensively to record all aspects of their knowledge accurately and confidently. As Père Francois Xavier d'Entrecolles noted in his letters:

While I was training congregants in Jingdezhen, I had the opportunity to study the methods of making the beautiful porcelain that had spread around the world and was highly admired. It was not out of curiosity that I explored this: I believed that a more detailed account of the methods of porcelain making would be of some use to Europe.

About the porcelain method, in addition to the eye to see, I also learned from the Christians to many special circumstances. Among these Christians were a number of people who worked in porcelain making and some who were large porcelain merchants. In order to confirm the truth of their answers to my questions, I consulted a number of

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<sup>397</sup> Stephen W. Bushell. *Description of Chinese Pottery and Porcelain; Being a Translation of the T'ao shuo*. South Yarra: Leopold Classic Library, 2015.

<sup>398</sup> Marx Jacques. "De la Chine à la chinoiserie. Échanges culturels entre la Chine, l'Europe et les Pays-Bas méridionaux (XVIIe XVIIIe siècles)". *Revue belge de philologie et d'histoire* Tome 85, fasc. 3-4, 2007.

Chinese books on porcelain, and more correctly grasped the various aspects of this wonderful art, and thus confidently wrote it down.<sup>399</sup>

Du Halde also recorded in his notation the professional research of d'Entrecolles into the porcelain industry:

Fr. D'Entrecolles had a church in King-te-tchin, and among his Christians he counted several who worked on porcelain or who did a great deal of trade in it. It was from them that he gained exact knowledge of all the parts of this beautiful art.<sup>400</sup>

D'Entrecolles also gives details of the origin of the porcelain and the export and production of porcelain: Jingdezhen is the porcelain capital of China, being more than 900 kilometres from Guangzhou in the south. It is a huge industrial city with a population of 1 million, with 18,000 potters and 3,000 furnaces that smoke day and night. The products from Jingde zhen are used to pay tribute to the court and the domestic market, goods with inferior quality are used for export. These goods are shipped to Guangzhou for colour decoration in Guangzhou workshops, processed into coloured porcelain and sold to Europe. The decorative patterns are custom made by the European buyers.<sup>401</sup>

It is also clear from many of the illustrations of ancient porcelain that China at that time did not only manufacture products for local sale, but also produced them to suit the needs and aesthetics of overseas customers. Such export products blended Chinese production with European styles. “Instead of limiting themselves to their national production, the Chinese export porcelain taking orders adapted to the taste of their various customers: they thus created, on demand, porcelain for Europe.”<sup>402</sup> “Chinese craftsmen had the reputation of being extremely skilful and they imitated the models sent from Europe with exact servility. In practice, either ‘raw’ porcelain was sent to Europe to be overdecorated; or models were sent directly to China and copied... with some amusing transpositions: for example, a plate depicting the Holy Women with the words ‘Les trois marins/The Three Sailors’. The Chinese had misread the

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<sup>399</sup> Jingdezhen Ceramics Museum 景德镇陶瓷馆文物资料组, eds. *Two Letters from Yin Hongxu about Jingdezhen 陶瓷资料-殷弘绪关于景德镇的两封信*. Jingdezhen: Jingdezhen Ceramics Museum, 1978

<sup>400</sup> Stanislas Julien, Hoffmann. *Histoire Et Fabrication De La Porcelaine Chinoise*. Charleston: Nabu Press, 2013

<sup>401</sup> Jingdezhen Ceramics Museum 景德镇陶瓷馆文物资料组, eds. *Two Letters from Yin Hongxu about Jingdezhen 陶瓷资料-殷弘绪关于景德镇的两封信*. Jingdezhen: Jingdezhen Ceramics Museum, 1978.

<sup>402</sup> D. F Lunsingh Scheurleer. *Chinese Export Porcelain: Chine de commande*. (London: Pitman Publishing, 1974)

inscription on the model: ‘Les trois Maria/The three Marys’! Magnificent export pieces were used for decorations often depicting gallant scenes (such as cherry picking, after Boucher) but also coats of arms: in Belgian collections, in particular, there are numerous examples of Chinese porcelain with coats of arms.”<sup>403</sup>

Besides porcelain, decorative wallpaper and tissue paper were also produced in Guangzhou to the designs of Western customers for export. “Manufactured at the same time (the most precious papers were made in the Kangxi and Yongzheng periods), under the same quasi-industrial conditions, they were indeed brought back mostly on the same boats.”<sup>404</sup> Screens made from such wallpaper had already appeared in Versailles between 1667 and 1669 or earlier; <sup>405</sup> they were popular in Europe in the eighteenth and nineteenth centuries, and their eastern, rustic theme inspired more Western imagery of China.<sup>406</sup>

In addition to the exchange of goods and technology, the activities of the missionaries also contributed greatly to the exchange of ideas between East and West, and the “chinoiserie” also had an impact on philosophical thinking and the establishment of a royal image. The late seventeenth and early eighteenth centuries coincided with the onset of the Enlightenment in the West, whose philosophers promoted reason, intended innovation, rejected dogma and stereotypes, and critically re-evaluated all consistent ideas in the fields of culture, art, philosophy and religion. With the first more systematic and detailed transmission of information between China and the West by the missionaries, the arts, philosophies and ideas about social models from the East were integrated into the entire ideological foundation of society on which the Enlightenment was based. “Thanks to the considerable work of the Jesuits, Europeans became acquainted with the ‘details’ of a powerful empire, which could provide an excellent frame of reference for the philosophers of the Enlightenment and help them to fix the

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<sup>403</sup> Henry Maertens de Noordhout. *Porcelaines Chinoises “Compagnie des Indes” Décorées d’Armoiries Belges*. Andenne: Magermans, 1997.

<sup>404</sup> “Un Spectacle Panoramique Venu Directement de Chine”, in *Connaissance des Arts*, n° 97, mars 1960. In Marx Jacques. “De la Chine à la Chinoiserie. Échanges Culturels entre la Chine, l’Europe et les Pays-Bas Méridionaux (XVIIeXVIIIe siècles).” *Revue Belge de Philologie et d’Histoire*. Tome 85, fasc. 3-4, 2007.

<sup>405</sup> Jules Guiffrey. *Inventaire Général du Mobilier de la Couronne sous Louis XIV (1663-1715)*. Paris: Hachette Livre BNF, 2016. In: Marx Jacques. “De la Chine à la Chinoiserie. Échanges Culturels entre la Chine, l’Europe et les Pays-Bas Méridionaux (XVIIeXVIIIe siècles).” *Revue Belge de Philologie et d’Histoire*. Tome 85, fasc. 3-4, 2007.

<sup>406</sup> Marx Jacques. “De la Chine à la chinoiserie. Échanges culturels entre la Chine, l’Europe et les Pays-Bas méridionaux (XVIIeXVIIIe siècles)”. *Revue belge de philologie et d’histoire* Tome 85, fasc. 3-4, 2007.



object of their thinking. As we have seen, the Jesuits and other clerics selected the information they needed to develop an ideal image of China. Philosophers followed the same method.”<sup>407</sup>

The Jesuits portrayed China as a powerful empire ruled by an absolute monarch, which may also have inspired Voltaire’s idea of an enlightened monarch and a political model in accordance with natural reason. It could be assumed that Voltaire developed his theory further on the basis of the elements provided by the Jesuits about China.<sup>408</sup> The rituals and protocols of the worship of the absolute emperor, being so majestic and supreme, influenced even some European monarchs to imitate them.<sup>409</sup>

As in the case of “Petite Académie” planned and organized by Colbert, one of its duties was to “work for the glory of the King”<sup>410</sup>, the scope of the Petite Académie’s work included arranging the scenes of the king’s daily life, as if it were a theatre for his performances, with the intention of portraying the king as an absolute authority in contemporary times and beyond. And the principle of Colbert’s design, according to the experts of the Petite Académie, is because: He thought of making a small assembly of selected persons who would be instructed in all the magnificence of Greece and Rome.<sup>411</sup> In Charles Perrault’s memoirs it is mentioned that Colbert held the position of director and general organiser of French architecture, art, tapestry and manufacturing in 1664, “he wanted to assemble a number of literary figures and have them at his side to take their advice and form a kind of small council...which he could consult on all matters relating to buildings and where he could enter into the spirit and erudition”. Colbert also conceived: “in buildings there was a constant need for designs, for all the ornaments used for ceilings, paintings, statues, fountains, tapestries, etc., and that it was good that these designs were correct, appropriate, and even thought out with order and spirit”.<sup>412</sup>

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<sup>407</sup> Shi Zhan. “L’image de la Chine dans la Pensée Européenne du XVIIIe Siècle: de l’Apologie à la Philosophie Pratique.” *Annales Historiques de la Révolution Française*. n°347, 2007. pp. 93-111.

<sup>408</sup> Shi Zhan. “L’image de la Chine dans la Pensée Européenne du XVIIIe Siècle: de l’Apologie à la Philosophie Pratique.” *Annales Historiques de la Révolution Française*. n°347, 2007. pp. 93-111.

<sup>409</sup> David Martin Jones. *The Image of China in Western Social and Political Thought*. Hampshire: Palgrave Macmillan, 2001.

<sup>410</sup> Peter Burke. *The Fabrication of Louis XIV*. London: Yale University Press, 1992.

<sup>411</sup> Sabatier Gérard. “La gloire du roi. Iconographie de Louis XIV de 1661 à 1672”, *Histoire, économie et société*, 2000, 19<sup>e</sup> année, n°4.

<sup>412</sup> Josèphe Jacquot. *Médailles et Jetons de Louis XIV, d’après le Manuscrit de Londres ADD. 31. 908*. Paris: Imprimerie Nationale-Klincksieck, 1968. In: Sabatier Gérard. “La Gloire du Roi. Iconographie de Louis XIV de 1661 à 1672.” *Histoire, Economie et Société*. 2000, 19<sup>e</sup> année, n°4.

The missionary dispatches certainly echoed Colbert's mercantilist state policy of encyclopaedic investigation throughout the world as far as it could go, requiring ambassadors everywhere to observe in secret all aspects of local cities, governments and manufacturing industries and to keep them informed, as is recorded in Colbert's correspondence. Colbert's global information-hunting strategy included a series of commercial espionage operations that took advantage of business facilities, embassy and consulate connections, and, predictably, the presence of Jesuits in foreign countries. In Colbert's letter of March 1669 to the French ambassadors abroad, the king's mission was to make the ambassadors observe carefully the forms of government in the cities in which they were stationed and in all the surrounding countries, and in particular to make very detailed observations and reports on the conduct of business there.<sup>413</sup> In a letter to the English ambassador in March 1669, Colbert stated that his post gave him the right to set up French state consulates in many parts of Europe and Asia in order to be informed of everything that was going on at the place where the consulate was located. The English ambassador was also asked to examine the consumption of wine, various commodities and manufactures in France in England, and it was particularly requested that the observation and notification of foreign trade and manufactures should be done in secret.<sup>414</sup>

In May 1669, Colbert's letter to an official in Holland also conveyed the king's request for secret information about the Dutch trade, details including the quantity and quality of tolls levied on the rivers, the prices of goods, etc.<sup>415</sup> In a letter to the Venetian ambassador in August 1669, Colbert also conveyed the king's request that he should make careful enquiries about the state of the glass and sewing factories in Venice and Murano, including production, marketing, and the situation of French fabrics there, etc. He also gave special instructions to "conduct these

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<sup>413</sup> Pierre Clément, eds. *Lettres, instructions et mémoires de Colbert, publiées par Pierre Clément. Tome II. IIe partie. Industrie, commerce*. Paris: Imprimerie imperiale, 1863. "Instruction de Jean-Baptiste Colbert (secrétaire d'Etat de la Marine et de la Maison du roi) aux consuls de France à l'étranger datée du 16 mars 1669, à Paris (correspondence)"

<sup>414</sup> Pierre Clément, eds. *Lettres, instructions et mémoires de Colbert, publiées par Pierre Clément. Tome II. IIe partie. Industrie, commerce*. Paris: Imprimerie imperiale, 1863. "Lettre de Jean-Baptiste Colbert (secrétaire d'Etat de la Marine et de la Maison du roi) à Charles Colbert de Croissy (ambassadeur en Angleterre) datée du 20 mars 1669 (correspondence)"

<sup>415</sup> Pierre Clément, eds. *Lettres, instructions et mémoires de Colbert, publiées par Pierre Clément. Tome II. IIe partie. Industrie, commerce*. Paris: Imprimerie imperiale, 1863. "Lettre de Jean-Baptiste Colbert (secrétaire d'Etat de la Marine et de la Maison du roi) à l'abbé Jacques de Gravel (résident à Mayence) datée du 17 mai 1669 (correspondence)"

investigations secretly and unobtrusively so that no one can think of the purpose for which you will be conducting them”.<sup>416</sup>

Was there any information about the manufacture of Chinese silk in the reports of the missionaries’ extensive expeditions? The answer should be affirmative, as the study of silk production has been explicitly included in the list of missions of the French Royal Academy of Sciences. At the turn of the seventeenth and eighteenth centuries, the production of silk had long since ceased to be a secret exclusive to China and was widely produced throughout the world; but Chinese silk was still favoured and sought after by European courts and the middle upper classes for its quality, design and prestige. The production of silk was one of the major industries in China, and the missionaries would have had access to and studied Chinese silk production, both imperial and private, during their missionary work at the court, among the scholarly classes and among the people. Those research, particularly on the Chinese imperial silk factory production system would possibly have inspired and influenced France at the same time, which was developing its own textile industry and creating a kingdom of fashion.

In 1943, Fang Hao found evidence from rare primary sources in Western languages, such as *Biography of the Jesuits who entered China before 1773*, the *Collection of Correspondence of the Jesuits*, and the *Orthodox Church’s Compliments*, that Cao Xi must have met with Western missionaries when he was working as a Zhizao official in the imperial silk factory in Jiangning. It also proves that many of the foreign objects in *Dream of the Red Chamber*, the semi-autobiographical novel of Cao Xueqin who was the grandson of Cao Xi, were introduced in this way.<sup>417</sup> And Huang Long points out that the Cao family of the imperial silk factory in Jiangning, being imperial merchants, were involved in many foreign missions to receive missionaries at the request of the imperial court.<sup>418</sup>

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<sup>416</sup> Pierre Clément, eds. *Lettres, instructions et mémoires de Colbert, publiées par Pierre Clément. Tome II. IIe partie. Industrie, commerce*. Paris: Imprimerie imperiale, 1863. “Lettre de Jean-Baptiste Colbert (secrétaire d’Etat de la Marine et de la Maison du roi) à Nicolas Prunier de Saint-André (ambassadeur à Venise) datée du 16 août 1669 (correspondence)”

<sup>417</sup> Fang Hao. *Collection of Fang Hao*. Beijing: Beiping Shangzhi Compilation House, 1948.

<sup>418</sup> Huang Long. *A new examination of the foreign aspects of the Dream of the Red Chamber*. Nanjing: Southeast University Press, 1989.

Mau Chuan-Hui studied in her dissertation surveys carried out by French investigators spread over more than two centuries, since the earliest Jesuits to later scientists. “The Jesuits managed to acquire Chinese works, including sericulture, mulberry seeds and industrial plants, through exchanges with emperors and scholars, but also with court gardeners. They also collected useful information, either from Chinese craftsmen (farmers and gardeners, etc.) or by their own observations.”<sup>419</sup> French scholars of eighteenth and nineteenth centuries were not blindly imitating Chinese sericulture processes, but studied it in a scientific way and tried to develop it. Sericulture techniques had circulated first from China to France and then returned to China with a French retouch.

From the retracing of silk weaving techniques through China to France and back to China , it can also be assumed that in the seventeenth and eighteenth centuries, France may have critically adopted Chinese sericulture techniques, or even the production model of Chinese imperial silk factories; and incorporated them into its manufacture system, taking into account French conditions. Unfortunately, no detailed missionary reports on the imperial silk factories have been found, but in the following chapters, a comparison will be made between the two sides of France and China in terms of management, division of labour, production processes and distribution channels, etc. thus proving the thesis’ conjecture that the imperial silk factories of the Kangxi had an influence on the French court-supplying silk factories.

And is the subject of this research, is Louis XIV’s court supplying silk factories a mirror reflection of Kangxi’s imperial silk factories? Unfortunately, it has not been sought direct evidence for Colbert’s comments on Chinese government silk production, and perhaps the large number of missed documents in Colbert’s letters of 1661-1669, particularly those relating to the East India Company, are not unconnected to this. In the notes to the Colbert Correspondence collection, the editor states: “There are considerable gaps in Colbert's correspondence between 1661 and 1669, mainly concerning finance, industry and commerce. In particular, there are no letters from him relating to the founding of the East India Company and the West India Company, which would have been very illuminating; however, most of the letters written to

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<sup>419</sup> Mau Chuan-Hui. “L’introduction en Chine des Techniques Européennes de l’Industrie de la Soie, de la Guerre de l’Opium au Début du XXe Siècle.” *Études Chinoises*. vol. 20, n°1-2, Printemps-Automne 2001.

him on this subject do exist and offer curious insights into this part of his administration. In the introduction you will find some details about the founding of these famous companies, and in the appendix, a statement of the establishment of the East and West India Company in August 1664.”<sup>420</sup>

However, the influence of the East is evident in the craftsmanship, the ideas and the form of organisation of the literary intelligentsia of the Petit Collège; in the context of the relentless search for information and the tactics of commercial espionage, it would have been difficult for Colbert to avoid taking an interest in the government factories, which represented the highest level of technology in the silk kingdom. In the next chapter, a further detailed analysis will be made in terms of the state economy, the production processes and the administration system of the both, to confirm the links between the royal silk factories of the East and the West.

## **Chapter IX Comparisons between the Two Silk Factories**

### **9.1 State and economy**

The influence of central power on the production of silk in the country can be observed very clearly in both cases of the imperial silk factories in China and the court-supplying silk factories in France at the turn of the 17th and 18th centuries. The central authority, with its economic control and administrative power, planned, designed, produced and marketed silk production, which represented the highest level of the country. The government and economy have always been closely linked, with the Chinese imperial handicrafts industry, which had existed since ancient times, reaching an extremely prosperous stage during the Kangxi period; on the other hand, the mercantilist economic line of France under Louis XIV, which undoubtedly brought the crown's influence on the country's silk industry to its peak. In this section of the thesis, the focus will be on how the central authorities in China and France

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<sup>420</sup> Pierre Clément, eds. *Lettres, instructions et mémoires de Colbert, publiées par Pierre Clément. Tome II. IIe partie. Industrie, commerce*. Paris: Imprimerie impériale, 1863. “Lettre de Jean-Baptiste Colbert (surintendant des Bâtimens, arts et manufactures de France) aux présidents et trésoriers généraux de France à Bourges datée du 20 novembre 1664, à Paris (correspondence)”.

influenced and controlled the manufacturing industry at the turn of the seventeenth and eighteenth centuries respectively.

Since ancient times China's institutional environment has been crucial to the country's economic development, the government-run handicraft economy has always been a feature of the Chinese economy in feudal society. In addition to the production of luxury goods for the imperial family and the government, the government handicraft industry also included the construction of palace buildings, the building of government offices, the production of weapons, the minting of coins and other public facilities, as well as the government monopoly of salt, iron, wine and tea, etc. Dating back to the Shang and Zhou periods (c. 1600 BC - 256 BC), there has been a saying that “government controlled and supported artisans and merchants [gōng shāng shí guān 工商食官]”<sup>421</sup>, and the centralised power kept a large number of skilled craftsmen and professional merchants to provide the ruling class with all the luxury goods they needed.

The handicrafts industry was already well developed and the division of labour was already very detailed, including metalworkers, carpenters, jade workers, stone workers, potters, weavers, leather workers, weapons makers and so on, known as the “hundred craftsmen”.<sup>422</sup> The development of handicrafts and the fine division of work in society also provided an abundant and skilled labour force for the flourishing of state-controlled production, which was often of a servitude nature, although it was also paid a certain amount of money. In the first year of Xuande in the Ming Dynasty (1426), the Ministry of Works was ordered to “retain one person in every artisan household of two or three persons, two persons from a household of four or five persons, and three persons from a household of six or more persons” to be employed in state-run handicraft workshops.<sup>423</sup> This was the basic means of obtaining labour for the imperial craft industry, and was a common practice in the feudal society of the Ming and Qing dynasties. As to the choice of labours, it was not allowed “hiding the dexterous and supplement

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<sup>421</sup> Zuo Qiuming 左丘明. *Discourses of the States 国语*. (4th century BC) Shanghai: Shanghai Ancient Book Publishing House, 2015.

<sup>422</sup> Zuo Qiuming 左丘明. *Discourses of the States 国语*. (4th century BC) Shanghai: Shanghai Ancient Book Publishing House, 2015.

<sup>423</sup> Guo Hou'an 郭厚安. *Selected Economic Information from the Ming Records*. Beijing: China Social Science Press, 1989.

them with the clumsy, avoiding the heavy for the light”, so that the craftsmen in the government workshops were all “strong and skilful”. Before the abolition of the artisan registry system, artisans who escaped from state service were often “punished” or “ordered to be sent to the capital” and forced to work in the imperial factories.<sup>424</sup>

In addition to state-controlled production, the central power also valued and controlled trade, directly operating a certain scale of commerce to meet the needs of the royal family and the various levels of administration system. The merchants who worked directly for the royal family and the government were known as the “inner court merchants [nèi cháo shāng jiǎ 内朝商贾]” and served mainly to identify the grades and prices of goods contributed to the royal family, as well as to purchase daily necessities and luxury goods such as livestock, gold, silver, jewellery and textiles for the royal family.

The three imperial silk factories of Kangxi period were typical examples revealing the maturity of the feudal state-run handicraft industry, producing a wide range of luxury silk goods for the daily life and administrative needs of the Qing royal family and bureaucracy, under a management system that had been developed over several dynasties by the most skilled weavers in China at the time. As mentioned in Part III above, when the imperial silk factories were restored in the early Qing dynasty, the intention was to reform the scattered local silk factories in the Ming dynasty by centralising production and “setting a sum of money and food supply, buying silk material and recruiting craftsmen [é dìng qián liáng mǎi sī zhāo jiàng 额定钱粮, 买丝招匠]”<sup>425</sup>. The imperial silk factories bought raw silk in advance, the loom claimers [jī hù 机户] then recruited craftsmen to weave according to the prescribed pattern, and then handed over finished silk fabrics to the imperial silk factories.

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<sup>424</sup> Guo Hou'an 郭厚安. *Selected Economic Information from the Ming Records*. Beijing: China Social Science Press, 1989.

<sup>425</sup> First Historical Archives of China. Shunzhi Dynasty Inscriptions, Letter 477, No. 21, eighth year of Shunzhi, Minister of Household Affairs, Ge Dahong, “Requesting royal decree to dispense with the Dispatching of looms to people of Jiangsu and Zhejiang”. 中国第一历史档案馆, 顺治朝题本, 第477函, 第21号, 顺治八年, 户部尚书葛达洪“题为请敕免派机户以苏江浙民困事”. In Fan Jinmin 范金民. *Study on Jiangnan Silk in the Ming and Qing Dynasties 明清江南丝绸史研究*. Nanjing: Jiangsu People's Publishing House, 2016.

In the imperial silk factories, the sources of money and food supply required for production and the quality of the silk fabrics produced were strictly regulated. At the same time, the Qing court also strictly controlled the appointment of management, the selection of officials and their duties were all issued by royal decrees; the selection of loom claimers was gradually institutionalised, laws were enacted to avoid corruption and profit-making activities through imperial silk factories; Meanwhile, silk fabrics had to be manufactured in strict accordance with the designs and patterns laid down by the court. The transport of finished products to the court was also regulated in terms of time and mode of transport, and there was an explicit prohibition on “carrying merchant ships at the same time”.

It could be obviously observed that in the Kangxi period, the imperial silk factories were fully subordinate to the central power, under its sole control, and provided silk production services exclusively to the court and the bureaucratic administration. They were not producing for products distributing to the market and profit making; nevertheless, they did have an impact on the state economy in general and in particular on the Jiangnan region, where the official weavers were located. The imperial silk factories acquired labour sources of a large number of individual silk weavers, they were supplied with production materials such as raw silk, dyes and production tools allocated straightforwardly by the centralized power. The silk weaving skills of the private silk weaving industry, which had been matured over a long history, also served as a source of technology for the central government; although in the private sector, silk weavers were closed and conservative with their techniques in order to reserve their competitiveness in the market, these technical knowledges shouldn't be kept secret from the government. Production in the imperial silk factories did not follow the laws of the market value, but was maintained by the ruling class through bureaucratic administrative means. Although, as has been the focus of traditional studies, the imperial silk factories restricted the personal freedom of weavers and exploited them severely; its management was often pervasive and costly; however, in terms of technological development and diffusion, the imperial silk factories were often the creators of the latest technological inventions and the standard for top quality and design in the silk weaving industry, due to the availability of a sufficient number of expert artisans, the crystallization of highly developed folk weaving skills, a pursuit for



innovative design, first-rate quality regardless of cost, and a relatively unobstructed exchange of information.

On the other side, in France under Louis XIV, the Minister of Commerce, Colbert, was strongly encouraging the revival of industry and commerce. In a letter to the citizens of Marseilles in 1664, Louis XIV expressed the importance he attached to the resumption of trade within the kingdom and abroad, convening regular meetings to examine and resolve issues relating to the interests of merchants and to discuss ways of achieving a revival of trade and manufacturing; and allocating funds to this strategy. “We shall also tell you that we are allocating, in the expenses of our State, one million livres each year for the re-establishment of the factories and the increase in navigation, without including other more considerable sums which we are having formed to supply the East and West India companies; That we will have all those who wish to undertake the re-establishment of the old manufactures, or who propose new ones, assisted by the funds of our royal treasury.”<sup>426</sup>

In France at the time, Colbert promoted mercantilism, which essentially held that the aim of all economic activity should be to enhance the solidity of the central authority of the state. The economy was put at the service of a policy that was not a new economic idea at the time, yet Colbert analysed the situation of the French economy and in particular its weaknesses, brought about a revival of French commerce with his decrees of execution and order. “Colbert considered himself, not a thinker, but a doer who acted on grounds of well-established reasoning. He made no reference to the works of men such as Montchrétien, Laffemas, Bodin, or Eon. He had possibly never read them nor even heard of them. He probably derived his economic philosophy from discussion, and governmental precedents. It was in the very air about him in seventeenth-century France. Mercantilist thinking that had been burgeoning there for a half-dozen generations bore its fruit in Colbert, not because he was a thinker who saw more deeply into its problems or reasoned better from its premises, but because he was a man of action, vested with power, who accepted the mercantilist concepts as the only natural and logical way

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<sup>426</sup> Pierre Clément, eds. *Lettres, instructions et mémoires de Colbert, publiées par Pierre Clément. Tome II. IIe partie. Industrie, commerce*. Paris: Imprimerie imperiale, 1863. “Lettre de Louis XIV (roi de France) aux échevins et habitants de Marseille datée du 26 août 1664 (correspondence)”.

of attaining the end which he sought - a powerful and wealthy France, united under a glorious monarch.”<sup>427</sup>

Colbert considered the economy as a whole with the state being the main body, hoping to organise its development through the centralisation of the state. Colbert summed up his doctrine by saying, “As in these three points consists the greatness, the power of the State and the magnificence of the King by all the expenses which the great revenues give occasion to make, which is all the extra raised as it lowered at the same time all the neighbouring States.”<sup>428</sup> He believed in the principle of enrichment through the accumulation of precious metals, that the level of wealth of a nation was reflected in its silver, and that the strength of a nation was proportional to the amount of silver it possessed. The growth of the state’s finances and economic income was based on increasing the amount of silver coins that circulated in the kingdom. Colbert’s aim was to bring precious metals into France in large quantities to fill the treasury, thus consolidating the stability of the regime and asserting the king's authority.

Such a mercantilist approach to the management of the national economy has been described by Richard F. Kuisel as the “Gallic style”, in which state, enterprise and market were combined.<sup>429</sup> Such innovative management concepts of that time were concentrated in industrial manufacturing, and Edgar Faure described Colbert’s administration style as “the awareness of the modern economy by France, at the highest governmental level”.<sup>430</sup> Mercantilist strategies were used in more or less all European countries of the time, whereas France in particular “concentrated the innovative development of industry and politics in the will of the politicians”.<sup>431</sup> Heckscher explains this mercantilist method as “power is perceived as an end in itself, and economic life is mobilised for political purposes”.<sup>432</sup>

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<sup>427</sup> Charles Woolsey Cole. *Colbert and a Century of French Mercantilism*. (New York: Columbia U.P, 1939)

<sup>428</sup> Pierre Clément. *Lettres, instructions et mémoires de Colbert, publiées par Pierre Clément. Tome II. Ite partie. Industrie, commerce*. (Paris: Imprimerie imperiale, 1863).

<sup>429</sup> Charles Woolsey Cole. *Colbert and a Century of French Mercantilism*. (New York: Columbia U.P, 1939)

<sup>430</sup> Richard F. Kuisel. *Capitalism and the State in Modern France: Renovation and Economic Management in the Twentieth Century*. Cambridge : Cambridge University Press, 1983.

<sup>431</sup> Guery Alain. “Industrie et Colbertisme; Origines de la Forme Française de la Politique Industrielle?” *Histoire, Economie et Société*. 1989, 8<sup>e</sup> année, n°3. L’industrialisation.

<sup>432</sup> Smedley-Weill Annette. “La gestion du commerce français au XVIIe siècle : impulsions gouvernementales et besoins des échanges”. *Histoire, économie et société*, 1993, 12<sup>e</sup> année, n°4

Colbert believed that the key to raising state revenues lay in encouraging the production of goods in France that sold at high prices abroad. The State's intervention in the sixteenth century, when it issued customs decrees for Lyon on the weaving of silk in gold and silver,<sup>433</sup> allowed Lyon to prosper in the eighteenth century on the basis of protected factories, despite certain obstruction of merchants or manufacturers; which also gave Colbert reason to be determined to intervene in the economy through a series of decrees or regulations to protect and promote the state industry.<sup>434</sup> Colbert had a strong central authority behind him in order to be able to use the administrative work of the King's ministers and officials at all levels, as well as the public service network at all levels, to implement his industrial and commercial plans. "Louis XIV aided this programme by silencing Parliament and concentrating some of his authority in the hands of agents who wanted greatness only as an emanation of his own."<sup>435</sup>

The manufacturing and industry fields, where centralised administration could be more effective than in other sectors, were the focus of Colbert's attention and where he believed the country's wealth lay. The specific programme adopted by the mercantilist strategy consisted above all in giving weight to the opinions of businessmen. Colbert chose three advisers from among important business people in each of the ports and industrial cities and summoned them to Paris to seek their advice in order to deploy plans that would revitalise French commerce and increase the country's heavy metal revenues. The mercantilist system advocated by Colbert was also reflected in taxes and tariffs designed to restrict imports, encourage exports and promote free trade within the country, drawing precious metals in and allowing them to circulate rapidly within the country. As Colbert's memorandum of 1670 states, "give some means of establishing the same manufactures in the kingdom", thus restricting the entry of foreign goods, denying unnecessary imports and keeping the wealth within the country.<sup>436</sup>

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<sup>433</sup> Note: Creation of the Lyon customs by ordinance of 18 July 1540, issued at Anet by François I, Edits and Ordinances, op. cit, Tome II, pp. 399-401. From: Smedley-Weill Annette. "La gestion du commerce français au XVIIe siècle : impulsions gouvernementales et besoins des échanges". *Histoire, économie et société*, 1993, 12<sup>e</sup> année, n°4

<sup>434</sup> Smedley-Weill Annette. "La gestion du commerce français au XVIIe siècle : impulsions gouvernementales et besoins des échanges". *Histoire, économie et société*, 1993, 12<sup>e</sup> année, n°4

<sup>435</sup> A. Chérueil. *De L'administration de Louis XIV (1661-1672), d'après les Mémoires Inédits d'Olivier d'Ormesson*. South Yarra: Leopold Classic Library, 2015.

<sup>436</sup> Pierre Clément. *Lettres, instructions et mémoires de Colbert, publiées par Pierre Clément. Tome II. IIe partie. Industrie, commerce*. (Paris: Imprimerie imperiale, 1863).

## 9.2 Regulations for production processes, economic measures by the royal power

The practice of state economic policy had to be implemented through decrees and regulations, through the state administration and enforcement system, in order to achieve economic reform. Colbert's written records contain very few theoretical works, but rather memoirs, instructions, letters sent to administrations.<sup>437</sup> The benefits derived from these direct instructions and regulations, which restricted imports, encouraged exports and enhanced the tax system, were undeniable for the country's industrial development. From the time of Louis XI in the fifteenth century, the French royal power intervened directly in the country's sericulture and weaving industry through decrees and regulations, and up to the time of Louis XIV, the establishment of royal factories was designed and managed directly by the royal power.

The first means of intervention by the royal power in the national economy was through commissions or councils of trade. In the mid to late fifteenth century, Louis XI showed his interest in commercial matters by convening a kind of informal council to listen to the merchants and respond to their demands. In 1470, for example, he discussed with the merchants of Tours how to encourage trade. Until the sixteenth century, there were still no special economic institutions, but the king could still issue rulings to intervene and direct trade and industrial and agricultural production. The first official commission was established under Henry IV, when the Letters Patent of 1601 were issued and announced the establishment of a commission composed of members of the various sovereign courts to re-establish the kingdom's trade and manufactures.<sup>438</sup> Meanwhile, Henry IV encouraged sericulture to free France from imports: thousands of mulberry trees were planted and silkworm eggs distributed; nevertheless, it was Colbert who took the most remarkable measures to develop this industry.<sup>439</sup>

Colbert, then intendant of finance, organised in 1664 an independent trade council, different from the previous ones, with a very governmental composition and the ability to issue

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<sup>437</sup> Guery Alain. "Industrie et Colbertisme; Origines de la Forme Française de la Politique Industrielle?" *Histoire, Economie et Société*. 1989, 8<sup>e</sup> année, n°3. L'industrialisation.

<sup>438</sup> Smedley Weill Annette. "La Gestion du Commerce Français au XVIIe Siècle : Impulsions Gouvernementales et Besoins des Echanges." *Histoire, Economie et Société*. 1993, 12<sup>e</sup> année, n°4

<sup>439</sup> Marie-France Du Castillon, Françoise Lauwaert. *Musée Royal de Mariemont. Morlanwelz, Belgique, Catherine Talon-Noppe. La Chine au Fil de la Soie Techniques, Styles et Société du XIXes*. Morlanwelz : Musée royal de Mariemont, 1988.

rulings, with Hugues de Lionne, Secretary of State for Foreign Affairs, Michel Le Tellier, Secretary of State for War, Colbert, the chancellor Pierre Seguier, and the Duke of Villeroy, Alexandre de Sève and Etienne d'Aligre all involved.<sup>440</sup> On 6 June 1662, Colbert bought the Gobelins hotel to establish a tapestry factory, two hundred and fifty tapestry makers were brought together, mainly Flemish, but also Italian and French. In December 1667, letters patent established the Royal Manufacture of Crown Furniture at the Gobelins, adding furniture and lighting to the production of tapestries.<sup>441</sup> The Royal Factory at Gobelins, headed by Charles Le Brun, one of the most famous French painters of the time of Louis XIV, produced silk carpets suitable for palace decoration, exclusively for the royal family. The Royal Factory at Beauvais, on the other hand, was for private clients and was directed by a master decorator Philippe Behagle.<sup>442</sup>

In accordance with the vision of external economic relations, Colbert sought to control the whole system of corporations within the kingdom. In July 1667, Colbert as comptroller-general of finance, issued an official letter to merchants and the aldermen of Lyon, "By order of the king, I send you the statutes and by-laws of the silk trade of the city of Lyon, Artogether with the approbation and confirmation of these statutes and by-laws, and the warrant of the committee which approved and confirmed them, and the committee concerning them, are sent to you so that you may read, publish and post them in your common quarters and in the registers of the merchant community, and that you shall print them and take care that copies are distributed to merchants and workers, for whom you shall draw up a list and submit to them the documents that meet their requirements so that they are punctually enforced." It also claimed that the same regulations were enforced in Paris and Tours and requested detailed reports from local enforcers.<sup>443</sup> Through the best-known edict of 1673, Colbert brought the industries that had escaped from the guilds into this system, and therefore for the most part the newest ones.

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<sup>440</sup> Smedley Weill Annette. "La Gestion du Commerce Français au XVIIe Siècle : Impulsions Gouvernementales et Besoins des Echanges." *Histoire, Economie et Société*. 1993, 12<sup>e</sup> année, n°4

<sup>441</sup> Sabatier Gérard. "La Gloire du Roi. Iconographie de Louis XIV de 1661 à 1672." *Histoire, Economie et Société*. 2000, 19<sup>e</sup> année, n°4.

<sup>442</sup> Sabatier Gérard. "La Gloire du Roi. Iconographie de Louis XIV de 1661 à 1672." *Histoire, Economie et Société*. 2000, 19<sup>e</sup> année, n°4.

<sup>443</sup> Pierre Clément, eds. *Lettres, instructions et mémoires de Colbert, publiées par Pierre Clément. Tome II. IIe partie. Industrie, commerce*. Paris: Imprimerie imperiale, 1863. "Lettre de Jean-Baptiste Colbert (contrôleur général des finances) à Constans de Silvecane (prévôt des marchands de Lyon) et aux échevins de Lyon datée du 15 juillet 1667, à Paris (correspondance)"

This was only seen as his desire to control the whole of economic life, especially as these measures were accompanied by attempts to bring all the corporations under the direction of the royal government.<sup>444</sup>

The establishment of the representative assembly was a typical move by the French royal power to regulate industry, and its by-laws were spelt out in the “Statute of Manufactures” of August 1669, article 59 and the last article, which also included provisions on the quality of cloth and fabrics. “And to know whether the guards and jurors are well discharging their duties, and whether the present regulations are fully enforced. At the same time, to seek more ways to improve the said manufactures, and to increase the trade, in all the cities and boroughs of the kingdom, that is, where there are and will be institutions and communities of master tailors and sewers.”<sup>445</sup> The factories were equipped with police officers to monitor the enforcement of the law and to maintain order, and in January each year the factory police must call in the guards and jurors in charge of the urban trades, with two notable burghers, therefore the assembly was informed of the situation of production and trade and could propose means for their perfection, the observance of the regulations and the remedies which would be appropriate to bring to the defects and contraventions. A report must be drawn up by the manufacturing officers and sent to the Superintendent of Arts and Manufactures in France. This is a sort of local trade council in the form of a representative assembly. All the important cities were solicited, but with little result. Colbert created factory inspectors to ensure the application of the 1669 ordinance, but in many towns, article 59 was not executed. However, these measures show the concern of the royal power to take into account commercial activities when deciding on government measures.<sup>446</sup>

In addition to regulating the manufacturing industry through the enactment of laws and regulations and the strict monitoring of their implementation, Colbert also sought to use fashion trends to lead to new ways of consuming and thus to guide the manufacturing industry. “Colbert lived in an age when luxury socially distinguished classes, when it was an indispensable means

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<sup>444</sup> Guery Alain. “Industrie et Colbertisme; Origines de la Forme Française de la Politique Industrielle?” *Histoire, Economie et Société*. 1989, 8<sup>e</sup> année, n°3. L’industrialisation.

<sup>445</sup> Pierre Bonnassieux. *Les Assemblées Représentatives sous l’Ancien Régime*. Paris: Berger-Levrault, 1883.

<sup>446</sup> Smedley Weill Annette. “La Gestion du Commerce Français au XVIIe Siècle : Impulsions Gouvernementales et Besoins des Echanges.” *Histoire, Economie et Société*. 1993, 12<sup>e</sup> année, n°4

of posing and socially positioning oneself.” Colbert aspired to lead a new way of spending and a model of prestige consumption in industry and manufacturing, just as he had done with his innovations in state finance.<sup>447</sup> Colbert responded to the social tastes of the time for luxury and its role in the display of social status, contributing to a new model of economic activity through its linkage to the social economy. Luxury as an important factor in constituting prestige, Colbert sought to channel and exploit it. Several academies were established under the power of centralisation, such as the Petit Academia, where scholars, elites and artists from the world of ideas, culture and art were brought together to set the tone and shape the tastes of society in terms of art and fashion trends. The Academy also nurtures and sponsors artists and scholars, for example by arranging study trips to Italy for sculptors. “The academies are to culture what factories are to economy, with strict production rules, the same demand for quality and an orientation, an obligatory interest of one towards the other.”<sup>448</sup>

The silk weaving protocols were designed to cover all aspects of the industry, including the design of the production process and detailed regulations on the various production steps. Among these rules for the length of silk weaving, there are no less than forty-four guidelines and instructions on the same subject between 1666, when Colbert made his first regulations on the manufacture and factories of the kingdom, and 1683.<sup>449</sup> Colbert compiled extremely detailed decrees, once codifying the production step of applying dye to a canvas, stating that “their duration should be equal to that of the goods to which it is applied”.<sup>450</sup>

Colbert has repeatedly affirmed the importance of the regulations in his letters and commented on the enforcement of the manufacturing industry. He declared in a letter to the intendant of Amiens in 1670, “the only way to make the manufactures perfect and to establish good order in the trade, consisting in making them all uniform, is to have the general regulation of the year 1669 punctually executed; all the more so as it is easy to obey it, and that in the

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<sup>447</sup> Guery Alain. “Industrie et Colbertisme; Origines de la Forme Française de la Politique Industrielle?” *Histoire, Economie et Société*. 1989, 8<sup>e</sup> année, n°3. L’industrialisation.

<sup>448</sup> Guery Alain. “Industrie et Colbertisme; Origines de la Forme Française de la Politique Industrielle?” *Histoire, Economie et Société*. 1989, 8<sup>e</sup> année, n°3. L’industrialisation.

<sup>449</sup> Granat O. “L’industrie de la draperie à Castres au dix-septième siècle et les « ordonnances » de Colbert (suite).” *Annales du Midi : revue archéologique, historique et philologique de la France méridionale*. Tome 11, N°41, 189

<sup>450</sup> Guery Alain. “Industrie et Colbertisme; Origines de la Forme Française de la Politique Industrielle?” *Histoire, Economie et Société*. 1989, 8<sup>e</sup> année, n°3. L’industrialisation.

future the workers will find their advantages there.” The regulation of 1669, called par excellence the regulation or ordinance, rules: “on the length, width and quality of sheets, serge and other fabrics of wool and thread which His Majesty wishes to be observed by all drapery merchants, drapery masters, serge workers and tailors of the cities, towns and villages of his kingdom. For this purpose, I therefore consider that they must work, in the course of this month, on the reformation of their looms, so that they put the number of threads and spans suitable for the width, strength and goodness of the fabrics, and that the goods which will be, during the said month only, of a particular mark, which will be broken in your presence after it has expired, will have their flow. This is what I beg you to do, so that all the factories in the kingdom may be of equal length and width, and that the public may obtain the benefit which the King has promised himself.”<sup>451</sup>

In Colbert’s letter to the intendant of Alecon in 1670, it was stated that the intendant could make decrees to regulate the number and span of threads used in the weaving process and the width that the finished fabric must have; also, textiles were required to be marked with wax and carefully inspected before they could be sold. “According to the general regulation of the manufactures of August 1669, the frocks, after having been trodden, had to be half a yard wide by twenty-four to twenty-five yards long. The manufacturers were required to write their name and address on the head of each piece before it was taken to the fuller.”<sup>452</sup>

The regulations issued for the textile industry also included a requirement to keep books of account to prevent fraudulent bankruptcy. Colbert wrote to the provost of the merchants of Lyon in May 1670, stating that the king had been told that fraudulent bankruptcy was causing great confusion in business activities because most merchants did not keep proper and detailed records of their books, diaries and inventories; or simply wrote down their purchases, loans or borrowings in a confusing manner on bills of exchange. By issuing an order requiring the

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<sup>451</sup> Pierre Clément, eds. *Lettres, instructions et mémoires de Colbert, publiées par Pierre Clément. Tome II. IIe partie. Industrie, commerce*. Paris: Imprimerie imperiale, 1863. “Lettre de Jean-Baptiste Colbert (surintendant des Bâtiments, arts et manufactures de France) à Jean-Paul de Barrillon d'Amoncourt (intendant d'Amiens) datée du 07 mars 1670, à Saint-Germain-en-Laye (correspondance)”

<sup>452</sup> Pierre Clément, eds. *Lettres, instructions et mémoires de Colbert, publiées par Pierre Clément. Tome II. IIe partie. Industrie, commerce*. Paris: Imprimerie imperiale, 1863. “Lettre de Jean-Baptiste Colbert (contrôleur général des finances) à Bernard-Hector de Marle de Versigny (intendant d'Alençon) datée du 02 août 1670, à Saint-Germain-en-Laye (correspondance)”



keeping of books of account, it was possible to distinguish the fraudster from the true insolvent in the event of a possible insolvency, and thus make the commercial fraudster liable to punishment.<sup>453</sup>

Colbert's extremely detailed and punitive decree regulations caused a great deal of volatility in the industry, "The large register of the cloth factories from 1670 to 1673 is full of recriminations of all kinds, numerous denunciations, sometimes ill-founded, and various condemnations to fines or even to prison. In the four months which followed the application of Colbert's orders, there were twenty-nine various condemnations and 89 pounds of fines were imposed."<sup>454</sup>

Colbert's letter to the police officer of Paris in 1669 reflected that most workers in the manufacturing industry within the kingdom did not comply with these statutes and ordinances, and for which many workers were even arrested in certain cities where the statutes and ordinances were already established. And the Royal Commission of Trade, which aimed to strictly monitor and enforce these ordinances and regulations, required that the enforcement authorities must "carefully publish, post and notify the jurors of the cloth merchants and sergeants who are in the area of your jurisdiction, and that must ensure its punctual execution." Through such strict controls, locally manufactured products were made to conform to the lengths and widths specified in the decrees and regulations; and it was also stipulated that products must be inspected locally before they were sold, and that products that do not meet the quality requirements must be confiscated, and police officers who neglect their duties will also be punished.<sup>455</sup>

At the same time, Colbert also sought to increase the efficiency of the law and regulations by adding to the enforcement system businessmen who were familiar with manufacturing. In

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<sup>453</sup> Pierre Clément, eds. *Lettres, instructions et mémoires de Colbert, publiées par Pierre Clément. Tome II. IIe partie. Industrie, commerce*. Paris: Imprimerie imperiale, 1863. "Lettre de Jean-Baptiste Colbert (secrétaire d'Etat de la Marine et de la Maison du roi) à Constans de Silvecane (prévôt des marchands de Lyon) datée du 14 mai 1670, à Paris (correspondance)"

<sup>454</sup> Granat O. "L'industrie de la draperie à Castres au dix-septième siècle et les « ordonnances » de Colbert (suite)." *Annales du Midi : revue archéologique, historique et philologique de la France méridionale*. Tome 11, N°41, 189

<sup>455</sup> Pierre Clément, eds. *Lettres, instructions et mémoires de Colbert, publiées par Pierre Clément. Tome II. IIe partie. Industrie, commerce*. Paris: Imprimerie imperiale, 1863. "Lettre de Jean-Baptiste Colbert (surintendant des Bâtiments, arts et manufactures de France) aux officiers de police datée du 18 mars 1669, à Paris (correspondance)"

Colbert's letter of 1670 to the intendant of Tours it is mentioned that the silk merchants of Tours had presented a petition to the king, alleging that the 24 aldermen of the body which enforced the statutes and ordinances of the mills in the city did not know much about manufacturing, and that the silk workers had been excluded from the city council. Colbert also considered that it should be possible to heed the demands of the silk workers and to take some remedy for the complaints they had made; and proposed that the number of the twenty-four aldermen should be reduced to twelve, and that of the twelve retained there should always be two garment merchants and two silk workers elected, and that of the six appointed to judge the facts of manufacturing there should be at least one garment merchant and one silk worker.<sup>456</sup>

Colbert constantly demanded greater municipal supervision of the enforcement of ordinances and regulations on manufacturing, and in a letter to the consulate of Dijon in 1670 he expressed his satisfaction with the state of the manufacturing factories in Auxerre, especially the sewing and knitting factories; he pointed out that the mayor and councillors should be determined not to tolerate irregularities, otherwise the consequence would only be the destruction of the manufacturing industry in their own city.<sup>457</sup> In 1670 Colbert complained to the mayor of Amiens about the constant violation of the provisions of the manufacturing ordinances by the manufacturers of the city, declaring that the king had given orders in the provinces for officials to act in the enforcement of the legal regulations of manufacturing, to inspect and confiscate goods that did not conform to the regulations, and to punish dishonest merchants and workers.<sup>458</sup>

In contrast to the French silk industry, which was regulated and supervised through the numerous legal regulations detailed by Colbert, strict protocols and harsh punitive mechanisms

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<sup>456</sup> Pierre Clément, eds. *Lettres, instructions et mémoires de Colbert, publiées par Pierre Clément. Tome II. IIe partie. Industrie, commerce.* Paris: Imprimerie imperiale, 1863. "Lettre de Jean-Baptiste Colbert (surintendant des Bâtiments, arts et manufactures de France) à Jean-Baptiste Voysin de La Noiraye (intendant de Tours) datée du 15 janvier 1670, à Saint-Germain-en-Laye (correspondance)"

<sup>457</sup> Pierre Clément, eds. *Lettres, instructions et mémoires de Colbert, publiées par Pierre Clément. Tome II. IIe partie. Industrie, commerce.* Paris: Imprimerie imperiale, 1863. "Lettre de Jean-Baptiste Colbert (surintendant des Bâtiments, arts et manufactures de France) à Louis d'Anglure de Bourlémont (auditeur de rote à Rome) datée du 07 février 1670, à Saint-Germain-en-Laye (correspondance)"

<sup>458</sup> Pierre Clément, eds. *Lettres, instructions et mémoires de Colbert, publiées par Pierre Clément. Tome II. IIe partie. Industrie, commerce.* Paris: Imprimerie imperiale, 1863. "Lettre de Jean-Baptiste Colbert (secrétaire d'Etat de la Marine et de la Maison du roi) à Pierre de Bonzi (ambassadeur à Madrid) datée du 15 mars 1670, à Saint-Germain-en-Laye (correspondance)"

were also effective tools for monitoring the quality of the imperial silk factories in China. From the early days of the Qing dynasty when the imperial silk factories were established, the design of the production chain, the allocation of departmental responsibilities and the specific regulations for punishment were all strictly defined. The penalties for irregularities or mistakes in warp, weft, colour, size, etc. are strictly defined, with financial compensation and cruel bamboo flogging being common forms of punishment. These have been described with more details in Part II.

Besides the harshness and torture inflicted under the centralised feudal system, some of the common failings and shortcomings of the imperial silk factories and the whole weaving industry were still officially decreed. In *A Collection of Ming and Qing Suzhou Industrial and Commercial Inscriptions*, there are a number of provision measures for the production and manufacture of silk, including *Notes on Weaving Warp System* from the fourth year of the reign of Shunzhi (1647), *Record of the Restoration of the Weaving and Dyeing Bureau* in the fourth year of the Shunzhi reign (1647), *Monumental inscriptions to Suzhou government's order for flower satin shopkeepers to pay tax on a household base* of twenty third year of Kangxi (1677), *Monument to the Suzhou imperial silk factories prohibiting cheating by dyers* in the twenty third year of the Kangxi reign (1684), and *Wu County Yarn and Satin Trade Treaty Monument* in first year of Yongzheng (1723), etc. All of this reflects the importance the Qing court attached to the control of silk production, and the stringency of its laws and regulations.

The strict establishment and supervision of decrees and regulations concerning production requirements and methods of punishment were a common and necessary way of producing silk fabrics. However, in seventeenth and eighteenth century France, at a time when the exchange of information, technology and ideas between France and China was rapidly increasing thanks to missionary visits, investigations and correspondence, Colbert's vigorous promotion and quality control of the country's silk industry imposed an unprecedented number of targeted regulations and corresponding punitive mechanisms; its regulations and controls on weavers even went so far as to infringe on personal freedom and gave rise to strong opposition. It is inevitable to wonder whether Colbert learnt about the production methods of the Chinese

imperial silk factories from the findings of the missionaries and used them as a reference to try to control the production of silk fabrics by centralised power.

### 9.3 Appointment of administrative officials and selection of suppliers to the crown

While comparing the management systems of the three imperial silk factories in Jiangnan with those of the French court-supplying silk factories, it is also worth noting the manner in which they appointed their management officials, specifically, how the top management officials of the three imperial silk factories in Jiangnan were chosen, their terms of office, and their areas of responsibility; meanwhile, how the French court-supplying silk factories were selected, by what management officials, and what criteria were used to appoint the officials with decision-making powers, also what were their terms of office and areas of jurisdiction?

At the beginning of the Qing dynasty, the affairs of the imperial silk factories were managed by eunuchs, following the old system of the Ming dynasty. Che Tianxiang, an eunuch who managed the imperial silk factories by the end of the Ming dynasty was “assigned to supervise the money and food supply of silk manufacturing and since June of the fifth year of Shunzhi (1648)”.<sup>459</sup> After the restoration of the three weaving bureaus in Jiangnan, the Qing court set up in each imperial silk factory one supervisor, one secretary [bǐ tiēshì 笔贴式], and one treasury, each for a period of three years, and selected management officials from Ministry of the Treasury since Shunzhi five years. The two imperial silk factories in Suzhou and Hangzhou were originally managed by one official, the administration was separated only since the tenth year of the reign of Shunzhi (1653). In the thirteenth year, the eunuchs were reassigned to manage the imperial silk factories at the term of one year. In the fifteenth year of Shunzhi (1658), it was changed to a three-year term. In the eighteenth year of the reign of Shunzhi, the appointment was changed back to one year.<sup>460</sup>

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<sup>459</sup> First Historical Archives of China. Shunzhi Dynasty Inscriptions, Letter 477, No. 21, eighth year of Shunzhi, Minister of Household Affairs, Ge Dahong, “Requesting royal decree to dispense with the Dispatching of looms to people of Jiangsu and Zhejiang”. 中国第一历史档案馆, 顺治朝题本, 第477函, 第21号, 顺治八年, 户部尚书葛达洪“题为请敕免派机户以苏江浙民困事”. In Fan Jinmin 范金民. *Study on Jiangnan Silk in the Ming and Qing Dynasties 明清江南丝绸史研究*. Nanjing: Jiangsu People’s Publishing House, 2016.

<sup>460</sup> Fan Jinmin 范金民. *Study on Jiangnan Silk in the Ming and Qing Dynasties 明清江南丝绸史研究*. Nanjing: Jiangsu People’s Publishing House, 2016.

In the second year of the Kangxi reign (1663), the number of secretary [bǐ tiēshì 笔贴式] in the imperial silk factories was increased to two and the number of treasurers to three. In the same year, the three imperial silk factories were given permission to assign respectively one wise official, two secretaries and three treasurers to reside in the location of the imperial silk factories forever. In March of the tenth year of Kangxi (1671), the court issued a special imperial edict to the three imperial silk factories for their authority to manage the custom. From the third year of the Kangxi reign, the officials of three imperial silk factories in Jiangnan were appointed for permanent term, instead of the original three-year or one-year schedules.<sup>461</sup> This is also the background to the system in which Cao Xi, who began his tenure as official of Jiangning imperial silk factory in the second year of the Kangxi reign, was subsequently on the post for a long period of twenty years.

The chief official in charge of the imperial silk factories in Jiangnan was known as Zhizao [zhī zào 织造], an official title literally interpreted to mean weaving and manufacturing, as described previously in Chapter II. It was not a very high ranking official, but was appointed directly by the emperor and had the privilege of reporting straight to him, rather like a kind of imperial envoy. Trusted by the emperor because of the background of their close relationship with the royal family, Zhizao officials were not only in charge of the royal silk factories, but also customs and salt copper business, which was state monopoly. It can be assumed that the officials who ran the royal silk factories were themselves members of the social aristocracy with special ties to the royal family.

A total of ninety officials served as Zhizao, either full-time or part-time, during the Qing dynasty, until the Jiangnan imperial silk factories were abolished in the 1904s, a period of 260 years. Taking an example of the Jiangning imperial silk factory, it went through a total of six Zhizao officials during the Kangxi period. The first, Zhou Tiancheng, was promoted to the minister of the Ministry of Works in the ninth year of the reign of Shunzhi and supervised the

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<sup>461</sup> Yi Sang A 伊桑阿 and others, eds. "Vol.1190. Imperial Household Department, Warehouses 卷一一九〇钦定总管内务府现行则例.广储司." *Collected Status of Qing Dynasty/Guangxu Years* 钦定大清会典/光绪. (Qing Dynasty) Nanjing: Phoenix Publishing House, 2016.

imperial silk factory of Suzhou.<sup>462</sup> In the fifteenth year of Shunzhi, he was reappointed to supervise the affairs of the Jiangning imperial silk factory. In 1663, he was promoted to the post of Secretary of the Guanglu Temple and ceased to supervise the weaving affairs.<sup>463</sup> In the second year of the Kangxi period (1663), Cao Xi, a household person for the plain white banner<sup>464</sup>, became a Zhizao official in Jiangning imperial silk factory, thus beginning a sixty-six-year history of the Cao family's prominence from the second year of the Kangxi era to the sixth year of the Yongzheng era (1728). In June of the twenty-third year of the Kangxi period (1684), Cao Xi died of illness on the post of Zhizao official of Jiangning imperial silk factory. The Manchurian white banner man, Sangar, took over as Jiangning Zhizao thereafter until his dismissal in September of the thirty-first year of the Kangxi era, when he was promoted to the position of Governor of Hubei and Guangxi.<sup>465</sup>

Cao Yin [cáo yín 曹寅], son of the former Jiangning weaver Cao Xi [cáo xǐ 曹玺], was formerly a junior official<sup>466</sup> in the Department of Prudence and Punishment in the Ministry of Internal Affairs, and was a senior official in the Salt Administration of the two Huai river regions, with the rank of Minister of General Administration; In the twenty-ninth year of the Kangxi reign (1690), he was appointed as Zhizao official in Suzhou; in the thirty-first year (1692), he was also appointed as Zhizao official in Jiangning imperial silk factory and an salt administration inspector of the two Huai river regions; Since the thirty-second year of the Kangxi reign (1693), he served only as Zhizao official in Jiangning imperial silk factory until his death in the fifty-first year of Kangxi.<sup>467</sup> In the fifty second year of the Kangxi reign, Cao

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<sup>462</sup> Wu Fuyuan 吴幅员, eds. *Recodes of Emperors of Qing Dynasty 清世祖实录*. Taiwan: Taiwan Da Tong Publishing House, 1984.

<sup>463</sup> Zhonghua Publishing House, eds. *Recodes of Emperors of Qing Dynasty 清实录. 圣主仁皇帝实录*. Vol 4-6, *Recodes of Emperor Kangxi*. Beijing: Zhonghua Publishing House, 2008.

<sup>464</sup> Note: White banner baoyi [zhèng bái qí bāo yī 正白旗包衣]. Baoyi is a Manchu word literarily means "Household person", referring to hereditarily servile people in Qing Dynasty. White banner is one of the eight banners of Manchu military and society, is one of the three "upper banners".

<sup>465</sup> Zhonghua Publishing House, eds. *Recodes of Emperors of Qing Dynasty 清实录. 圣主仁皇帝实录*. Vol 4-6, *Recodes of Emperor Kangxi*. Beijing: Zhonghua Publishing House, 2008.

<sup>466</sup> Note: The junior official is Langzhong [láng zhōng 郎中], an official position in the auxiliary department of the court and is of the fifth rank, a middle ranking official dealing with various common affairs.

<sup>467</sup> National Palace Museum, eds. *The Palace Archives of Kangxi Emperor 宫中档康熙朝奏折 Vol.3*. Taipei: National Palace Museum, 1976.

Yin's son, Cao Yong [cáo yóng 曹颢], succeeded his father in the management of the Jiangnan imperial silk factory and died in the fifty fourth year of illness.<sup>468</sup>

Subsequently, Cao Fu [cáo fǔ 曹頌], Cao Yin's nephew and stepson, became the supervisor of the House of Internal Affairs in the fifty fourth year of the Kangxi period (1715) and went to the Jiangning imperial silk factory to manage the supply of satin and silk fabrics and other weaving affairs for royal family as well as the two ministries of household and work departments. In the fifth year of the Yongzheng reign (1727), he was dismissed from his post and had his family censored for shortfalls of “over 31,000 taels of silver in items of satin yarn for the royal court and official use of the Household Department”.<sup>469</sup>

As for the royal silk factories in Suzhou, the most noteworthy Zhizao official was Li Xu [lǐ xù 李煦], who was appointed in the thirty-first year of Kangxi until the sixtieth year of the Kangxi era (1692-1721), while he also served as the imperial envoy governor of the two Huai river regions and managed the taxation at Hushu Custom [hǔ shù guān 浒墅关], a post he held for a full thirty years. In the sixty-first year of Kangxi (1722), he owed 450,000 taels of silver to the imperial silk factory and submitted a petition to make up the deficit year by year. When the Yongzheng Emperor enthroned, he investigated the money and food supply he owned during his term of Zhizao official and ordered him to dismiss himself from the post, using his private assets to cover the deficit of 150,000 taels. In the first year of the Yongzheng reign (1723), the deficit of 300,000 taels of silver was able to be made up by the salt merchants of the two Huai river regions because of Li Xu “showed virtue to the merchants” being salt inspector. In the first year of the Yongzheng reign (1723), his family was raided.<sup>470</sup>

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<sup>468</sup> National Palace Museum, eds. *The Palace Archives of Kangxi Emperor 宫中档康熙朝奏折 Vol.2*. Taipei: National Palace Museum, 1976.

<sup>469</sup> Huang Zhijun 黄之雱, Zhao Hongen 赵弘恩, eds. “Qianlong Jiangnan Gazetteer, vol. 150, Gazetteer of Officials - Civilian Officials - Jiangning Imperial Silk Factory 乾隆江南通志卷一五〇 职官志·文职七·江宁织造.” *Imperial Libraries of Wenyuange Sikuanquanshu 文渊阁四库全书*. Shanghai: Shanghai Ancient Books Publishing House, 2003.

<sup>470</sup> The First Historical Archives of China, eds. “The Newly Discovered Folded List of Li Xu's Family Property 新发现的查抄李煦家产折单”. *Historical Archives 历史档案*. No. 2, 1981.

The most influential figures among the Zhizao officials of the Qing dynasty are Cao Yin and Li Xu, who were also relatives, Cao Yin being husband of Li Xu's sister. The Cao family, Li family and Sun family were all service person of white banners. Although the status of the service person was very low, whereas because of their proximity to the imperial family, those who were talented often had the opportunity to be appreciated by the emperor and were entrusted with important duties and became the emperor's close associates, which was exactly what happened to the Cao and Li families. The three imperial silk factories in Jiangnan carried out the policy of "buying silk and recruiting weavers" while Li Xu and Cao Yin being Zhizao officials in Kangxi period, both of them played irreplaceable roles working together for the daily production of the three imperial silk factories in Jiangnan. While supervising the silk textile fabrication for the Qing court, they were highly favoured by Kangxi emperor and worked as the emperor's eyes and ears in Jiangnan area, being essential assisting the Qing court understanding Jiangnan society and stabilising the region. At the same time, Jiangnan gathered famous industrial and commercial cities in the Qing dynasty, concentrating commodities and materials from all over the country and even the world, becoming an important place for the Qing court to procure necessary goods, Jiangnan Zhizao officials were also responsible for this task.

The three imperial silk factories of Jiangnan in the Qing dynasty were restored and rebuilt on the basis of the Ming dynasty, but there were inheritances and innovations in the system. In particular, the management system and the appointment of Zhizao officials differed, which was determined by different political systems of the Ming and Qing dynasties: in the Ming dynasty the Zhizao officials were under the Ministry of Industry and were filled by eunuchs who were at the side of the emperor; while Kangxi emperor made institutional changes and transferred the appointment of Zhizao officials from the Ministry of Industry to the decisions of himself, The imperial silk factories of the Qing dynasty were subordinate to the House of Internal Affairs, while the Zhizao officials were selected from service person of the emperor's upper three banners, whose status was domestic servants of the emperor, with absolute loyalty to him. They were elites, all highly talented and personally cultivated, and could perform jobs assigned by



the emperor other than Zhizao official, which illustrates the special characteristic of the post of Zhizao official in Kangxi period.

The two families of Cao and Li served as Zhizao officials for a full thirty years, an unprecedentedly long tenure, playing an important role in supervising the weaving of silk textiles, acting as the emperor's "secretary agencies", purchasing goods for the Qing court and even contributing to stabilising the Jiangnan society. However, after Kangxi dynasty, Yongzheng emperor tabooed the involvement of Zhizao officials in the inner court and local affairs, restricted the role of Zhizao officials to supervising the weaving of silk textile itself, thereafter the social role of Zhizao official significantly diluted and their status rapidly declining. The function and status of the Jiangnan Zhizao officials in the Qing dynasty were very different during and after the Kangxi emperor, the role of Jiangnan Zhizao officials in Kangxi period should be distinguished rather than be generalised.

On the French side, looking at the suppliers of silk fabrics to the French court, how did their production activities and personal status relate to the royal family? How and by what criteria were the royal silk suppliers in France selected? The court-supplying silk factories of Louis XIV of France were commercially linked to the royal family through an institution called Garde-Meuble, which literally means furniture supervision. The institution was set up and managed directly by Louis XIV to arrange the decoration and furnishing of the royal household, which is responsible for not only the day-to-day furnishing of the crown, but also for special occasions such as religious rituals, royal outings, receptions of foreign ambassadors and coronation ceremonies. These special ceremonies and rituals were carried out almost always in collaboration with Menus Plaisirs, an agency specialising in the furnishing of special court events include balls, parties, theatrical performances, weddings or funerals, etc. Garde-Meuble manages all the furnishings of the royal family, from tables and chairs to upholstery, carpets, silverware and linen, and for selecting the right suppliers and arranging the delivery of furniture. It also organized the movement of furniture between the various palaces or castles, various incoming and outgoing items and the inventory; At the same time, The maintenance of furniture,

the sale of used furniture and the management of the upholstery staff are also the responsibilities of Grande-Meuble.<sup>471</sup>

These suppliers to the royal family and the court are located under the hierarchical management of Garde-Meuble. Under the arrangements of the “Règlement du Roy”, which came into force on 1 January 1784, the decorator chosen to serve the crown would be entirely responsible for making new furniture and carrying out any major repairs, and his shop would be located in the Garde-meuble in Paris, while the Garde-meuble’s employees naturally became the overseers of the speed of the quality of the service. It can be inferred that a shop specialising in the repair and production of fabric furniture in Paris was incorporated into Garde-meuble and given the privilege of being “Tapissier choisi pour le service de Sa Majesté”, providing the royal family with fabric furniture production and expensive repair services.<sup>472</sup>

The management of the Garde-meuble was carried out by Intendant, which was a position often passed down from father to son. “In 1718, the title of Intendant and General Inspector of the Crown’s Furnishings (Intendant et Controleur general des Meuble de la Couronne) was taken by Gaspard-Moyse de Fontanieu, then from 1767 to 1784 by his son Pierre-Elisabeth de Fontanieu. In 1780 however, the office of Intendant and Controleur general was cut, and de Fontanieu took the title of General Superintendent (Commissaire general) as part of the new General Office of the Expenditures of the King’s Household (Bureau general des depenses de la Maison du roi). In 1784, Marc-Antoine Thierry de Ville d’ Avray became the new Commissaire general de undertook an important reform of the department.”<sup>473</sup> Although the backgrounds are very different, the father-to-son succession to the post of Intendant forms an interesting contrast to the family monopoly of the Zhizao officials of the Kangxi dynasty.

“The Intendant dealt directly with the royal family or with the tutors of the princes and princesses, giving afterwards orders to the different persons in charge, such as de Pommery,

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<sup>471</sup> Dato Moira. “Silks for the Crown: Five Partnerships of Merchant Manufacturers in Eighteenth-century Lyon.” MRes thesis. <http://theses.gla.ac.uk/7970/> 2017

<sup>472</sup> Condamy Laurent. “Les ‘boutiques’ des maisons royales et du Garde-Meuble de la Couronne (1666-1792)”. *Versalia. Revue de la Société des Amis de Versailles*, n°19, 2016.

<sup>473</sup> Stephane Castellucio. *Le Garde-Meuble de la Couronne et ses intendants du XVIe au XVIIIe siècle*. Paris: CTHS, 2004. In Dato Moira. “Silks for the Crown: Five Partnerships of Merchant Manufacturers in Eighteenth-century Lyon.” MRes thesis. <http://theses.gla.ac.uk/7970/> 2017

General Guard of the Crown's Furniture (Garde general des Meubles de la Couronne), or Joseph Savournin, Inspector of the Manufactures (Controleur des Fabriques), who were in contact with the suppliers."<sup>474</sup> The furnishing décor and various decoration fabrics are generally designed by official designers "such as Alexis Peyrotte, Jacques Gondoin or Jean-Demosthene Dugourc"<sup>475</sup>; and presented to Garde-Meuble to finalise the style. At the same time, Garde-Meuble had its own decorating workshop. The intendant, director of Grande-Meuble, did not liaise directly with the suppliers to the Royal Family, but approached them through intermediaries, who, however, have the final say in the choice of suppliers to the crown.

Another position related is the Inspector of the Kingdom's silk factories, Vaucanson was appointed this position in the 1740s, when the Controller General of Finances Orry was conceiving a plan to modernise the French silk industry. This seems unusual, since Vaucanson was a young man of thirty-one, not of aristocratic or even middle-class origin, and not particularly interested in the textile industry. Yet he had already become famous in France and in Europe for his brilliant invention, the automata, which was recognised by the Royal Academy of Sciences, and he was favoured by the court. Voltaire even praised him as "Vaucanson, rival of Prometheus" in his speech "De la nature de l'homme".<sup>476</sup> Vaucanson's innovation synthesised mechanical technology and abstract science, which was favoured by the state at the time. Vaucanson wanted to work on a project for artificial man of the Academy of Science, but was unable to do so and was appointed to a new position, Inspector General of Manufactures, a position he was given mainly because of his reputation and value as a creative figurehead.<sup>477</sup>

What criteria and rules did Intendant follow in selecting its suppliers of royal silk fabrics? It is recorded that during his tenure at Intendant in Ville d'Avray, Garde-Meuble had undergone important reforms and, in order to reduce expenditure and optimise management, chose to delegate commissions to new suppliers of royal silks. In the decades between 1741 and 1784,

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<sup>474</sup> Dato Moira. "Silks for the Crown: Five Partnerships of Merchant Manufacturers in Eighteenth-century Lyon." MRes thesis. <http://theses.gla.ac.uk/7970/> 2017

<sup>475</sup> Dato Moira. "Silks for the Crown: Five Partnerships of Merchant Manufacturers in Eighteenth-century Lyon." MRes thesis. <http://theses.gla.ac.uk/7970/> 2017

<sup>476</sup> Hillau Bernard. "Progrès Technique et Acteurs du Changement dans la Soierie Lyonnaise au XVIIIe Siècle." *Formation Emploi*. N.64, 1998.

<sup>477</sup> Journal des Conférences de l'Académie; in Doyon et Liaigre, p. 148. From Hillau Bernard. "Progrès Technique et Acteurs du Changement dans la Soierie Lyonnaise au XVIIIe Siècle." *Formation Emploi*. N.64, 1998.

Jean Charton father and son had a monopoly on almost all commissions, except for one; this change in supplier selection policy changed this and several new suppliers were appointed, including Camille Pernon and Olivier Desfarges, but also Gilles Gaudin, Gros et Cie, and Reboul, Fontebrune et Cie.<sup>478</sup> It can be said that Intendant was decisive in the matter of choosing the royal silk supplier.

From 1741 to 1784, Charton father and son was almost the only supplier of royal silk, completing forty-five royal orders, and was therefore also the recipient of royal commissions; commissions vary for each order, but in general the amount is quite substantial. It is estimated that during the fifteen years of being a royal silk supplier, their family received a total of no less than 1299,895 livres of royal commissions.<sup>479</sup> Other suppliers produce a small number of orders, usually only one or two orders. For example, between 1786 and 1790, Gros et Cie had four shipment records of fabrics; in 1785, Reboul, Fontebrune et Cie was responsible once for royal silk supply; the only other supplier appointed during the monopoly of Charton father and son was Pierre Cesar Sonnerat of Lyon, who received an order in 1765.<sup>480</sup>

As royal suppliers, what commissions can these merchants get? Only in the example of Gaudin et Cie can be glimpsed, although it was not very clear in the case of other suppliers. The condition was quite remarkable that they received a commission from the crown after bankruptcy. Garde-Meuble first came into contact with the upholstery silk produced by this company through Lenormand et Cie, an intermediary owner of a luxury shop in Paris, who provided fabrics in 1786. In 1789, the royal family bought silk when the company's products were sold out, and ordered Savournin to complete the furniture called "meuble Gaudin" for use in a royal residence. Savournin bought a fabric from merchant in 1791 and ordered it to be produced by Lyon's master weaver; the weaving of the borders was done by Gilles Gaudin, who unexpectedly became a supplier of royal silk.<sup>481</sup>

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<sup>478</sup> AN, O/1/3313 to O/1/3321, Maison du roi, Journaux de Garde-Meuble, deliberies; O/1/3534 and O/1/2613 to O/1/3627, Maison du roi, bills of the suppliers. In Dato Moira. "Silks for the Crown: five partnerships of merchant manufacturers in eighteenth-century Lyon." (MRes thesis. <http://theses.gla.ac.uk/7970/> 2017)

<sup>479</sup> Dato Moira. "Les Fabricants Jean Charton Père et Fils : des Soyeux Lyonnais Héritiers du Privilège au XVIIIe Siècle." *Mémoire de master 1 (histoire de l'art)*. Université Paris I Panthéon Sorbonne soutenu en 2014, 2 vol.

<sup>480</sup> Dato Moira. "Silks for the Crown: Five Partnerships of Merchant Manufacturers in Eighteenth-century Lyon." MRes thesis. <http://theses.gla.ac.uk/7970/> 2017

<sup>481</sup> Dato Moira. "Silks for the Crown: Five Partnerships of Merchant Manufacturers in Eighteenth-century Lyon."

Dato Moira examines the royal silk suppliers of eighteenth-century Lyon in some detail, seeking to understand why they stood out from the crowd and produced directly for the royal family, placing them in the context of the socio-economic environment of Lyon and the nation to reveal who they were and what commonalities and characteristics they shared. She concludes that these royal silk suppliers were not necessarily the most successful businessmen in Lyon, nor did they necessarily achieve the highest levels of social and professional success. With the exception of a few, such as Jean Charton father, Joachim Gras, Charles-Claude Briasson and Louis Reboul, who did achieve professional success and social advancement, this was not the case. The background of these royal silk suppliers was very diverse.<sup>482</sup>

In contrast to the Kangxi dynasty, where the Zhizao official was in charge of all matters and his authority and relationship with the royal family far exceeded those relating to the royal silk factories. The division of labour in the French silk weaving industry seems to have been much more subtle, with the Intendant, head of Grande-Meuble, having the power to choose the royal silk suppliers, and the Inspector of the Kingdom's silk factories being another important management position in the French silk industry.

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MRes thesis. <http://theses.gla.ac.uk/7970/> 2017

<sup>482</sup> Dato Moira. "Silks for the Crown: Five Partnerships of Merchant Manufacturers in Eighteenth-century Lyon." MRes thesis. <http://theses.gla.ac.uk/7970/> 2017

## Conclusion

“Encounters” and “communications” across geographical and cultural boundaries have formed an unconventional entry point for the study of global history. Globalisation is not a modern or recent phenomenon; population movements, economic linkages, cultural exchanges, borrowings and influences have existed since time immemorial. The global history approach focuses on the “connections” and “interactions” between objects rather than on things that are static and isolated, thus allowing for a breakthrough with the framework characterised by “national history” and “Eurocentric” approach.

This thesis explains the theoretical background and development of contemporary global and consumer historiography; examines the interactions and connections between a then seemingly closed China and the outside world during the Qing Empire through missionaries, the tribute system and overseas trade. Examines the forms of business organisation, production processes, sources of finance, personnel management, the income and social status of artisans, products and outlets of the imperial silk factories of China and the court-supplied silk factories of Louis XIV of France at the turn of the seventeenth and eighteenth centuries. Comparisons and correlations are made to discover the links established between these two distant monarchical territories through the exchange of missionaries and goods, and the impact of these cultural contacts. This comparison is made on an equal footing, a 'reciprocal comparison' in which neither side is used as a standard reference item.

A large number of historical sources are used to justify this thesis, including Imperial Archives in the First Archive of China, "Collection of Archives" and ancient books, Local gazetteers, Archives Municipales, Fonds de la Grande Fabrique de soie 1563-1791, and other works and essays, which are compared through the lens of global history. The overlap of historical sources and the biases caused by cultural differences can stimulate new perspectives and understandings.

The study of the history of consumption in the circulation of goods between Asia, Europe and the Americas in the early modern period is also the subject of the GECM project to which this study belongs. Its ongoing database draws on existing historical archival resources and data, combined with new computer-scientific methods of social network analysis, to construct a

global map with local characteristics and facilitate the quantitative study of trade network data collected from historical archives in different parts of the globe. A new narrative model reveals the material and cultural exchanges between Europe and Asia from a global historical perspective, focusing on the distribution of commodities represented by silk, wine and porcelain in global commodity flows and the impact of these commodity exchanges on consumption patterns of various classes of society in the early years of globalisation. The historical data in this thesis will also contribute to the database, while the massive amount of data in the GECM database and the data analysis methods of computer technology will provide further support for this research.

Tracing its written history back to the second century BC, the imperial silk factories went through several dynasties in the Han, Tang, Song, Yuan, Ming and Qing dynasties, constantly developing and refining its production methods, scale and management model. By the Kangxi period, production was at its peak of prosperity. In accordance with the production process of the royal silk factories, the Ministry of Rites first determined the style, texture, colour and quantity of the garments and calculated the materials and labour required for each process; after receiving the Emperor's approval, the court painters drew precise patterns of the garments in accordance with the requirements of the Ministry of Rites. The drawings were sent by the Imperial Household Department to the three imperial silk factories in Jiangnan to be woven strictly according to the pattern; finally, the finished fabrics were shipped to Beijing for inspection and preservation by the Warehouses of leather, Satins and costumes, which were managed by the Ministry of the Interior.

The organisation of production in the imperial silk factories also underwent a series of evolutions, culminating in the introduction of the "buying silk and recruiting weavers" system in the Qing dynasty. The imperial silk factories selected and registered workshop owners as loom claimers, who were responsible for recruiting weavers for production at the imperial silk factories and delivering the finished fabrics. The loom claimer would also receive silver and food from the imperial silk factories to pay the monthly wages of the weavers. As for the output of the three imperial silk factories in Jiangnan, this thesis summarises the inputs and outputs, as well as the product categories, of the imperial silk factories during the Kangxi period as recorded in historical sources. Each imperial silk factory had its own product focus categories

based on court orders; however, their production figures do not really reflect the capacity of each factory, but rather depend on the court's demand for various types of fabric and the approval of weaving funds.

On the other hand, due to the importance attached to the sericulture industry by the court in successive dynasties, as well as a series of reforms in taxation and handicraft production regulations, such as the abolition of silk as a unit of taxation, the abolition of the craftsmanship servitude system, and the removal of the limit on the number of privately owned looms, private silk production also developed greatly during the Kangxi period in the Qing Dynasty, becoming an important part of the local economy, especially in the Jiangnan region, where the imperial silk factories located. It could be observed that the imperial silk factories did not simply exploit private silk production, as traditional studies suggested, but that the two production systems were in fact integrated, with the production techniques, fashion trends and quality requirements of the imperial silk factories having a positive impact on private production as well.

As silk production flourished, so did the highly developed silk commodity economy, and although silk remained a luxury item in Qing China, the domestic silk market was thriving and silk was consumed by an increasing number of people. Also, silk was a leading player in the global commodity market during the Qing dynasty. According to historical materials from the First Archives of Chinese History and the Archivo General de Indias, the frequent global exchange of goods in the early days of globalisation could be seen: foreign ships carried exotic western treasures favoured by the imperial and scholarly classes, while silk, porcelain and handicrafts were sold overseas in large quantities and the made-to-order model of international trade was already widespread.

At the same time, the production of silk in France came under the powerful influence of centralised power, and the system of silk factories in Lyon became commonly known as the "Grande Fabrique". The royal power issued orders to the court and the central administration to promote silk weaving in Lyon. From the mid-fifteenth century, when letters patent granted Lyon the privilege of weaving special fabrics, the silkworm industry and weaving techniques developed considerably in the sixteenth and seventeenth centuries, although there were further setbacks for religious reasons, followed by a century of reconstruction. At the end of the seventeenth century, Colbert established industrial processes, product standards and regulations



for the Lyon Grande Fabrique, separating production from sales. These measures had a major impact on the silk industry in Lyon, and the Grande Fabrique flourished for more than a century and a half.

The comparison between the imperial silk factories of Kangxi period and those court supplying silk factories under Louis XIV hasn't been accidental, but is due to the connections and integrations that existed between these two monarchies, which were far apart and in the same historical period. With the project of sending French missionaries to extend their influence to the East, the Jesuits, "the king's mathematicians", sent by Louis XIV, arrived at the court of Kangxi Emperor with an elaborate research programme and the best equipment of the time to investigate almost all areas of China including history, geography, medicine, flora and fauna and handicrafts, etc. The missionaries left behind many letters, diaries and translations that built bridges for Western research and understanding of China, as well as completing Colbert's global information-gathering project, thus contributing to his mercantilist strategy.

Like "cultural smugglers", the missionaries promoted the exchange of culture, art, goods and technology between East and West. Chinoiserie swept Europe, especially at court; and Western science and imported goods such as clocks, glassware and wine became known as the new favourites of the Chinese court and the scholarly classes. With research missions to the French court and the Royal Academy of Sciences, the missionaries used their access to the court and their status as missionaries to learn a great deal of information they needed among the scholarly classes and Christians, particularly in the art of ceramics making. As well as commodities and techniques, the activities of the missionaries contributed greatly to the exchange of ideas between East and West, and the chinoiserie also influenced French philosophical thought and the image of royalty.

The study of Chinese silk production was also explicitly included in the list of research tasks of the French Royal Academy of Sciences, and missionaries were exposed to and studied the production of silk, both imperial and private, during their missionary work at court, among the clergy and the general public. These studies, particularly those of the imperial silk factories, were, in my view, inevitably instructive and influential to France, which was in the process of developing its own silk industry and aiming to create a "kingdom of fashion". Unfortunately, during the research for this thesis, no direct evidence was found of detailed missionary reports

on the Royal Silk Factory, or of Colbert's comments on the Royal Silk Factory in China, which may be related to the loss or lack of historical sources. In the context of a global search for information and commercial espionage tactics, it would have been difficult for Colbert not to have been interested in the imperial silk factories in China, which represented the highest level of silk weaving in the world at the time.

Both the imperial silk factories of Kangxi and the palace court supplying silk factories of Louis XIV were expression of the will of the central power, which, with its economic control and administrative power, planned, designed, produced and marketed the highest level of silk production in their territories. The imperial silk factories in China, which flourished during the Kangxi period, were entirely subordinate to the central power, supplying the court and the bureaucratic administrative system exclusively, and were not market-oriented to earn profits. The mercantilist economic line of Louis XIV also brought the influence of royal power over the country's silk industry to its peak, the difference being that the palace silk factories were mostly privately owned and the royal family was their biggest customer.

The management of the national economy and government industry through a system of state administration and law enforcement was the inevitable means: the imperial silk factories of Kangxi were under strict control of a centralised feudal system, with countless laws and regulations, inscriptions warning of failing and shortcomings common to the weaving industry, and even severe penalties such as flogging, all of which were a guarantee of the quality and efficiency of production in the imperial silk factories. In France, on the other hand, during the same period, in order to promote the development of the country's silk weaving industry, Colbert drew up an unprecedented number of targeted decrees and regulations on production processes and quality control, as well as corresponding punishment mechanisms that were so detailed and strict that they were even protested against for infringing on the weavers' personal freedom. It is reminiscent that Colbert may well have drawn inspiration from the missionary descriptions of the way production was managed in the Chinese imperial silk factories, and thus sought to regulate the country's silk production through a series of decrees and regulations imposed compulsorily by strengthening centralised administrative power.

Noteworthy as well when comparing silk production in France and China is the appointment of the top management officials. The officials in charge of the Chinese imperial

silk factories were in a very special position, all being close to the emperor, and were not only responsible for silk production, but also in charge of the country's customs, copper and salt operations, also acted as secret agents for the emperor in Jiangnan. The French court, on the other hand, chose the court supplying silk factories through a body called Garde-Meuble; the management of the silk factories for the whole country was carried out by an inspector, whose appointment was based on innovation and ability, rather than on rank, according to the example. The backgrounds of the silk suppliers chosen for the court were diverse and they were not necessarily the most successful merchants in Lyon, nor did they necessarily have a high social status.

In conclusion, although the most direct evidence is lacking, in the context of missionary activities at the Chinese court and the encyclopaedic global research of the French Royal Academy of Sciences, as well as the well-documented side evidence of commercial espionage in the manufacture of ceramics, information about Kangxi's imperial silk factories must have been used for Colbert's mercantilist economic strategy. A comparison of the imperial silk factories of Kangxi with the court supplying silk factories of Louis XIV, looking at the connections and integrations, the extensive centralised intervention in the state silk industry, the flow of silk production, the separation of production and distribution, and the targeted decrees and regulations for quality control, all suggest that, thanks to the bridging role of the missionaries, the Kangxi-era Chinese imperial silk factories had a very likely influence on the French silk industry, and Louis XIV's court supplying silk factories could be considered a mirror reflection of the Kangxi's imperial silk factories.

## Conclusión

Los “encuentros” y las “comunicaciones” a través de fronteras geográficas y culturales han constituido un punto de entrada poco convencional para el estudio de la historia global. La globalización no es un fenómeno moderno o reciente; los movimientos de población, los vínculos económicos, los intercambios culturales, los préstamos y las influencias han existido desde tiempos inmemoriales. El enfoque de la historia global se centra en las “conexiones” e “interacciones” entre objetos más que en las cosas estáticas y aisladas, lo que permite romper con el marco caracterizado por la “historia nacional” y el enfoque “eurocéntrico”.

Esta tesis explica los antecedentes teóricos y el desarrollo de la historiografía contemporánea global y del consumo; examina las interacciones y conexiones entre una China entonces aparentemente cerrada y el mundo exterior durante el Imperio Qing a través de los misioneros, el sistema de tributos y el comercio de ultramar. Examina las formas de organización empresarial, los procesos de producción, las fuentes de financiación, la gestión del personal, los ingresos y el estatus social de los artesanos, los productos y las salidas comerciales de las fábricas de seda imperiales de China y las fábricas de seda suministradas por la corte de Luis XIV de Francia a finales de los siglos XVII y XVIII. Se establecen comparaciones y correlaciones para descubrir los vínculos establecidos entre estos dos territorios monárquicos distantes a través del intercambio de misioneros y mercancías, y el impacto de estos contactos culturales. Esta comparación se realiza en pie de igualdad, una “comparación recíproca” en la que ninguna de las dos partes se utiliza como elemento de referencia estándar.

Para justificar esta tesis se recurre a un gran número de fuentes históricas, como los Archivos Imperiales del Primer Archivo de China, la “Colección de Archivos” y libros antiguos, los nomenclátors locales, los Archivos Municipales, los Fonds de la Grande Fabrique de soie 1563-1791, y otras obras y ensayos, que se comparan a través del prisma de la historia global. La superposición de fuentes históricas y los sesgos provocados por las diferencias culturales pueden estimular nuevas perspectivas y comprensiones.

El estudio de la historia del consumo en la circulación de mercancías entre Asia, Europa y América a principios de la Edad Moderna es también objeto del proyecto GECM, al que

pertenece este estudio. Su base de datos en curso aprovecha los recursos y datos de archivos históricos existentes, combinados con nuevos métodos informáticos de análisis de redes sociales, para construir un mapa global con características locales y facilitar el estudio cuantitativo de los datos de redes comerciales recogidos en archivos históricos de distintas partes del globo. Un nuevo modelo narrativo revela los intercambios materiales y culturales entre Europa y Asia desde una perspectiva histórica global, centrándose en la distribución de las mercancías representadas por la seda, el vino y la porcelana en los flujos mundiales de mercancías y el impacto de estos intercambios de mercancías en los patrones de consumo de las distintas clases sociales en los primeros años de la globalización. Los datos históricos de esta tesis también contribuirán a la base de datos, mientras que la ingente cantidad de datos de la base de datos del GECM y los métodos de análisis de datos de la tecnología informática proporcionarán un apoyo adicional a esta investigación.

Las fábricas imperiales de seda, cuya historia escrita se remonta al siglo II a.C., atravesaron varias dinastías en las dinastías Han, Tang, Song, Yuan, Ming y Qing, desarrollando y perfeccionando constantemente sus métodos de producción, escala y modelo de gestión. En el periodo Kangxi, la producción estaba en su punto álgido de prosperidad. De acuerdo con el proceso de producción de las fábricas reales de seda, el Ministerio de Ritos determinaba primero el estilo, la textura, el color y la cantidad de las prendas y calculaba los materiales y la mano de obra necesarios para cada proceso; tras recibir la aprobación del Emperador, los pintores de la corte dibujaban patrones precisos de las prendas de acuerdo con los requisitos del Ministerio de Ritos. El Departamento de la Casa Imperial enviaba los dibujos a las tres fábricas imperiales de seda de Jiangnan para que se tejieran siguiendo estrictamente el patrón; por último, los tejidos acabados se enviaban a Pekín para su inspección y conservación por los Almacenes de Pieles, Satenes y Trajes, gestionados por el Ministerio del Interior.

La organización de la producción en las fábricas imperiales de sedas también experimentó una serie de evoluciones, que culminaron con la introducción del sistema de “compra de seda y contratación de tejedores” en la dinastía Qing. Las fábricas imperiales de seda seleccionaban y registraban a los propietarios de los talleres como demandantes de telares, que se encargaban de reclutar tejedores para la producción en las fábricas imperiales de seda y de entregar los tejidos acabados. El reclamante de telares también recibía plata y alimentos de las fábricas

imperiales de seda para pagar los salarios mensuales de los tejedores. En cuanto a la producción de las tres fábricas imperiales de seda de Jiangnan, esta tesis resume las entradas y salidas, así como las categorías de productos, de las fábricas imperiales de seda durante el periodo Kangxi, tal y como recogen las fuentes históricas. Cada fábrica imperial de la seda tenía sus propias categorías de productos según las órdenes de la corte; sin embargo, sus cifras de producción no reflejan realmente la capacidad de cada fábrica, sino que dependen de la demanda de la corte de diversos tipos de tejidos y de la aprobación de los fondos para tejer.

Por otro lado, debido a la importancia concedida a la industria sericícola por la corte en las sucesivas dinastías, así como a una serie de reformas en la fiscalidad y en la normativa de producción artesanal, como la abolición de la seda como unidad de imposición, la supresión del sistema de servidumbre artesanal y la eliminación del límite del número de telares de propiedad privada, la producción privada de seda también se desarrolló enormemente durante el periodo Kangxi en la dinastía Qing, convirtiéndose en una parte importante de la economía local, especialmente en la región de Jiangnan, donde se ubicaban las fábricas imperiales de seda. Se pudo observar que las fábricas imperiales de seda no se limitaban a explotar la producción privada de seda, como sugerían los estudios tradicionales, sino que ambos sistemas de producción estaban de hecho integrados, y las técnicas de producción, las tendencias de la moda y los requisitos de calidad de las fábricas imperiales de seda repercutían positivamente también en la producción privada.

A medida que florecía la producción de seda, también lo hacía la economía de la seda como mercancía, y aunque la seda seguía siendo un artículo de lujo en la China de la dinastía Qing, el mercado nacional de la seda prosperaba y cada vez la consumía más gente. Además, durante la dinastía Qing, la seda ocupó un lugar destacado en el mercado mundial de materias primas. Según los materiales históricos del Primer Archivo de Historia China y del Archivo General de Indias, en los primeros tiempos de la globalización se podía observar el frecuente intercambio mundial de mercancías: los barcos extranjeros transportaban exóticos tesoros occidentales preferidos por las clases imperial y erudita, mientras que la seda, la porcelana y la artesanía se vendían en el extranjero en grandes cantidades y el modelo de comercio internacional por encargo ya estaba muy extendido.

Al mismo tiempo, la producción de seda en Francia se vio sometida a la poderosa

influencia del poder centralizado, y el sistema de fábricas de seda de Lyon pasó a conocerse comúnmente como la “Grande Fabrique”. El poder real dio órdenes a la corte y a la administración central para promover el tejido de la seda en Lyon. A partir de mediados del siglo XV, cuando las cartas patentes concedieron a Lyon el privilegio de tejer tejidos especiales, la industria del gusano de seda y las técnicas de tejido se desarrollaron considerablemente en los siglos XVI y XVII, aunque hubo nuevos retrocesos por motivos religiosos, seguidos de un siglo de reconstrucción. A finales del siglo XVII, Colbert establece procesos industriales, normas de producto y reglamentos para la Grande Fabrique lionesa, separando la producción de la venta. Estas medidas tuvieron un gran impacto en la industria de la seda de Lyon, y la Grande Fabrique floreció durante más de siglo y medio.

La comparación entre las fábricas imperiales de seda de la época de Kangxi y las sederías proveedoras de la corte bajo Luis XIV no ha sido casual, sino que se debe a las conexiones e integraciones que existían entre estas dos monarquías, muy alejadas entre sí y en el mismo periodo histórico. Con el proyecto de enviar misioneros franceses para extender su influencia a Oriente, los jesuitas, “los matemáticos del rey”, enviados por Luis XIV, llegaron a la corte del emperador Kangxi con un elaborado programa de investigación y el mejor equipamiento de la época para investigar casi todos los ámbitos de China, como la historia, la geografía, la medicina, la flora y la fauna, la artesanía, etc. Los misioneros dejaron tras de sí numerosas cartas, diarios y traducciones que tendieron puentes para la investigación y comprensión occidentales de China, además de completar el proyecto de recopilación de información global de Colbert, contribuyendo así a su estrategia mercantilista.

Como “contrabandistas culturales”, los misioneros promovieron el intercambio de cultura, arte, bienes y tecnología entre Oriente y Occidente. La chinoiserie arrasó en Europa, especialmente en la corte; y la ciencia occidental y los bienes importados, como relojes, cristalería y vino, se convirtieron en los nuevos favoritos de la corte china y las clases eruditas. Con misiones de investigación a la corte francesa y a la Real Academia de Ciencias, los misioneros aprovecharon su acceso a la corte y su condición de misioneros para aprender mucha información que necesitaban entre las clases eruditas y los cristianos, sobre todo en el arte de la fabricación de cerámica. Además de productos y técnicas, las actividades de los misioneros contribuyeron en gran medida al intercambio de ideas entre Oriente y Occidente, y la

chinoiserie influyó también en el pensamiento filosófico francés y en la imagen de la realeza.

El estudio de la producción de seda china también se incluyó explícitamente en la lista de tareas de investigación de la Real Academia de Ciencias francesa, y los misioneros conocieron y estudiaron la producción de seda, tanto imperial como privada, durante su labor misionera en la corte, entre el clero y el público en general. Estos estudios, en particular los de las fábricas de seda imperiales, fueron, en mi opinión, inevitablemente instructivos e influyentes para Francia, que estaba en proceso de desarrollar su propia industria de la seda y aspiraba a crear un “reino de la moda”. Lamentablemente, durante la investigación para esta tesis, no se encontraron pruebas directas de informes misioneros detallados sobre la Real Fábrica de Seda, ni de los comentarios de Colbert sobre la Real Fábrica de Seda en China, lo que puede estar relacionado con la pérdida o la falta de fuentes históricas. En el contexto de una búsqueda global de información y de tácticas de espionaje comercial, habría sido difícil que Colbert no se hubiera interesado por las fábricas imperiales de seda en China, que representaban el más alto nivel de tejido de seda en el mundo de la época.

Tanto las fábricas de seda imperiales de Kangxi como las fábricas de seda proveedoras de la corte palaciega de Luis XIV eran expresión de la voluntad del poder central, que, con su control económico y su poder administrativo, planificaba, diseñaba, producía y comercializaba el más alto nivel de producción de seda en sus territorios. Las fábricas imperiales de China, que florecieron durante el periodo de Kangxi, estaban totalmente subordinadas al poder central, abasteciendo exclusivamente a la corte y al sistema administrativo burocrático, y no estaban orientadas al mercado para obtener beneficios. La línea económica mercantilista de Luis XIV también llevó a su punto álgido la influencia del poder real sobre la industria sedera del país, con la diferencia de que las fábricas de seda de palacio eran en su mayoría de propiedad privada y la familia real su principal cliente.

La gestión de la economía nacional y de la industria gubernamental a través de un sistema de administración estatal y de aplicación de la ley era el medio inevitable: las fábricas de seda imperiales de Kangxi estaban bajo el estricto control de un sistema feudal centralizado, con innumerables leyes y reglamentos, inscripciones que advertían de los fallos y deficiencias habituales en la industria del tejido, e incluso severas penas como la flagelación, todo ello como garantía de la calidad y eficacia de la producción en las fábricas de seda imperiales. En Francia,



por el contrario, durante el mismo periodo, con el fin de promover el desarrollo de la industria del tejido de seda del país, Colbert elaboró un número sin precedentes de decretos y reglamentos específicos sobre los procesos de producción y el control de calidad, así como los correspondientes mecanismos de castigo, tan detallados y estrictos que incluso fueron objeto de protestas por atentar contra la libertad personal de los tejedores. Cabe pensar que Colbert pudo inspirarse en las descripciones de los misioneros sobre el modo en que se gestionaba la producción en las fábricas de seda imperiales chinas y, de este modo, trató de regular la producción de seda del país mediante una serie de decretos y reglamentos impuestos obligatoriamente mediante el refuerzo del poder administrativo centralizado.

Al comparar la producción de seda en Francia y en China, cabe destacar también el nombramiento de los altos cargos directivos. Los funcionarios encargados de las fábricas de seda imperiales chinas ocupaban una posición muy especial, todos ellos cercanos al emperador, y no sólo eran responsables de la producción de seda, sino que también se encargaban de las aduanas del país y de las operaciones del cobre y la sal, además de actuar como agentes secretos del emperador en Jiangnan. La corte francesa, por su parte, elegía a los proveedores de las fábricas de seda a través de un organismo llamado Garde-Meuble; la dirección de las fábricas de seda de todo el país corría a cargo de un inspector, cuyo nombramiento se basaba en la innovación y la capacidad, más que en el rango, según el ejemplo. Los orígenes de los proveedores de seda elegidos para la corte eran diversos y no se trataba necesariamente de los comerciantes más prósperos de Lyon, ni tenían necesariamente un estatus social elevado.

En conclusión, aunque se carece de pruebas más directas, en el contexto de las actividades misioneras de la corte china y de la enciclopédica investigación global de la Real Academia de Ciencias francesa, así como de las bien documentadas pruebas colaterales de espionaje comercial en la fabricación de cerámica, la información sobre las fábricas imperiales de seda de Kangxi debió de servir para la estrategia económica mercantilista de Colbert. La comparación de las fábricas de seda imperiales de Kangxi con las fábricas de seda proveedoras de la corte de Luis XIV, examinando las conexiones e integraciones, la amplia intervención centralizada en la industria estatal de la seda, el flujo de la producción de seda, la separación de la producción y la distribución, y los decretos y reglamentos específicos para el control de calidad, todo sugiere que, gracias al papel de puente de los misioneros, las fábricas de seda

imperiales chinas de la época de Kangxi tuvieron una influencia muy probable en la industria de la seda francesa, y las fábricas de seda proveedoras de la corte de Luis XIV podrían considerarse un reflejo especular de las fábricas de seda imperiales de Kangxi.

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