

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 explores the silk trade in China and Europe at the turn of the seventeenth and eighteenth century through a transnational point of view, taking an example of France, by comparing the imperial silk factories of the Emperor Kangxi of Qing Dynasty (1661-1722) and the Grande Fabrique of Luis XVIII of France (1643-1715), analyzes the variation of business organization system, the manufacturing equipment scale, finance, personnel management, income and social status of the craftsmen, product types and sales, etc., which reflected the differences of the economic development strategies of the two monarchs; Like a butterfly effect, it could be inferred from the details of the official silk production and consumption in the studied geographical and time range, the causes and effects of diverse economic and political roads each monarch took subsequently.

Introduction: Through a “global history” perspective

The theme of Chinese silk production and the imperial silk factories in early Qing Dynasty (1644-1840) have been generally acknowledged and extensively studied, especially in the Chinese academic sphere; which is the same with the investigation of the development of fabric production and the Grande Fabrique of Lyon in France. Authors who analyzed respectively the silk production of each country have principally focused on the features of the business organization forms, the manufacturing equipments, the personnel management, the income and social status of weavers and the influence to the whole silk manufacturing industry, etc. This thesis intends to explore the silk trade in China and Europe at the turn of the seventeenth and eighteenth century through a transnational point of view, taking an example of France, by comparing the imperial silk factories of the Emperor Kangxi of Qing Dynasty (1661-1722) and the Grande Fabrique of Luis XVIII of France (1643-1715).

There've been abundance of works researching the Chinese silk trade, the sea-ban policy, the guilds and the European silk production development, nonetheless, a transnational comparison of the two officially organized silk factories at a coincidental historical period would be rather thought-provoking, and would conceivably fill one of the voids in the historiography: a synchronized comparison of silk production and consumption in two far apart countries which were essentially influencing each other. In this dissertation, the introductory part highlights the contemporary theoretic background of the historiography of consumption. It will explain how the research object and the specific time range is chosen, at the same time, it will present the objective of the investigation, the hypothesis and the main questions for the investigation: for example, the difference and coincidence between the imperial silk factories of China and the Grande Fabrique in France in the studied time range, in the aspects of business organization system, the manufacturing equipment scale, finance, personnel management, income and social status of the craftsmen, typology of products and sales, etc.? The sources adapt to the investigation will be introduced and analyzed, whose availability and challenges 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 problems could be solved.

1. Global History and Historiography of consumption: Concepts, disputes, approaches and databases

Global history could be preliminarily and simply defined as a historical research method in which events, processes and phenomena are observed and studied in a global background, being not restricted by the borders of nations, politics, geographies or cultures...In fact, the global/world history is in its booming age, the trend has swept the academic world of the United States till arrived Europe and Asia. There are many causes for the boom of global history. With the fall of the Berlin wall, the terrorism in the world and the economic globalization... it could be inferred that there are few things which could be seen without paying a global view. The world has become much more diverse and integrated than ever before. In the academic field, the greatly enriched communication across countries and regions also provides a positive international environment and academic background for the uprising global history. The great improvements in modern communication and transportation technologies has also 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. 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. Thus, these all lead to the result of adopting a comprehensive global view instead of the previous national or regional view.

The field of history has been changed and updated dramatically along the time. From the classical historical and economical approaches highlighted by the Capital Theory of Karl Marx and the Protestant Ethic of Max Weber, which focused on the historical and social progresses of the western world, to the first attempt in putting China in the center by Joseph Needham, till the Annales School represented by Fernand Braudel and Marc Bloch firstly emphasized on a “global history” concept; In the recent decades, “ReOrient” by

Gunder Frank, and “the Great Divergence” by Pomeranz, provided the history world with a new view; Lastly, through the GECHEM project, we intend to build a new databased global history with a polycentric approach.

The traditional world economic historians of the 1st 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. “The history of all hitherto existing society is the history of class struggles.”²

In contrast to Marx's historical materialism, Max Weber (1864-1920) emphasized the importance of cultural influences embedded in religion as a means for understanding the genesis of capitalism.³ 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, Web 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

² Karl Marx, Friedrich Engels (1848) *The Manifesto of the Communist Party*, Section 1, paragraph 1, lines 1-2.

³ Weber, Max (1905) “The Protestant Ethic and The Spirit of Capitalism”. Transl. by Stephen Kalberg (2002), Roxbury Publ. Co., pp. 19, 35; Weber's references on these pages to "Superstructure" and "base" are unambiguous references to Marxism's base/superstructure theory.

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 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 a 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.”⁴ 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

⁴ Olivia Harris, (2004) “Braudel: Historical Time and the Horror of Discontinuity.” *History Workshop Journal* (57): 161–174. ISSN 1363-3554 Fulltext: OUP. Only Ariès was a true conservative—indeed a royalist.

presence and the interest to study the culture.⁵ 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”.⁶ 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.

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. Samuel Philips Huntington’s “Clash of Civilizations and the Remaking of World Order” believes that the rise of the ideological conflict in the Cold War will be replaced by a conflict of civilizations.

Gunder Frank has become a supporter for the theory of the rise of contemporary China. He has historical materialism background, 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 10 cycles, and the region where the “global accumulation” dominated has become the centre of the global economy. China has maintained this advantage for a long time, and the West caught up only after 1800. In 1998, he published the “ReOrient: Global Economy in the Asian Age”, demonstrating that before the Opium War China was the centre of the global economy.⁷ 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.

⁵ John Bintliff (1991) *The Annales School and Archaeology*. Leicester University Press. Leicester London

⁶ John Bintliff (1991) *The Annales School and Archaeology*. Leicester University Press. Leicester London

⁷ Gunder Frank (1998) *ReOrient: Global Economy in the Asian Age*. University of California Press

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. “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 guilts like the European cities. In the 18th century, 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. The Europeans have created the Atlantic economic circle, but to break into the old and advanced trade centers of the Indian Ocean and the Pacific, the mines in the Americas provided an entrance ticket at the right time.⁸

⁸ Kenneth Pomeranz (2001) *The Great Divergence: China, Europe, and the Making of the Modern World Economy* (The Princeton Economic History of the Western World). Princeton University Press

Lastly, through an ERC project of GECEM (Global Encounters Between China and Europe: Trade Networks, Consumption and Cultural Exchanges in Macao and Marseille (1680-1840)), directed by Professor Manuel Perez Garcia, a new databased global history with a polycentric approach is intended to be constructed. In this project, perceptions and dialogues between China and Europe are examined by analysing strategic sites which fostered commerce, consumption and socioeconomic networks between China and Europe through a particular case study: Macau, connecting with south China, and Marseille in Mediterranean Europe. (Horizon 2020 GECEM) The methodology of “micro –history” and wide comparison have been adopted in this research. Micro-history focuses on daily life or personal experiences of certain historical time, which is often integrated with cultural anthropology or literary analysis.⁹

To conclude, we would contemplate the two rudimentary questions: where does global history come from? And why do we study history? Global history is mostly associated with the discussion over globalization. The new international flows and connections of economic and politics attracted a lot of attention, historians consider that some of the long global history connections could have a long lineage stretching back to the ancient world, to Han and Tang China, to Arab and Persian empires, even to the prehistoric period, but more significantly to the intertwining of commercial exchanging routes whether on land or oversea over time. Global history primarily challenged the old national history and area studies, it comprehends a new historiographical approach. Debates over “globalization” and paradigms such as the “great divergence” inspired historians in many in-depth studies to contemplate the historical foundation of these phenomena.

The founder of the Annales School, Mark Bloch carried out his entire book of “Historian’s Craft” with the question: “Tell me, Dad, what is the use of history?”¹⁰ which seems to be naive but actually serious. In Bloch’s concept, the most fundamental object of inquiry in historical research is “human.” “We have called history the science of men”. That is still far

⁹ https://erc.europa.eu/projects-figures/erc-funded-projects/results?search_api_views_fulltext=GECEM

¹⁰ Marc Bloch (1953) *The Historian’s Craft*. Toronto: House of Canada, Limited

too vague. It is necessary to add: “of men in time”.¹¹ History is not the accumulation of various events in the past. It is the science that studies human society. The historians must not only establish a comprehensive and holistic understanding of all human activities, but also need to analyze and interpret the interactive links between human activities; the concept of “civilization” has been referred to as a complex of this society. In addition, Bloch also noted the “population” and customs factor in social entities or social group organizations. He believes that: In the final analysis, human consciousness is the subject of historical research; in terms of historical research, the interaction, entanglement, and infection of human consciousness is the real thing itself. “A great many potentials, which might at any instant emerge from concealment, a great many more or less unconscious drives behind individual or collective attitudes, would remain in the shadows.”¹² In other words, for the study of human societies, the historians must strive to dig out the facts and states of the human spiritual world hidden behind their social life.

The historical thinking of intending to understand the overall history of the society is essential. “First of all, based on this historical thinking, history explores the activities of human social groups. If you only pay attention to individuals, you will not be able to grasp the deep and diverse factors of historical development. Similarly, if we only pay attention to political and military incidents and we cannot explore history from the perspective of the overall social groups, we will also be superficial.”¹³ Secondly, with the expansion of the historical vision and the field of study, in order to achieve understanding of all human activities, the historians must adopt the research orientation of interdisciplinary integration and expand the scope and types of historical materials. With the expansion of historical research fields, historians must collect and use more rich and various historical materials. In traditional historiography, historical research has been mostly based on the study of archived literature and other conscious historical materials. In contrast, Bloch believes that all things that allow historians to observe human activities and spiritual experiences can be

¹¹ Marc Bloch (1953) *The Historian's Craft*. Toronto: House of Canada, Limited

¹² Marc Bloch (1953) *The Historian's Craft*. Toronto: House of Canada, Limited

¹³ 潘宗忆 (2012) 布洛克历史思想的核心概念与方法 (Pan Zongyi (2012) The core concepts and methods of Brock's historical thought)

used as historical data. As he said in the *Historian's Craft*: The diversity of historical data is almost limitless. Everything that people has said, written, done, and touched could teach us about him. Many people are unfamiliar with our work, which underestimates the real potential of historical data.”¹⁴ In short, Bloch's idea of using historical evidence is very flexible and innovative. In addition to the above examples, the historical evidence he personally used includes poetry, wills, prayers, archaeological sites, tombstones, legendary literature, petitions, church archives, seals, paintings, reliefs, archeological sites, and deeds, maps, literary works, memos, statistical data, books of medicine, theology and political theories, coins, etc. “A linguistic characteristic, a point of law embodied in a text, a rite, as defined by a book of ceremonial or represented on a stela, are realities just as much as the flint, hewn of yore by the artisan of the stone age- realities which we ourselves apprehend and elaborate by a strictly personal effort of the intelligence.” “The painting and sculpture of sanctuary walls and the arrangement and furnishing of tombs have at least as much to tell him about the dead beliefs and feelings as a thousand contemporary manuscripts.”¹⁵ Due to the expansion of the scope of historical materials, the historian must also move towards interdisciplinary integration.

Bloch's historical ideas were great innovations at his time, and have continued to be influential till now. It was not only reflected in his interpretation of the overall history of society, but also on the concept of historical time, also escaped the traditionally rigid linear time concept or the chronological concept of historical time. Bloch believes that the nature of social development and change must be based on a longer period of time as its understanding. For different subjects, we must observe according to the rhythm of its own changes, and thus derive a multi-level view of historical time, such as geographical time, social time, and time of the human mind.¹⁶ The raise of a question is the starting point of historical research. “Each historical study assumes that there should be an inquiry direction

¹⁴ Marc Bloch, (1928) “A Contribution towards a Comparative History of European Societies”. Frederick C. Lane and Jelle C. Riermersma, eds., (1953) *Enterprise and Secular Change: Readings in Economic History*

¹⁵ Marc Bloch, (1928) “A Contribution towards a Comparative History of European Societies”. Frederick C. Lane and Jelle C. Riermersma, eds., (1953) *Enterprise and Secular Change: Readings in Economic History*

¹⁶ Marc Bloch, (1928) “A Contribution towards a Comparative History of European Societies”. Frederick C. Lane and Jelle C. Riermersma, eds., (1953) *Enterprise and Secular Change: Readings in Economic History*

from the beginning.”¹⁷ Bloch has also pointed out two important processes for historians to engage in historical understanding, namely, “understand the present from the past” and “understand the past from the present”. Why do we study history? About the usage of history, since the ancient time there came the famous Chinese sentence of “Take copper as a mirror, I can tidy up my clothes; take people as a mirror, I will know what I do is right or not; take history as a mirror, I will know how the things rise and fall.”¹⁸ “In the specific case of history, I find it difficult to conceive a civilized society that was not interested in the study of its own origins. History tells us who we are, where we come from and why we are who we are.” “As Huizinga wrote, history is not only a branch of knowledge, but also an intellectual way of understanding the world.”¹⁹

1.1 Research from a transnational and comparative point of view

Transnational and comparative history is now a widely discussed subject. The debate on divergence has opened a new space for economic history, which is now pursuing outline of investigation encompassing beyond Europe or America, beyond national histories into global comparisons and connections. The development of different historiographies, as well as recent global perspective, has reshaped frameworks for analyzing the origins of industrialization. The term of transnational and comparative history has been more and more perceptible in the historiographical 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.”²⁰

The term transnational was first used in the 1860 by Georg Curtius, who argued that all national languages import important notions from other languages and integrate these

¹⁷ Marc Bloch (1953) *the Historian's Craft*. Toronto: House of Canada, Limited

¹⁸ 刘昫 (941) “旧唐书 魏征传”. (Liu Xu (941) “Biography of Weizheng, History of Tang”)

¹⁹ Carlos M. Cipolla (1991) *Entre la Historia y La Economía*. Barcelona: Editorial Crítica.

²⁰ Yun Casalilla, Bartolomé (2014). “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>

notions with a specific meaning in the national languages.²¹ Akira Iriye defined transnational history as “the study of movements and forces that cut across national boundaries.” (Iriye, 2004: 213) Sometimes transnational history is closely linked with Trans-Atlantic history and defined in a negative way: a type of history whose main aim is to replace the so called old-fashioned national histories. (Yun Casalilla, 2014) “Transnational history is more a viewpoint than a method endowed with sophisticated, specific and exclusive tools of analysis. It is a perspective that historians adopt to discover new dimensions of new or old subjects. It can also be a way to revise common assumptions among scholars and to contextualise the local – even, sometimes, to analyse the local – in a wider and even, sometimes, global context.” (Yun Casalilla, 2007)

Transnational history started to show more importance in the historical research during the 19th and 20th 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. has normally been handled in a transnational perspective. “The term “transnational” was very much present among those German and French historians of the 1990s who were interested in cultural transfers between Germany and France, particularly during the 18th century.”²² Since the 1990s, being influenced by the economic globalization, the mass immigration, the popularization of digitalization and internet, as well as increased international criminality and terrorism, historians started to pay more attention to this new perception of the discipline. The transnational approach is also usually connected to the research concerning international organizations such as multinational companies, NGO, unions among different countries etc. Cross-national and cross-cultural biographies are also

²¹ G. Curtius, *Philologie und Sprachwissenschaft: Antrittsvorlesung gehalten zu Leipzig am 30. April 1862*, Leipzig, Teubner 1862, p. 9, cited in P.Y. Saunier, *Palgrave Dictionary of Transnational History*, cit., p. 1047. Cited by: Hartmut Kaelble (2017) “Comparative and Transnational History”. *Ricerche di storia politica* (ISSN 1120-9526), Fascicolo speciale, ottobre 2017. Doi: 10.1412/87615

²² Yun Casalilla, Bartolomé (2014). “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>

adapted to transnational history. Cultural history has been greatly influenced by the transnational approach as well, including economic history, and a variety of which, history of consumption. (Yun Casalilla, 2014)

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,²³ the research on how the consumer patterns change with the circulation of products by Nutzenadel and F. Trentmann or Brewer and F. Trentmann. (Yun Casalilla, 2014) “Craig Clunas asks us to consider comparisons made hitherto between Western and Chinese art. He considers Meike Bal’s cultural critique that comparison becomes a ground for relative judgement; it establishes hierarchies and distracts from looking. He uses the example of different attitudes to Chinese art before and after the Second World War. Chinese art was part of the syllabus of the Courtauld Institute between 1933 and 1945; it was excluded thereafter. Craig Clunas return to Meike Bal to argue that comparison should not be an instrument of judgement, but a source of difference.”²⁴

The Global History takes us further into the comparative and transnational methodologies. The “great divergence”, which has provoked so much renovated thoughts in global history, has generated significant comparative historical studies on trade routes, resources, capital, demography and incomes, or institutional structures among different areas in the world. The “great divergence” related investigations challenge us to not restrict on the internal histories, but to compare in a much broader global range. Manuel Perez Garcia in “Vicarious Consumers: Trans-National Meetings between the West and East in the Mediterranean World (1730-1808)” has also adopted transnational and comparative approach to analyse consumption models, paying special attention to the socio-cultural and economic transfers which occur when different commodities are introduced to regions with diverse values and identities. In particular, it inspects the role of merchants and their

²³ Maxine Berg (2004) *Luxury and Pleasure in Eighteenth Century Britain*. Oxford Press

²⁴ Maxine Berg (2013) *Global History: approaches and new directions*. *Writing the History of the Global, Challenges for the 21st Century*. Oxford University Express

vital influence on consumer decisions, describing how they created demand for new necessities in local, national and international markets of the western Mediterranean area.²⁵

“Transnational history, 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.”²⁶ 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.”²⁷ “Comparative history is partly regarded as a variation of national history, since the units of comparison are still frequently nations and comparative history often focuses on differences between nations, hence a continuation of the predominance of national history.”²⁸ 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.

The use of comparative methods has always been a feature of the global history research and is one of the major contributions to contemporary historiography. The reason why contemporary historians attach great importance to comparative historiography is due in large part to the teachings of Marc Bloch and his example. First of all, Bloch points out the significance of comparison: from one or several social situations, choosing two or more perspectives with similar phenomena; then, trace the process of these phenomena, record and explain their similarities and differences. From a historical point of view, the two conditions make comparison possible: Among these observed phenomena, there must be some degree of similarity, and in the same situations, there must be some degree of

²⁵ Manuel Perez Garcia (2013) *Vicarious Consumers: Trans-National Meetings between the West and East in the Mediterranean World (1730-1808)*. Ashgate Publishing Company

²⁶ K.K. Patel (2011) *Transnational history*, in *Europäische Geschichte Online (EGO)*, ed. By the Leibniz Institut für Europäische Geschichte, Mainz

²⁷ Hartmut Kaelble (2017) “Comparative and Transnational History”. *Ricerche di storia politica* (ISSN 1120-9526), Fascicolo speciale, ottobre 2017. Doi: 10.1412/87615

²⁸ Hartmut Kaelble (2017) “Comparative and Transnational History”. *Ricerche di storia politica* (ISSN 1120-9526), Fascicolo speciale, ottobre 2017. Doi: 10.1412/87615

dissimilarity.²⁹ Second, Bloch believes that the use of comparative methods can be divided into two types based on the differences in research topics and categories. The first is the comparison of “two or more societies in different time and space” and the second is the comparison of two “societies that are close to each other, contemporaneous, and of the same origin and affect each other.” But Bloch himself seems to be more interested in the use of the second method of comparison. He supposed that historical comparison should be confined to neighbouring societies, which are closely entangled, for Bloch interconnection was crucial to historical comparison.³⁰ Historians can make up for the lack of historical materials through comparison of various historical materials. In addition, through the comparison of historical data in several aspects, differences and similarities between different phenomena can also be found. Bloch pointed out that only comparative methods can show real problems.³¹ “Without a certain degree of comparison, there will be no real understanding.”³² 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. Important publications concerning comparative history has appeared world widely, for instance, principal journals including the French “*Annales*”, the Italian “*Ricerche di Storia Politica*”, the British “*Past & Present*”, “*The American Historical Review*”, the German “*Geschichte und Gesellschaft*” and “*HSK*”, a leading digital book review platform. Among the significant historical projects funded by the European Research Council, many are carried out in the perspective of comparative history as well as transnational history. Among them, one to be highlighted is the GECHEM project: *Global Encounters between China and Europe: Trade Networks, Consumption and Cultural Exchanges in Macau and Marseille (1680-1840)*, directed by

²⁹ Marc Bloch, (1928) “A Contribution towards a Comparative History of European Societies”. Frederick C. Lane and Jelle C. Riermersma, eds., (1953) *Enterprise and Secular Change: Readings in Economic History*.

³⁰ M. Bloch, (1928) “Pour une histoire comparée des sociétés européennes”, “*Revue de synthèse historique* 46”

³¹ Marc Bloch, (1928) “A Contribution towards a Comparative History of European Societies”. Frederick C. Lane and Jelle C. Riermersma, eds., (1953) *Enterprise and Secular Change: Readings in Economic History*

³² Marc Bloch, (1928) “A Contribution towards a Comparative History of European Societies”. Frederick C. Lane and Jelle C. Riermersma, eds., (1953) *Enterprise and Secular Change: Readings in Economic History*

professor Manuel Pérez García.³³ As Marc Block declared, “with the endless chat from one national history to the other, without any comprehension, ...a dialogue among the deaf.”³⁴ Comparison with another country or another historical period often inspires renovated views and understanding of the history of one’s own.

Global history with a comparative and transnational perspective has now become a substantial part of the historical disciplines. A global perspective has recast many of the problems previously taken as given. Themes which used to be preserved in a national framework are now presented in a comprehensive global context. Historical research of all kinds of specialisms, including economic, cultural, political, or regional history have to re-considerate and to dispute with each other with the comparative and inspective perceptions.

1.2 Theoretical background

1.2.1 Origin of Silk

Silk and China are two closely interrelated concepts. China is the birthplace of the world's silk civilization and the first country in the world to invent sericulture. Chinese Huaxia ancestors successfully domesticated wild silkworms about 6,000 years ago, using the silk spun out by the silkworms as raw materials to weave silk fabrics, creating early silk civilizations, and nurturing a rich silk culture. Silk constitutes an important part of the Chinese civilization; it has been firmly associated to the Chinese etiquette system, literature, art and technological innovations. Official sayings and folk tales have been scattered all around China about the origins of silk. The most famous official saying, such as “Princess Leizu discovering silkworm and inventing silk loom”, is about the Yellow Emperor’s wife who is said to invent sericulture and silk production.³⁵ And the “Silkworm and horse story” is a legend about the integration of horse and woman into silkworm.³⁶

³³ https://erc.europa.eu/projects-figures/erc-funded-projects/results?search_api_views_fulltext=GECM

³⁴ M. Bloch, (1928) “Pour une histoire comparée des sociétés européennes”, “Revue de synthèse historique 46”

³⁵ 罗泌 《路史》宋代 (LUO Mi (Song Dynasty) Lushi/Grand History)

³⁶ 干宝 (晋)、汪绍楹校注:《搜神记》卷十四, 中华书局, 1979年, 172页 (Ganbao (Jin Dynasty) “Soushen Ji/In search of the Sacred)

The wide spread of various legends about silkworm shows the long history and rich culture of Chinese silk; the results of modern archaeology have also continuously explored the precise origin and location of silk. The half cocoon of the Yangshao Cultural Site (about 3500 BC) excavated at Xiyin Village, Xiaxian, Shanxi Province in 1926 was judged to be a silkworm cocoon and is now preserved as a national treasure at the National Palace Museum in Taipei.³⁷ The sepals found in the Hushan Qianshan Relics in Huzhou in 1958 were widely recognized in the textile and archaeological fields and were identified as Maqiao Culture which is after Liangzhu Culture, about 3,500 to 4,000 years ago.³⁸ In the 1980s, at the Neolithic site of Qingtai Village in Leiyang City, silk artifacts dating back to about 5500 years were unearthed, setting the origin of silk to 5,000 years ago.³⁹ In addition, many Neolithic carvings or ornaments displayed the image of silkworm or cocoon, such as the silkworm image on the tooth carvings unearthed from the Hemudu site in Yuyao, Zhejiang, the cocoon-shaped decoration found in the Yangshao cultural site in Yucheng, 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.

A concept being closely linked to Chinese silk is the Silk Road, which is a terminology, originally derived from a set of five volumes published in 1877 by Ferdinand von Richthofen, a German imperial geographer, in 1877.⁴⁰ The Silk Road is not a “road”, but a commercial network that passes through the mountains, deserts or oceans without any signs. In this system, it has been exchanged not only commodities such as silk and porcelain but also ideas of culture and religions.

1.2.2 Imperial Silk Factories of Jiangnan Area in the Qing Dynasty

³⁷ 李济 (1927) 《西阴村史前遗存》，清华研究院存书。(Li Ji (1927) The prehistoric remains of Xiyin Village)

³⁸ 周颖(2006)“丝之源—湖州钱山漾”，《丝绸》，2006 年第 6 期 (Zhou Yin (2006) “The Origin of Silk-Qianshanyang of Huzhou”, “Silk” 2006. Vol.6)

³⁹ 张松林、高汉玉(1999)“荥阳青台遗址出土丝麻织品观察与研究”，《中原文物》，1999 年第 3 期(Zhang Songlin, Gao Hanyu (1999) “Observation and Research on Silk Fabric Excavated from Qingtai Site in Xiangyang”, “Chinese Relics” 1999. Vol.3)

⁴⁰ 芮乐伟/韩森 (2015) 丝绸之路新史. 北京: 北京联合出版公司·后浪出版公司 (Rayleigh / Hansen (2015) A New History of the Silk Road. Beijing: Beijing United Publishing Co., Ltd. Houlang Publishing Company)

When the Qing court (1616-1912) settled down in Jiangnan area in the early seventeenth century, the imperial silk factories were reconstructed in the three cities of Jiangning (nowadays Nanjing), Suzhou and Hangzhou, where the silk industry had been the most prosperously developed in the Ming Dynasty (1368-1644); In the rest areas of China, only an in-court imperial silk factory in Beijing remained though was abolished soon due to its small scale and low productivity; The imperial silk factories in the Qing Dynasty had been concentrated in Jiangnan area, the three Jiangnan factories were reputed for its large production scale and significant status in the silk manufacturing industry. The reconstructions and production of Jiangnan imperial silk factories had experienced a rather sophisticated process: started with the recovering of Jiangning imperial silk factory in 1645, followed by Suzhou and Hangzhou in 1646.⁴¹ The Qing court appointed one supervisor (Jiandu 监督), one clerk (Bitieshi 笔贴式) and one warehouse manager (Kushi 库使) for each factory, which was all under the administration of officials from the Imperial Treasury Department (Hubu 户部). According to the documents of the Imperial Household Department, since the third year of Kangxi emperor (1664), the terms of the officials of the three imperial factories had been change from three years or one year to permanent without a limit. The Qing court established financial sources for the three imperial factories: from the Imperial Treasury Department and the Imperial Industrial Department; till the third year of Kangxi emperor (1663), it had been regulated that the silk production was supervised by the Imperial Industrial Department, while the financial sources were from the Imperial Treasury Department. (FAN Jinmin 2016)

The production organization method of the imperial silk factories was principally “setting the financial expenditure, offering silk raw material and recruiting silk weavers”.⁴² Meanwhile, in order to achieve better silk production efficiency, the Qing court intended to avoid the malpractice of “designating the silk weaving errand to rich households”, and change designated home-based silk weaving into collective factory-based manufacturing.

⁴¹ 范金民 (2016) 明清江南丝绸史研究 . 南京: 江苏人民出版社 (FAN Jinmin (2016) Study on Jiangnan Silk in the Ming and Qing Dynasties. Nanjing: Jiangsu People's Publishing House).

⁴² 雍正《大清会典》卷二〇一,《工部》,《做造》,夏八。(Yongzheng Emperor “Daqing Huidian/Memoria of Qing Dynasty” Vol. 201, “Ministry of works”, “Manufacturing”)

Nevertheless, at the very beginning of the reconstruction, the supervision of the imperial silk factories, the officials appointed, and the financial resources, were all changing irregularly; The organization method of “setting the financial expenditure, offering silk raw material and recruiting silk weavers” had only been actually carried out after the second year of Kangxi emperor (1662), which had an epoch-making significance: it terminated essentially the corvee service system in the imperial silk factories. (FAN Jinmin 2016)

As to the production organization methods and the identification of the weavers, generally speaking, the form of “setting the financial expenditure, offering silk raw material and recruiting silk weavers” means that: the imperial factories select families who claim weaving errands, issue weaving certificates and offer silk raw materials; the claiming families would recruit weavers to produce according to the designated design, and hand in the finished products to the imperial silk factories. Besides the above mentioned basic and principal production method, some other auxiliary form such as “designating the silk weaving errands to rich households”, “taking weaving duty in turn”, and “taking weaving duty for specific procedures”, etc. “Designating the silk weaving errands to rich households” is like the production organization methods in Ming Dynasty and early Qing Dynasty, though it was only infrequently adapted to small scale production; “taking weaving duty in turn”, and “taking weaving duty for specific procedures” meant “recruiting weavers as the production demands” in the auxiliary procedures like dyeing, gold thread weaving, and spinning wheel weaving, etc. The co-existence of the principle “setting the financial expenditure, offering silk raw material and recruiting silk weavers” production organization method and other auxiliary forms demonstrated the variety in the silk manufacturing industry. Each one should be analysed specifically, and none of them should be over-emphasized.

Practically all the exquisite silk products demanded by the Qing court were manufactured by the three imperial silk factories, including the clothes of the emperor and princesses, rewards to the officials and foreign subsidiary countries, decorations for national festivals, and silk materials for ancestor worship, etc., nevertheless the emphasises of production in the three imperial silk factories were different. About the production and scales of the three imperial silk factories, there've almost never been any detailed quantitative

investigation; As it's concerned the actual quantity of production of the Jiangnan imperial silk factories, it was either avoided or unclearly described; in some cases, even been estimated probably, the results were too varied to be believed. It has been a big defeat for the study of the Jiangnan imperial silk factories, which had a history as long as the entire Qing Dynasty, and covered almost all the official supplying silk products.

Lillian M. Li, declared in her book “China’s Silk Trade: Traditional Industry in the Modern World (1842-1937)”, that the production ability had reached its peak at the Kangxi period (1661-1722), and began to decline afterward; the information of the production quantity of the imperial silk factories was indeed difficult to obtain, as the financial resources of the factories were chaotic.⁴³ In “Study on Jiangnan Silk in the Ming and Qing Dynasties”, Fan Jinmin combined related materials from the Mandarin archives (not Manchu language) of the Chinese First Archive with data from the existing previous research, organized a form of “Silver claimed for the production in the imperial silk factories in early Qing Dynasty”, and demonstrated through analysis and comparison: The quantity of silver claimed for the production of the imperial silk factories and how the silver was distributed, could prove neither the productivity nor the actual quantity produced of the imperial silk factories. In the same book, professor Fan Jinmin examined the quantity of the delivered silk products, and estimated that: First, Since the Qianlong years to the Xianfeng years, the annual average silk production of each imperial silk factory was 13000 *pi* (斤); from the scattered records of delivered silk products and the regulations of claimed silver, it could be estimated that from Shunzhi year to Yongzheng years, the annual productivity should be higher as 14000-15000 *pi*. Second, the percentage of different kind of silk products in each imperial silk factory was different; Third, Concerning the quality, Jiangning was the best, followed by Suzhou, Hangzhou was the least. However, about the quantity, it was all the contrary; Forth, As observed from the analyse of the delivered silk products and claimed silver, the productivity of the Jiangnan imperial silk factories was not declining gradually as commonly known, but was fluctuated.⁴⁴

⁴³ Lillian M. Li, (1981) *China’s Silk Trade: Traditional Industry in the Modern World (1842-1937)*, Cambridge: Harvard University Press (李明珠 (1981) *近代中国蚕丝业及外销*)

⁴⁴ 范金民 (2016) *明清江南丝绸史研究* . 南京: 江苏人民出版社 (FAN Jinmin (2016) *Study on*

About the influence of the Jiangnan imperial silk factories to the private silk production, there is a tendency in the academic field to think that: The influence of the imperial silk factories to the private silk industry had been mostly negative: the imperial silk factories controlled private silk weavers, occupied their time and labour for their private production, which had been a loss for the commodity production; the weavers were damaged in wages and abused in social status, and were forced to serve the *corvée* for the imperial silk factories. Theoretically, it was reasonable to hold this point of view, however, it must be rethought that why the private silk industry was the most prosperous instead of being underdeveloped where the imperial factories were most influential? Whereas in places where there existed environments for silk industry development but without establishing imperial silk factories, the private silk industry was less booming?

In the Qing Dynasty, the *corvée* service of the weaves in the imperial silk factories had been abolished, in this way their social status had been raised up, the production had been characterised by employment, the actual situation of the weavers also depends on the financial resources for production. Undeniably, the imperial silk factories controlled the weavers and occupied their labour time to produce royal tribute, thus was a disadvantage for the commercial production. Nevertheless, in a feudal society as the Qing Dynasty, it was more important for the small producers to make a living than to develop their business and make a fortune, it wasn't a bad situation for the weavers to have food and wage from the imperial silk factories. Due to its large production scales, the imperial silk factories could offer employment opportunities for thousands of weavers. At the same time, the food and wage offered by the imperial silk factories forced the private silk factory owners to hire weavers with a similar remuneration.

On the other side, the contribution to improve the technique of private silk factories was unconditional. To provide royal tributes, a large number of skilled weavers were collected in the imperial silk factories, which was also a stimulate to the improvement and renovation for the private silk industry. Pushed by the imperial silk factories, Jiangning, Suzhou and

Hangzhou had been developed into the production and commerce centre of silk; the imperial silk factories had also encouraged the sericulture industry. Conclusively, these all explained why the most prosperous private silk industry was not developed where the imperial production was avoided, but Jiangning, Suzhou and Hangzhou, where the imperial production was the most prevailing and concentrated.

1.2.3 Le Grande Fabrique

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,⁴⁵ 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.”⁴⁶ “La historia de Lyon” 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 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.”⁴⁷

⁴⁵ Michael Jones (Ed.) (2000) *The Avignon Papacy*, P.N.R. Zutshi, *The New Cambridge Medieval History: c. 1300-c. 1415*, Vol. VI, Cambridge University Press, 653.

⁴⁶ Jacques Anquetil (2002) *Las Rutas de la Seda: De China a Andalucía, Veintidós Siglos de Historia y Cultura*. Madrid: Acento Editorial

⁴⁷ Jean-Pierre Gutton (2000) *Historie de Lyon et du Lyonnais*. Presses Universitaires de France - PUF

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.”⁴⁸ 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. (Jacques Anquetil 2002)

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.⁴⁹

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

⁴⁸ Texto citado en *L'industrie et le commerce de la soie, aperçue historique de la soie*, obra realizada para la exposición franco-británica de 1908, p.47 (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)

⁴⁹ Jacques Anquetil (2002) *Las Rutas de la Seda: De China a Andalucía, Veitidós Siglos de Historia y Cultura*. Madrid: Acento Editorial (Jacques Anquetil (2002) *The Silk Roads: From China to Andalusia, Veitidós Centuries of History and Culture*. Madrid: Acento Editorial)

silks of that time. Henri Algoud expressed: “Would it be necessary to insist on the refinement in the execution of this 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.”⁵⁰

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 slavery. 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. (Jacques Anquetil 2002) 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 4,000.⁵¹

1.2.4 Links between the Chinese Imperial Silk Factories and the Grande Fabrique

⁵⁰ Henri Algoud, (1928) *La soie; art et histoire*. Ed. Payot, París, p. 128 (Henri Algoud, (1928) *Silk; art and history*. Ed. Payot, París, p. 128)

⁵¹ Jacques Anquetil (2002) *Las Rutas de la Seda: De China a Andalucía, Veitidós Siglos de Historia y Cultura*. Madrid: Acento Editorial (Jacques Anquetil (2002) *The Silk Roads: From China to Andalusia, Veitidós Centuries of History and Culture*. Madrid: Acento Editorial)

“At the crossing of the 17th and 18th century, Lyon experienced an intense production and an artistic renovation destined for all of Europe. The looms of Avignon were not far from the decline, and those of Nîmes, Tours and Paris had not developed; everything was concentrated in Lyon. The pompous style of Louis XIV succeeded more refined decorations, in which the landscapes and flowery gardens played the most prominent role. The East India Company imported painted cotton fabrics, silk fabrics, porcelain and lacquered furniture: again, the taste was going to China. The French clientele could no longer distinguish silks imported from China from those woven in Lyons.”⁵²

The links between the Chinese Imperial Silk Factories and the Grande Fabrique could also be inferred by the activities of the Jesuit missionaries. Since the 17th century, the maritime routes from Europe to Asia have been opened, various batches of missionaries came from ultramarine to China, forming a significant Western learning movement in China. Since the Tianqi years (1621-1627) and Chongzhen years (1628-1644) of the Ming Dynasty, the attentions and interests paid to the priests and the Catholic church from the upper classes and the imperial court gave the missionaries great encouragement. Many missionaries introduced China to the European society through letters and works, and the study of China had been unprecedentedly popular in the west. In order to attain supports from imperial court and economic benefits, what the missionaries introduced was mostly good sides of China as they observed, and even expected the convert of the Chinese emperor. As described by the missionaries, China was the best place in the world, a literary and philosophical emperor was the centre of power, governing through an effective administrative literary official system. The emperor was modest and patient, discussing profound philosophical issues and strategical plans with the ministers. In this circumstance, Louis XIV in the splendid Versailles and the Emperor Kangxi living in the majestic Forbidden City coincided in the same era. More than 300 years ago, due to their open vision and the desire to understand each other's civilization, the two wise and cultivated monarchs opened the doors to exchanges between the two countries. In 1685, Lois XIV

⁵² Jacques Anquetil (2002) *Las Rutas de la Seda: De China a Andalucía, Veitidós Siglos de Historia y Cultura*. Madrid: Acento Editorial (Jacques Anquetil (2002) *The Silk Roads: From China to Andalusia, Veitidós Centuries of History and Culture*. Madrid: Acento Editorial)

sent five “Mathematicians of the King” to China, two of them stayed to teach Kangxi sciences such as Geometry and algebra, astronomy, physics, and modern medical science. In 1693, Bai Jin (Joachim Bouvet), one of the missionaries, brought back to France Kangxi’s gifts for King Louis XIV, such as ginseng, porcelain and silk, imperial books in Chinese and Manchu language, such as a full set of natural history and Chinese medicine books. In 1697, Bai Jin published “Portrait historique de l’empereur de la Chine” in Paris.⁵³ Louis XIV had got a picture of China, especially for Kangxi, from Bai Jin’s work, he also asked Bai Jin to prepare gifts to Emperor Kangxi when he returned to China. Although the two monarchs of the East and the West couldn’t meet, they had exchanged and communicated through the ambassadors.

1.2.5 Theoretical framework

There’ve been abundance of academic achievements concerning the imperial silk factories in the Qing Dynasty, especially in the early Qing Dynasty. Peng Zeyi, a famous Chinese economic historian had published an important dissertation in the 1960s, investigated 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.⁵⁴ Which couldn’t be exceeded up till today, even though there’ve been more development in the research of this topic.

In the book of “Study on Jiangnan Silk in the Ming and Qing Dynasties”, Fan Jinmin declared that the research of the imperial silk factories of Jiangnan had been focused on the study of the officials who were managing the factories, not on the silk production. Professor Fan collected related archives and records, analyzed statistically the production scales, food and money claimed for production and actual productivity of the three imperial silk factories, and reproduced the module of the actual production of the three factories. Though investigation of the archives, from the two aspects of regulations and

⁵³ Joachim Bouvet, Collège de la Trinité, Michallet, Estienne Michallet (edi), (1697)“Portrait historique de l’empereur de la Chine présenté au roy”. Bibliothèque municipale de Lyon (Joachim Bouvet, College of the Trinity, Michallet, Estienne Michallet (edi), (1697) "Historical Portrait of the Emperor of China presented to the King". Lyon Municipal Library)

⁵⁴ 彭泽益 (1963)“清代前期江南织造的研究”,“历史研究”1963年第4期 (Peng Zeyi (1963) “Studies on the imperial silk factories in early Qing Dynasty”, “Historical Study” 1963, Vol. 4

actual operation, by analyzing the quantity of weavers, the money claimed for production and the production module, Fan stated that the production form had been principally “setting the financial expenditure, offering silk raw material and recruiting silk weavers”, supplemented by other forms such as “designating the silk weaving errands to rich households”, “taking weaving duty in turn” and “recruiting weavers as the production demands” in a small percentage. Fan hold a different idea from the previously emphasized negative effects of the imperial silk factories to the private silk industry, he thinks that it could not be considered from only one aspect, the imperial silk factories influenced the private silk industry in both negative and positive ways; from a long time perspective, it had been more advantages than disadvantages, which had been the reason for the emerge of a prosperous silk industry in the Jiangnan area. (Fan Jinmin 2016)

“Gazetteer of Suzhou Imperial Silk Factory” was 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 local gazetteer as well as the “Gazetteer of Suzhou Imperial Silk Factory”. It has been a significant document recording events concerning textiles of imperial and official use of Qing Dynasty before the twenty-fifth year of Kangxi (1686), as well as information concerning fabric materials and wages, etc. Also, the work of Wu Fengpei of 1984 “Collection of Materials of the Silk Road: the Qing Dynasty”, published by the National Library of Literature microfilm replication centre, must be mentioned, which contributed greatly to the study of “silk road” and silk production concerned research.

“Historical Materials Concerning Cao Family of Jiangning Imperial Silk Factory” is a collection of memorials to throne concerning Cao family of Jiangning Imperial Silk Factories of Qing Dynasty, edited by the Ming and Qing Dynasty Archives Apartment of the Palace Museum in 1975, it collected around 200 memorials to thrones, tribute lists of the cabinet, the inner palace and the imperial household department of the Qing court, including 139 documents in Han language and 61 documents translated into Manju language from Han. It is formed by the two parts of main body and appendix, the main body includes 187 documents, mainly were the memorials to throne from the three

generations of Cao family during their term in the Jiangning imperial silk factory, a few was from Li Xu, the official of Suzhou imperial silk factory, besides there were also imperial edicts responding to certain memorials. The time range of these documents is from Oct. of the sixteenth year of Kangxi (1677) to Dec. of the thirteenth year of Yongzheng (1735).

⁵⁵ Of course, not to forget the “Chinese Local Gazetteer”, which is a great collection of the local geographical, historical, demographical, economical and cultural information. In addition, the Chinese First Historical Archive of Beijing provides information of the imperial subjects as well.

Besides archives, historical and historical works, there’ve been abundance of literature concerning the topic of the imperial silk factories. The most outstanding one is “Dream of the Red Chamber”. Cao Xueqin, the writer, whose family has been officials of Jiangning imperial silk factories for three generations since his grand-grandfather, his grandfather had been 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.⁵⁶ There’ve been innumerable academic study of the “Dream of Red Chamber”, which even had a specific term called “Redology”. Among which, there is “Jiangning Imperial Silk Factory and Cao Family” of Zhou Ruchang and Yan Zhong, studying the sophisticated relationship between Jiangning imperial silk factory and the family Cao. 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. ⁵⁷

⁵⁵ 故宫博物馆明清档案部 (编著)(1975) 关于江宁织造曹家档案史料. 北京: 中华书局 (Ming and Qing Dynasties Archives Department of the Palace Museum (ed.) (1975) Archives of Family Cao’s of the Jiangning Imperial Silk Factory Historical. Beijing: Zhonghua Book Company)

⁵⁶ 曹雪芹(1727-1732)“红楼梦”. (Cao Xueqin (1727-1732) “Dream of the Red Chamber”)

⁵⁷ 周汝昌, 严中(2006) 江宁织造与曹家. 北京: 中华书局 (Zhou Ruchang, Yan Zhong (2006) Jiangning Imperial Silk Factory and Family Cao. Beijing: Zhonghua Book Company)

There've been numerous archives concerning silk production and consumption in the studied period, the silk trade affected all aspects of the social and economic life in China, as well as the relevant regions in the world. The existing study easily gives the impression that Chinese silk has been sold mostly overseas. In fact, according to historical statistic research, the proportion of raw silk and silk products in domestic consumption is much higher. Silk consumer market is mainly domestic, not foreign. The silk trade in the Qing Dynasty, although its domestic sales accounted for a larger proportion, its vast foreign markets were even more eye-catching. If the domestic trade of silk merely reflected the situation of silk production throughout the country in the Qing Dynasties, its foreign trade was in fact the result of the rise and fall of silk production in various countries in the world. (Fan Jinmin 2016)

The above-mentioned academic accomplishments in the study of the Jiangnan imperial silk factories, set a firm base for further research of the Jiangnan silk industry and the imperial silk factories; the topics raised and materials provided could broaden our vision, stimulate more questions and achieve more knowledges.

As taking about le Grande Fabrique of France, the work of Justin Godat 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 the 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.⁵⁸ In the succeeding research by Jean Peyot and Carlo Poni in the 1970s and 1980s, a study of individuals in the guild, commercial production processes and techniques of the silk merchants had been carried out through quantitative analyses, as

⁵⁸ GODART, Justin, *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) au décret des 2'17 mars 1791 portant suppression de toutes les maîtrises et jurandes.* Paris: A. Rousseau, 1899. (The Silk Worker: Monograohy of Lyon: Historical, Economic and Social Study. First part, Labor regulations: the master worker in sheets d'or, d'argent and silk, the establishment of the manufactory in Lyon (1466) the decree of March 2'17, 1791 removing all masters and guilds. Paris: A. Rousseau, 1899.) from: Jacques Anquetil (2002) *Las Rutas de la Seda: De China a Andalucía, Veitidós Siglos de Historia y Cultura.* Madrid: Acento Editorial (Jacques Anquetil (2002) *The Silk Roads: From China to Andalusia, Veitidós Centuries of History and Culture.* Madrid: Acento Editorial)

a supplement to the work of Godat.⁵⁹ 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.⁶⁰ In the dissertation of “Silks for the Crown: five partnerships of merchant manufacturers in eighteenth century Lyon” of Dato, Moira (2017), 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.”⁶¹

1.3 Main working hypothesis and researching questions

Above and 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. In this thesis, the author intends to investigate the silk trade in China and Europe at the crossing of the seventeenth and eighteenth century through a transnational point of view, taking an example of France, by comparing the imperial silk factories of the Kangxi Emperor period of Qing Dynasty and of le Grande Fabrique of Louis XVIII of France. There've been abundance of works researching respectively the Chinese silk trade,

⁵⁹ Peyrot, “Les techniques du commerce de soies au XVIII e siècle”; “Mode et innovation”; Miller, “Innovation and Industrial Espionage in Eighteenth-Century France”; Miller and Sargentson, “Paris-Lyon: Modes de distribution des étoffes d’or, d’argent et de soie”. PONI, Carlo, “Mode et innovation: les stratégies des marchands en soie de Lyon au XVIII e siècle”, *Revue d’histoire moderne et contemporaine*, 45-3, juillet-septembre 1998, pp. 589-625.

⁶⁰ MILLER, Lesley Ellis, (1998) “Paris-Lyon-Paris: Dialogue in the Design and Distribution of Patterned Silks in the Eighteenth Century.” In *Luxury Trades and Consumerism in Ancien Régime Paris: Studies in the History of the Skilled Workforce*, eds. R. Fox and A. Turner, 139-167. Aldershot: Ashgate Publishing.

⁶¹ Dato, Moira (2017) *Silks for the Crown: five partnerships of merchant manufacturers in eighteenth-century Lyon*. MRes thesis. <http://theses.gla.ac.uk/7970/>

the sea-ban policy, the organization of the guilds and the silk production development in Europe, but a transnational comparison of the two official silk factories at a coincidental historical period would be rather innovative and stimulating. By comparing the imperial silk factories of China and France in the reigns of two great monarchs, my thesis intends to analyze the coincidences and variations 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, which reflected the different status and strategies of the economic development in the two monarchs; Like a butterfly effect, it could be inferred from the details of the official silk production and consumption in the studied geographical and chorological range, the causes and effects of diverse economic and political directions each monarch took subsequently.

Concerning this theme, one of the principle questions to be deal with is what's the coincidences and variations 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? Other important questions associated could be: In the meantime, the two monarchs were communicating with each other through the missionaries, could there possibly be any influence to the thoughts of the two monarchs which affected the running of each imperial silk factories? What is the trend of the silk trade and consumption in the studied period? Which social group were the biggest consumers of Chinese silk? How did the Chinese mass silk exportation activities generate? And what was the procedure of the exportation? Has Chinese silk encountered foreign competition? Had there been challenges or opportunities? What is the impact of China's sea ban (Haijin) policy on the silk trade? How did China's tribute system influence the silk trade? To which point has China's silver-based financial system encouraged the silk exportation? Was there any imitation to the Chinese products in France? What was the effect of the trend of Chinoiserie in France and in China? These questions could be responded by examining the whole process of the production in the imperial factories in both countries, as well as establishing a

comparison of the coincidences and variations. These questions could be associated by considering them in the contextual panorama of the silk production and consumption in the Chinese and French market, including trade policies, the bans, the financial system, the international competition and imitation, etc. The study of the imperial archives concerning the imperial silk factories in China could be principally critical to this study, as from which the reports of the factory officials and financial data of production could be found.

2. Sources and Methodology

2.1 Cross reference of the existing data and materials available in archives, including memorials to the emperor and imperial decrees concerning the theme, documents and letters of merchants, ancient books and local gazetteers of each county

2.1.1 Memorials to the emperor and imperial decrees

The First Historical Archives of China was established in 1925. It's a national archive that preserves documents and royal archives of the Ming and Qing Dynasties (1368-1840). There are more than 10 million archives in the collection, a total of 74 sects, about 10 million (books), including more than 3,000 archives of the Ming Dynasty, and most of them are archives of the Qing Dynasty. The contents of the archives cover politics, economic, military, culture, art, ethnic, religions, diplomacies, science, astronomy, geography, meteorology, major events, important rules and regulations, and leading historical figures of the Qing Dynasty, etc. The state of the Qing Dynasty was a feudal centralized authoritarian system. The imperial power was supreme, and the state political events were all directly dealt with by the emperor. Therefore, the archives focusing the activities of the emperor constitute the core of the national archives and can be roughly divided into five parts: including the decrees of the emperor, the report of the ministers, letters between countries, official history books and archives of royal family and royal affairs.⁶²

Since the second year of Kangxi (1663), the role of Jiangnan imperial silk factories had been changed essentially, the emperor Kangxi appointed his trusted aids to be the officials of the imperial silk factories of Suzhou, Jiangning and Hangzhou, with an “unlimited term”. At the same time, those officials had been engaged with special political tasks by the emperor Kangxi, and they'd been authorized to send “secret memorial report” to the emperor, concerning the situation of the officials and people in Jiangnan area.⁶³ Therefore,

⁶² 中国第一历史档案馆官网, “中国第一历史档案馆馆藏档案概述”(Chinese First Historical Archive, “Overview of the archives of Chinese first historical archives”)

⁶³ 以上引文内的用语, 均摘自康熙给李煦、曹寅二人的朱批, 均载在《康熙朝汉文 朱批奏折汇编》

since the second year of emperor Kangxi to the end of his reign, the three Jiangnan imperial silk factories, among which especially family Li, the official of Suzhou factory and family Cao, the official of Jiangning factory, had been the most trusted and favored ministers of emperor Kangxi. 经笔者查对, In “Collection of imperial memorials of emperor Kangxi”, 3119 memorials from the twenty-eighth year of Kangxi (1689) to the sixty-one year of Kangxi (1722) had been included, among which, there were 619 memorials from Li Xi of Suzhou factory and Cao Yin of Jiangning factory, occupying 20% of all the memorials, showing the special intimate relationship with the emperor.⁶⁴ Even though only a small part of these memorials are concerned with the imperial silk factory production, which explained that the appointment of the officials of the imperial silk factories was not focused on silk production but on the special agency functions; the rich storage of memorials could still be adapt to the research on the imperial factories.⁶⁵

2.1.2 “Collection of Archives”and ancient books

With years’ effort, the First Historical Archives of China had also published abundant collections of archives, here presents a list of materials which could be closely related to my theme, including: “Documents and correspondence between Roman envoys and emperor Kangxi”, “Memorial report of Li Xi of Suzhou imperial silk factory”, “Archives of Family Cao’s of the Jiangning Imperial Silk Factory Historical”, “Memorial report of Sun Wencheng of Hangzhou imperial silk factory”, “Living notes of emperor Kangxi”, “Overview of the archives of China's first historical archives”, “commented memorial reports in Kangxi period (Vol.1-8)”, “Chinese and foreign ambassadors in the Qing Dynasty”, “Ming and Qing Archives and History Studies (60th Anniversary Collection)”, “Translation of commented memorial report in Manchu language in Kangxi period”, “Ming and Qing Archives and History Studies (70th Anniversary Collection)”, “Selected

一书, 不一一详注出处。(“Collection of commented imperial memorial report”)

⁶⁴ 据中国第一历史档案馆的前身故宫博物院明清档案部编印发行的《关于江宁织造 曹家档案史料》、《李煦奏折》两书登录,《曹档》共收康熙朝奏折 142 件,《李档》共收 413 件,其中两书有少量重复,又有少量档案是从内务府满文档案中翻译而来的。奏折之数与《康熙朝汉文朱批奏折汇编》有出入。除上述原因外,还由于《汇编》已将台北故宫博物院文献馆所藏已刊布的康熙朝朱批奏折收录在内之故。

⁶⁵ 韦庆远 (2010) 江南三织造与清代前期政治,“史学集刊”3 期 (Wei Qingyuan (2010) “Jiangnan Imperial factories and Early Qing Dynasty Politics”, of “Historical Collection”, Vol. 3)

archives of the thirteen Hongs of Canton in the Qing Dynasty”, and “Collection of archives of the construction office of the imperial household department in the Qing court”, etc.

Besides, there’ve also been a collection of ancient books which could contribute to the research, such as “Da Qing Huidian (Rules Explanations of Qing Dynasty)”. In this book, the official grades, affiliation and various service systems of the central government of the Qing Dynasty were compiled in details, which was also the legal basis for handling official duties at that time. It is categorized by administrative agencies, including the functions of the imperial clan court, the cabinet, the ministry of personnel, the imperial households department, the ministry of rites, the ministry of war, the ministry of penalty, and the department of work, etc. From the view of the contents, it is mainly a compilation of administrative laws, with a detailed description of the administrative regulations and various cases from the beginning to the end of the Qing Dynasty, reflecting a high degree of completeness of the feudal administrative system.⁶⁶⁶⁷

2.1.3 Local gazetteers

The Chinese Local Gazetteers was originated since a very early time, and it was initially formed in the Song Dynasty. The local chronicles that have been preserved till today are mainly focused on the history since Song and Yuan Dynasties, especially Ming and Qing Dynasties, with a majority of the Qing Dynasty. The Local Gazetteer records almost all aspects of a place, is a comprehensive encyclopedia with rich historical values. The majority of the local gazetteers are specific and detailed records of the county history.⁶⁸ The Local Gazetteer not only provides basic information for local or regional study but also is an

⁶⁶ 吕丽、刘杨 (1998) “是官修史书，还是行政法典——《清会典》性质论”，《法制与社会发展》1998年第2期 (Lv Li, Liu Yang, “Is this an official history or administrative laws – a debate on “Daqing Hui Dian””, from “Law and Social development”, 1998 Vol2”)

⁶⁷ 陈灵海(2017)《大清会典》与清代“典例”法律体系，《中外法学》2017年第2期 (Chen Linghai (2017) “Daqing Hui dian’ and the Law System of Qing Dynasty”, from “International Law Study”, 2017, Vol 2)

⁶⁸ 常建华(2006) 试论中国地方志的社会史价值，《中国社会历史评论》第7卷，天津古籍出版社 (Chang Jianhua (2006) “About the social value of Chinese Local Gazetteer”, from “Chinese Social Historical Comments” Vol. 7, Tianjin Ancient Books Publishing House)

important historical approach. A new methodological value has been attached to the approach of local gazetteers for revising of microhistory.

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 SNA 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.). SNA 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 (creditors and debtors), associations (between members) or biological connections (kinships). Under the SNA 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 and Claire Lemercier in 2011, in the historical discipline, the use of A.R.S. has walked in two ways: investigations approach with formalization in technical terms that implies the application of the ARS, and those that use the concept of network to explain some space of the social reality, but without incorporating the formal analysis.⁶⁹ 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 interactions between individuals on these attributes. Social network analysis puts the relationship in the center. In these theories, individuals are abstracted as nodes, and the

⁶⁹ Bertrand, M., Guzzi– Hebb, S. y Lemercier, C. (2011). Introducción: ¿en qué punto se encuentra el análisis de redes en Historia? Revista Redes, Volumen 21, p. 8.

social relations between individuals as edges between nodes form a network together. Sociologists hope that this structural network can 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.⁷⁰ After years of development, it has become one of the core concepts in the field of social sciences and statistical physics, information science and other natural sciences. The technique known as Social Network Analysis derives from the sociological discipline, more specifically from the sociometry proposed by Jacob Levy Moreno⁷¹, incorporating largely the mathematical graph theory of Frank Harary⁷². It starts from a very simple idea: human beings, rankal interact with each other, develop various types of relationships (e.g. kinship or friendship relationships, commercial exchanges, etc.). Social relationships resemble a network, because they connect individuals.⁷³

Before the late 1990s, social network analysis was mainly the research field of social sciences (mainly sociology, anthropology, and economics, etc.). Among them, the representative research results include Macneil's "Relationship Contract Theory" (1978), White's "Market Network" Theory (1981), Granovetter's "embeddedness" Theory (1985), and Coleman's New Economic Sociology (1988), Putnam (1994) and a group of sociologists advocating the "social capital" theory, Burt's Structural Holes (1992).

Since the late 1990s, social network analysis paradigm has diverged: One research paradigm is still based on sociology and anthropology (the more preferred term is "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

⁷⁰ Freeman, I., C. (2004) *The Development of Social Network Analysis: A Study in the Sociology of Science*. Empirical Press.

⁷¹ MORENO, J. L., (1941). *Foundations of Sociometry: An Introduction*. Sociometry, Volume 4 (1).

⁷² HARARY, Frank (1969). *Graph Theory*. E.U.A.: Addison – Wesley.

⁷³ Sergio T Serrano (2015) *Introducción al Análisis de Redes Sociales*. http://www.academia.edu/28824439/Introducci%C3%B3n_al_An%C3%A1lisis_de_Red_Sociales

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. Of course, there are also some intermediate theories, the more common being Granovetter's weak link theory and Burt's structural hole theory. Previous social sciences often focused on the characteristics of individuals (or actors, such as businesses and individuals), while ignoring the relationships between individuals. Social network analysis is the method and perspective of research on relations. The most important feature is that it considers the interdependence between individuals and is closer to the real society. You can define a network from the following three aspects: 1. Actors. For example, a network of people, a network of consumers, or a network of society. 2. Ties. The graph is often represented by edges. For example, the friendship and loan relationship between people. Corporate partnerships. The hostile relationship between the country and the country. 3. Borders. These actors and edges need to be defined by a boundary, such as the user within a certain range, such as within a government unit or an industry. With these three parts, Networks could be abstracted from various aspects of daily life. A series of indicators could adapt to observe the impact of these networks on the actors in the network, or the reasons in these networks. Complex networks and SNAs often use the same analysis software and visualization techniques.

According to the famous chain letter experiment of Milgram (1967), 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.⁷⁴ Social network analysis has been neglected in many research fields. The economic analysis of social networks can be traced back to the American economist Veblen on “conspicuous consumption” (Veblen 1899) “relative consumption” (Dussenbery

⁷⁴ J Travers, S Milgram. (1967) The small world problem. *Psychology Today* 1 (1), 61-67, 1967.

1944), and scholars such as Schulz. Research on the labor market (Myers & Shultz, 1951). Granovetter evaluated: “Many complex transactions with high transaction costs continue to be conducted through the market. The key to understand this fact lies in the buyers and sellers. Both are embedded in a long-term business relationship network in which both buyers and sellers are reluctant to lose the trust that they have already established in mutual market transactions.” He believes that once social relationships embedded in various stakeholders are taken into account, the seemingly “irrational” behavior becomes very rational.⁷⁵ Since the 1970s, social network 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 have developed a historical social network analysis method (HSNA). In recent years, with the diversification of historians’ analytical tools, Social Network Analysis (SNA) has provided new ideas and rich details for the study of history. Charles Wetherel has systematically discussed the feasibility of applying Historical Social Network Analysis (HSNA) to historical research in his article. The author not only evaluated the basic elements of HSNA, but also demonstrated how to use social network analysis methods through case analysis of 19th-century Russian serfs. The author constructed database on kinship relations in certain region from a series of historical survey data conducted in Russia in 1795-1850. Through the use of a full social network analysis method, the author assessed the situation of kinship in the farm life.⁷⁶

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 Arcgis etc. SQL: Structural Query language, is actually

⁷⁵ Mark Granovetter (1985) Economic Behavior and Social Structure: Problem of Embeddedness. *American Journal of Sociology*, Vol. 91, No. 3 (Nov. 1985). Chicago: The University of Chicago Press.

⁷⁶ Barry Wellman & Charles Wetherel (1996) Social network analysis of historical communities: Some questions from the present for the past. *The History of the Family*. Vol. 1 1996

the standard language for dealing with Relational Databases. SQL can be effectively used to insert, search, update, delete database records. That doesn't mean SQL cannot do things beyond that. In fact, it helps in optimizing and maintenance of database and much more. Relational database like Mysql, Oracle, Ms SQL server, Sybase, etc uses SQL. GEPHI: Network Analysis and visualization appears to be an interesting tool to give the researcher the ability to see its data from a new angle. Gephi is an easy access and powerful network analysis tool of visualization and exploration for graphs and networks. ARCGIS: ArcGIS is a geographic information system (GIS) for working with maps and geographic information. It is used for creating and using maps, compiling geographic data, analyzing mapped information, sharing and discovering geographic information, using maps and geographic information in a range of applications, and managing geographic information in a database. The system provides an infrastructure for making maps and geographic information available throughout an organization, across a community, and openly on the Web.

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, SNA possesses real potential for 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."⁷⁷ For the historical research, the resources and archives are essential. "Unlike the sociologist and the anthropologist, who work with data obtained from fieldwork, and who can prepare questionnaires to apply to living people, the historian faces societies of the past that may not have left adequate documentary traces for the application of the ARS On this point, it must be said that the treatment of the sources and

⁷⁷ VAN YOUNG, Eric. (1992). *Mexico's Regions. Comparative History and Development*, San Diego: University of California at San Diego., En la introducción a este libro el autor se pregunta si las regiones son "buenas para pensar". Retomo la frase para aplicarla al A.R.S.

their correct interpretation is a problem prior to the decision of how they will be used analytically.”⁷⁸ In this way, it is more important to take full advantage of the existing information and data from archives and historical sources, the method of social network analysis which oriented from new computer sciences could offer a new approach and perspective to analyze these sources. For example, especially in the theme of consume history of oriental goods, by building a database with first hand resources, a social network analysis could be carried out with the accumulated mass-data; A combination of information from ancient archives and modern methods of social network analysis could very possibly led to new academic findings.

2.3 GECEM database

Since recent decades, a new method of digitalizing large-scale historical materials and explaining historical facts through quantitative analysis has been gradually popularized in the academic world. Quantitative database covers a variety of first-hand systematic data, a large geographical area and a certain time span, which is electronically constructed following a certain data format to suit statistical analysis. Quantitative database is a elementary and comprehensive research method which not only enrich and improve our understanding of micro-human history, but also contribute to a more reliable grand narrative. A quantitative historical database could also provide powerful and flexible research resources to promote the integration between history and other social sciences. A traditional historical research generally summarizes historical facts through literature collections and personal interpretation of scholars; meanwhile, through an integrated database of historical materials, historical materials could be transformed into data and applied directly to quantitative analysis and research, which has become a diversified historical research method, and provides a base for historical exchanges and interactions with other social sciences and even natural sciences.

⁷⁸ Sergio T Serrano (2015) Introducción al Análisis de Redes Sociales http://www.academia.edu/28824439/Introducci%C3%B3n_al_An%C3%A1lisis_de_Red_Sociales

The GECCEM database is still in its phase of development, being programmed in MySQL with an interface of Python software, and integrated archival information from China, France, Spain and Mexico concerning the project topic of GECCEM: Global Encounters between China and Europe: Trade Networks, Consumption and Cultural Exchanges in Macau and Marseille, 1680-1840. The GECCEM database is contributing to the specific research of every GECCEM investigators, with its archival information, including trade records, probate inventories and dowry letters; in the future it will be integrated with also Chinese archives of demography and trade information from Chinese aspects.

REFERENCES

Printed and Copied Primary Sources

- Cao Xueqin (曹雪芹) & Gao E (高鹗), *Hong Lou Meng (红楼梦: A Dream in Red Mansions)*, (Beijing: People's Literature Publishing House, 1982).
- Collection of commented imperial memorial report (康熙朝汉文 朱批奏折汇编)*, Chinese First Historical Archive
- Ganbao(干宝)、Wang Shaoying Ed.(汪绍楹校注), *Soushen Ji/In search of the Sacred(搜神记)* 卷十四, (Jin Dynasty) (Zhonghua Book Company, 1979) 故宫博物院明清档案部(编著)(1975) 关于江宁织造曹家档案史料. 北京: 中华书局 (Ming and Qing Dynasties Archives Department of the Palace Museum (ed.) (1975) Archives of Family Cao's of the Jiangning Imperial Silk Factory Historical. Beijing: Zhonghua Book Company)
- Liu Xu (刘昫), *Biography of Weizheng, History of Tang (旧唐书 魏征传)*, (941).
- Luo Mi (罗泌), *Lu Shi/Grand History (路史)*, (Song Dynasty)
- Wu Fengpei (吴丰培), *Collection of Materials of the Silk Road: the Qing Dynasty 丝绸之路资料汇钞:清代部分*, National Library of Literature microfilm replication center 全国图书馆文献缩微复制中心, (1996)
- Yongzheng Emperor, *Daqing Huidian/Memoria of Qing Dynasty*, Vol. 201, 'Ministry of works', 'Manufacturing'. (雍正《大清会典》卷二〇一,《工部》,《做造》,夏八)

Secondary Sources

- Abel Ramos, José, 'La Seda', *Artes de México*, No. 190, (1977).
- Algoud, Henri, *La soie; art et histoire*. Ed. Payot, Paris, p. 128, (1928)
- Anquetil, Jacques, (2002) *Las Rutas de la Seda: De China a Andalucía, Veitidós Siglos de Historia y Cultura*, (Madrid: Acento Editorial, 2002)
- Berg, Maxine, *Global History: approaches and new directions. Writing the History of the Global, Challenges for the 21st Century*, (Oxford University Express, 2013).
- Berg, Maxine, *Luxury and Pleasure in Eighteenth Century Britain*, (Oxford Press, 2004).
- Bertrand, M., Guzzi-Hebb, S. y Lemercier, C, 'Introducción: ¿en qué punto se encuentra el análisis de redes en Historia?' *Revista Redes*, Volumen 21, p. 8, (2011).
- Bintliff, John, *The Annales School and Archaeology*, (Leicester University Press. Leicester London, 1991)
- Bloch, Marc., 'A Contribution towards a Comparative History of European Societies', *Enterprise and Secular Change: Readings in Economic History*, (Frederick C. Lane and Jelle C. Riermersma, eds., 1953)
- Bloch, Marc., 'Pour una historie comparée des sociétés européennes', *Revue de synthèse historique*, Vol. 46, (1928)
- Bloch, Marc., *The Historian's Craft*, (Toronto: House of Canada, Limited, 1953)
- Bouvet, Joachim, Collège de la Trinité, Michallet, Estienne Michallet (edi), (1697) *Portrait historique de l'empereur de la Chine présenté au roy* (Historical Portrait of the Emperor of China presented to the King), Bibliothèque municipale de Lyon (Joachim Bouvet, College of the Trinity, Michallet, Estienne Michallet (edi), (1697) .

- Chang Jianhua (常建华), 'About the social value of Chinese Local Gazetteer' (试论中国地方志的社会史价值), *Chinese Social Historical Comments (中国社会历史评论)* Vol. 7, (Tianjin Ancient Books Publishing House 天津古籍出版社, 2006)
- Chen Linghai (陈灵海) (2017), *Daqing Hui Dian and the Law System of Qing Dynasty (《大清会典》与清代“典例”法律体系)*, *International Law Study (中外法学)*, 2017, Vol 2,(2017).
- Chinese First Historical Archive, 'Overview of the archives of Chinese first historical archives', (中国第一历史档案馆官网, “中国第一历史档案馆馆藏档案概述).
- Cipolla, Carlos M., *Entre la Historia y La Economía*. (Barcelona: Editorial Crítica, 1991).
- Clark, Gregory, 'The British Industrial Revolution, 1760-1860', *World Economic History*, ECN 110B, (Spring 2005)
- Curtius, G., *Philologie und Sprachwissenschaft: Antrittsvorlesung gehalten zu Leipzig am 30. April 1862*, Leipzig, Teubner 1862, p. 9, cited in P.Y. Saunier, *Palgrave Dictionary of Transnational History*, cit., p. 1047. Cited by: Hartmut Kaelble (2017) "Comparative and Transnational History". *Ricerche di storia politica* (ISSN 1120-9526), Fascicolo speciale, ottobre 2017. Doi: 10.1412/87615
- Dato, Moira (2017) *Silks for the Crown: five partnerships of merchant manufacturers in eighteenth-century Lyon*. MRes thesis. <http://theses.gla.ac.uk/7970/>
- FAN Jinmin (范金民), *Study on Jiangnan Silk in the Ming and Qing Dynasties 明清江南丝绸史研究*, (Jiangsu People's Publishing House 江苏人民出版社, 2016).
- Freeman, L. C., *The Development of Social Network Analysis: A Study in the Sociology of Science*. (Empirical Press, 2004)
- FU Lecheng (傅乐成), *General History of China (中国通史)*, (Great China Press 大中国出版社, 2009)
- Godart Justin, *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'etablissement de la manufacture a Lyon (1466) au décret des 2'17 mars 1791 portant suppression de toute les maitrises et jurandes*. Paris: A. Rousseau, 1899. (The Silk Worker: Monograohy of Lyon: Historical, Economic and Social Study. First part, Labor regulations: the master worker in sheets d'or, d'argent and silk, the establishment of the manufactory in Lyon (1466) the decree of March 2'17, 1791 removing all masters and guilds. Paris: A. Rousseau, 1899.) from: Jacques Anquetil (2002) *Las Rutas de la Seda: De China a Andalucía, Veitidós Siglos de Historia y Cultura*. Madrid: Acento Editorial (Jacques Anquetil (2002) *The Silk Roads: From China to Andalusia, Veitidós Centuries of History and Culture*. Madrid: Acento Editorial)
- Goichi Matsunaga (松永伍作), 'The Qing Dynasty sericulture' (论清国蚕业), *Agriculture 农学报*, Volume 3 Guangxu twenty-four years leap March 卷三 光绪二十四年闰三月下, (1898) (Text quoted in *L'industrie et le commerce de la soie, apercue historique de la soie, work done for the Franco-British exhibition of 1908*, p.47)
- Granovetter, Mark, 'Economic Behavior and Social Structure: Problem of Embeddedness', *American Journal of Sociology*, Vol. 91, No. 3 (Nov., 1985). (Chicago: The University of Chicago Press, 1985).

- Gunder, Frank, *ReOrient: Global Economy in the Asian Age*, (University of California Press, 1998)
- Gutton, Jean-Pierre, *Historie de Lyon et du Lyonnais*, (Presses Universitaires de France – PUF, 2000)
- Han Yuhai (韩毓海), ‘The Ming Dynasty: The Tragedy of the Silver Empire’ (明王朝: 白银帝国的悲剧), *Da Jinmao* 大经贸, Vol. 4, (2010)
- Harary, Frank, *Graph Theory*, (E.U.A.: Addison – Wesley, 1969)
- Harris, Olivia, ‘Braudel: Historical Time and the Horror of Discontinuity’, *History Workshop Journal* (57): 161–174. ISSN 1363-3554, (2004)
https://erc.europa.eu/projects-figures/erc-funded-projects/results?search_api_views_fullt_ext=GECM
- Huang Hongzhao (黄鸿钊), ‘The Rise and Fall of Macao's Overseas Trade during the Ming and Qing Dynasties’ (明清时期澳门海外贸易的盛衰), *Journal of Jianghai* 江海学刊, Vol 6, (1999).
- Jenkins, David (Eds.), *The Cambridge History of Western Textiles*, (Cambridge: Cambridge university Press, 2003)
- Jiang Gongtao (姜公韬) *History of China's Ming and Qing Dynasties*(中国通史明清史), (Kyushu Island Publishing House 九州岛出版社, 2010)
- Jones, Michael, (Ed.), ‘The Avignon Papacy, P.N.R. Zutshi’, *The New Cambridge Medieval History*, c. 1300-c. 1415, Vol. VI, (Cambridge University Press, 653., 2000).
- Kaelble, Hartmut, ‘Comparative and Transnational History’. *Ricerche di storia politica* (ISSN 1120-9526), Fascicolo speciale, ottobre, (2017). Doi: 10.1412/87615
- Li Guoqi (李国祁), *The History of China* (中国历史), San Min Book Press 三民出版社, 2001)
- Li Ji(李济), *The prehistoric remains of Xiyin Village* 西阴村史前遗存, (Qinghua Research 清华研究院存书, 1927)
- Lillian M. Li (李明珠), *China's Silk Trade: Traditional Industry in the Modern World (1842-1937)* (近代中国蚕丝业及外销, (Cambridge: Harvard University Press 1981).
- Lv Li(吕丽), Liu Yang(刘杨), ‘Is this an official history or administrative laws--a debate on *Daqing Hui Dian*’ (是官修史书, 还是行政法典--《清会典》性质论), *Law and Social development* (法制与社会发展), Vol2, (1998).
- Marx, Karl, Engels, Friedrich, *The Manifesto of the Communist Party*, Section 1, paragraph 1, lines 1-2., (1848).
- Mikosch, Elisabeth, ‘The Manufacture and Trade of Luxury Textiles in The Age of Mercantilism’, *Textile Society of America Symposium Proceedings*. 612. (1990)
- Milgram, J Travers, S, ‘The small world problem’, *Psychology Today* 1 (1), 61-67, (1967) .
- Miller, Lesley Ellis, ‘Mysterious Manufacturers: Situating L. Galy, Gallien et Compe. in the Eighteenth-Century Lyons Silk Industry’, *Studies in the Decorative Arts*, Vol. 9, No. 2 (SPRING-SUMMER 2002), pp. 87-131, (2002)
- Miller, Lesley Ellis, ‘Paris-Lyon-Paris: Dialogue in the Design and Distribution of Patterned Silks in the Eighteenth Century’, *Luxury Trades and Consumerism in Ancien Régime Paris: Studies in the History of the Skilled Workforce*, eds. R. Fox and A. Turner, 139-167. (Aldershot: Ashgate Publishing, 1998)
- Moreno, J. L., *Foundations of Sociometry: An Introduction. Sociometry*, Volume 4 (1), (1941).

- Pan Zongyi (潘宗忆), 'The core concepts and methods of Brock's historical thought'(布洛克历史思想的核心概念与方法), (2012)
- Patel, K.K., *Transnational history, in Europäische Geschichte Online (EGO)*, ed. By the Leibniz Institut für Europäische Geschichte, Mainz, (2011)
- 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), *Historical Study 历史研究*, Vol. 4, (1963)
- Perez García, Manuel, *Vicarious Consumers: Trans-National Meetings between the West and East in the Mediterranean World (1730-1808)*, (Ashgate Publishing Company, 2013)
- Peyrot, "Les techniques du commerce de soies au XVIII e siècle"; "Mode et innovation"; Miller, "Innovation and Industrial Espionage in Eighteenth-Century France"; Miller and Sargentson, "Paris-Lyon: Modes de distribution des étoffes d'or, d'argent et de soie". PONI, Carlo, "Mode et innovation: les stratégies des marchands en soie de Lyon au XVIII e siècle", *Revue d'histoire moderne et contemporaine*, 45-3, juillet-septembre 1998, pp. 589-625.
- Pomeranz, Kenneth, *The Great Divergence: China, Europe, and the Making of the Modern World Economy*, (Princeton University Press, 2001)
- Rayleigh (芮乐伟)/ Hansen(韩森), *A New History of the Silk Road 丝绸之路新史*. (Beijing: Beijing United Publishing Co., Ltd. Houlang Publishing Company 北京联合出版公司·后浪出版公司, 2015)
- Rowe, William T., *China's Last Empire: The Great Qing*, (Cambridge, Mass., Belknap Press of Harvard University Press, 2009)
- Serrano, Sergio T, Introducción al Análisis de Redes Sociales, (2015) http://www.academia.edu/28824439/Introducci%C3%B3n_al_An%C3%A1lisis_de_Red_Sociales
- Situ Shangji(司徒尚纪) / Xu Guiling (许桂灵), 'The Historical Evolution of China's Maritime Silk Road' (中国海上丝绸之路的历史演变), *Tropical Geography (热带地理)*, Vol.35, No. 5, Sept, (2015)
- Van Young, Eric, *Mexico's Regions. Comparative History and Development*, (San Diego: University of California at San Diego., 1992)
- Weber, Max, *The Protestant Ethic and The Spirit of Capitalism*, (Roxbury Publ. Co., 1905)
- Wei Qingyuan (韦庆远), 'Jiangnan Imperial factories and Early Qing Dynasty Politics'江南三织造与清代前期政治, *Historical Collection 史学集刊*, Vol. 3, (2010)
- Wellman, Barry & Wetherel, Charles, 'Social network analysis of historical communities: Some questions from the present for the past', *The History of the Family*, Vol. 1 (1996)
- Yun Casalilla, Bartolomé, 'Transnational history. What lies behind the label? Some reflections from the Early Modernist's point of view', *Culture & History Digital Journal*, 3(2): e025., (2014). Doi: <http://dx.doi.org/10.3989/chdj.2014.025>
- Zhang Li(张丽) / Luo Zhaodong(骆昭东), 'Seeing the Rise and Fall of the Ming and Qing Merchants from the Perspective of Global Economic Development'(从全球经济发展看明清商帮兴衰), *Chinese Economical History Study 中国经济史研究*, Vol 4, (2009).
- Zhang Songlin (张松林), Gao Hanyu (高汉玉), 'Observation and Research on Silk Fabric Excavated from Qingtai Site in Xiangyang'(荥阳青台遗址出土丝麻织品观察与研究), *Chinese Relics(中原文物)*, Vol.3, (1999).
- Zhou Gongxin (周功鑫), 'The Rise and Development of Chinese Fashion in the French

Louis XIV' (法国路易十四时期中国风尚的兴起与发展), (2011)
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 Book Company 中华书局, 2006)
Zhou Yin(周颖), 'The Origin of Silk-Qianshanyang of Huzhou'(丝之源—湖州钱山漾), *Silk* 丝绸, Vol.6, (2006).