Quantifying Historical Research and Expanding Understanding of China's Long-term Development History

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Abstract

This paper delves into China's extensive developmental history through the interdisciplinary approaches of quantitative historical research and digital humanities. It begins by outlining the characteristics of quantitative historical research in China over the past decade and then uses the latest research outcomes from the author's team to demonstrate how these studies have provided new insights into the long-term development of Chinese society. The research reveals that war, opening to the outside world, and maritime trade are the core factors shaping China's economic and geographical patterns and social culture, with these elements significantly influencing the trajectory of Chinese civilization. By integrating extensive historical and archaeological data with quantitative analysis methods and social science theories, this paper not only aids in resolving contentious issues in historical research but also introduces recent problems, perspectives, and discoveries, thereby deepening the understanding of China's history. This foundation also facilitates the accumulation of more general knowledge, incorporating the regularities of Chinese history into various branches of social science to enhance the comprehension of the laws governing human social development.

Keywords

Quantitative historical research, Digital humanities, Chinese development history, Maritime trade, International exchange, War impact

Introduction

Quantitative history and digital humanities are interdisciplinary subjects that have developed rapidly in recent years. In the era of big data and artificial intelligence, both have promoted the development of humanities. At the same time, quantitative historical research and digital humanities also promote and complement each other. Compared with digital humanities, quantitative history focuses on the use of databases, especially combining quantitative analysis methods and social science theories to study important historical phenomena, discover their laws, verify causality, and provide systematic explanations [1]. In other words, digital humanities estimate and judge the correlation between phenomena based on data, while quantitative historical research further explores the causal relationship between historical phenomena and makes systematic verification from statistics. With the establishment of more historical databases and opening to the academic community, the application of quantitative analysis methods has also increased and become more extensive. How statistical and interesting research questions from historical big data, conduct hypothesis testing and inference analysis that meet the statistical requirements, and then form a new understanding of history, is the direction that digital

humanities-related research is currently focusing on. In this respect, there have been many practices in the field of quantitative history research, which deserve the attention and understanding of digital humanities scholars [2].

Firstly, this paper introduces the characteristics of quantitative history in China in the past ten years. Then, taking the latest quantitative history research of my research team as an example, it explains what new cognition quantitative history has brought to understanding the long-term development history of China society [3].

Since 2013, quantitative historical research has developed rapidly in academic circles at home and abroad [4]. There are more young scholars engaged in quantitative history research, and many related studies have been published in high-level journals in both Chinese and English. Looking back on the development of quantitative historical research since 2013, we can see the following obvious characteristics [5].

First, it is the expansion of the research period. The early quantitative historical research was concentrated in the Qing Dynasty and the Republic of China, especially in the 17th to 19th centuries. However, the current research has covered 10,000 years from the Neolithic period to today. The reason for this change is that, on the one hand, with the development of digital humanities, researchers can obtain large-scale historical materials and numerous archaeological reports more conveniently; on the other hand, with the deepening of relevant thematic research, researchers are constantly looking for early factors that affect historical changes.

For example, we observed that the economic geographical pattern of the Qing Dynasty was centered on the south, especially the south of the Yangtze River, so what factors caused this geographical pattern? Currently, it often dates to the transition period of the Tang and Song Dynasties. Furthermore, how the economic and geographical pattern of the Tang and Song Dynasties was formed needs to be traced back. In the process of continuous tracing, the research period has been lengthened, thus forming the characteristic that the current quantitative history of China covers ten thousand years. In the following, we will explain it in detail with relevant cases.

Secondly, it is the expansion of the research object. Scholars who engaged in quantitative history research in the early days came from the field of economic history. Economic history research.

Scholars from both historical and economic backgrounds have a tradition of using data, so they quickly become active participants in the field of quantitative history research. However, with the emphasis on system, country, culture and other factors in the study of economic history, the topics studied by these scholars have gone beyond the scope of traditional economic history, and more closely interacted with political history, ideological history, cultural history, religious history, archaeology and so on. In addition, the so-called historical turn has emerged in political science, sociology, and other disciplines. With the development of historical sociology, historical politics and historical political economy, many scholars have been attracted to join the quantitative historical research. In the recent 10th International Conference on Quantitative Historical Studies and the 8th Annual Conference on Asian Economic History, the topics of papers submitted by different researchers are related to all aspects of history. It can be said that quantitative historical research has formed comprehensive coverage of different historical themes and has produced a comprehensive dialogue and interaction with different branches of history [6-8].

Thirdly, from the perspective of methodology, quantitative historical research has formed a multi-level and multi-dimensional research method. The frontier methods of causal inference in economics include the double difference method, triple difference method, breakpoint regression analysis method, propensity score matching method, tool variable method, “counterfactual” randomization method, etc., as well as correlation analysis, time series analysis, and multiple regression analysis with low threshold. In addition, social network analysis, GIS and other methods have also been widely used.

These research methods constitute a complete toolbox, which helps researchers to research different topics. This situation has also benefited from the continuous promotion of quantitative history workshops in the past ten years and the rapid improvement of computer capabilities [9].

Finally, it is the rise of global comparative research. Before the rapid development of the quantitative history of China, the research on the quantitative history of Europe, North America, the Middle East and other regions have been developed for decades in the overseas English circles, especially since the beginning of the 21st century, and the research problems and methods have been greatly improved. It is in the dialogue and comparison with these studies that the development of quantitative research on the history of China develops rapidly. Take the Nobel Prize in Economics in 2024 as an example. Three scholars, Daron Acemoglu, Simon Johnson and James A. Robinson, won this prize for their "innovative research in the field of institutional economics, which revealed the institutional roots of economic prosperity differences among countries and provided new perspectives for solving global inequality." Their representative research results were published around 2001 and 2002, which soon attracted the attention of quantitative China historians. These studies are the crucial factors that promote the rapid development of quantitative history research. With the increase in the quantity and quality of quantitative studies on the history of China, there are more global comparative studies, and quantitative studies based on the history of China are increasingly appearing in mainstream international academic journals. More researchers in China compare the study of quantitative history of China with that of other regions, and more overseas researchers include the history of China in their global comparative study.

Overall, in the past ten years, researchers have continuously lengthened the historical period of research, put forward innovative research questions, followed the cutting-edge quantitative methods, to a northern development model once again. The maintained a broad global comparative vision, and produced many influential results. These characteristics make quantitative historical research continue to maintain vitality and accelerate the expansion of academic influence [10].

The following research shows that the development history of China in the past 10,000 years can be divided into three stages. First, from the Neolithic Age to the early Sui and Tang Dynasties, the development of China society occurred in the north. According to the research of Chen Zhiwu, Peter Turchin and Wang Wanda, the reason leading to this economic geographical pattern is the threat of high-frequency war faced by the northern plain. The complex society of "cities" and the subsequent countries formed for the defense demand gave birth to the northern development model of mobilizing labor and material resources with power and allocating resources with power. The second period is from the Sui and Tang dynasties to Song and Yuan dynasties. According to the quantitative analysis of Chen Zhiwu, Lin Zhan and Peng Kaixiang's marine trade in this period, As Arab and Persian Muslim businessmen came to China from the sea in the late 7th century, they cooperated under the doctrine of monotheism, which greatly reduced the risk of breach of contract and moral hazard in the long-distance trade, and opened up a maritime business empire, which involved China society, especially the southern and southeast coastal areas, in global trade. It promoted the economic growth and social development in southern China, and made China society break away from the economic geographical pattern formed in the Neolithic Period in a brief time, specially created the "South" and made the South no longer a "Naman". During this period, the "city (town) driven by marine trade gave birth to the southern development model that attached importance to commerce and the southern culture with distinctive commercial characteristics. However, the maritime bans during the Ming and Qing dynasties weakened the influence of overseas trade on the rise of the South, causing Chinese society to revert

third is the period after the large-scale opening of

trading ports. Due to the Opium War and the subsequent opening-up, China society was once again integrated into global trade. This time, wider opening-up, especially the introduction of industrial technology, legal systems, and new business organization methods, completely reversed the economic and geographic patterns established during the Neolithic period, making the south and southeast coastal areas the core and driving force of economic growth. And the southern mercantile culture bred in the development of marine trade in the southeast coast has also become an important source of China's economic vitality today. In this round of opening, missionaries played a key role in the transmission of commercial information.

The North develops due to war risk

Next, we first introduce the first round of social development in China. This group of studies contains two working papers. These papers all use the "Chinese Archeology Database" (CADB) established by the Quantitative History Research Center of the University of Hong Kong. This database is based on all archaeological reports published in China and establishes a database of all archaeological sites from Neolithic Age to the Qing Dynasty, which contains basic information of more than 140,000 sites and detailed information of burial objects [11].

In this group of studies, the first paper answers the question why Chinese civilization originated in the north. Archaeological evidence indicates that early states and cities, representing prominent centers of civilization, were concentrated in the northern regions, particularly along the Yangtze River and to its north. Why did civilization come into being in the north? In the research of Chen Zhiwu, Peter Turchin, and Wang Wanda, they believe that war is a key trigger for the process of civilization. They took early China from 8000 BC to 221 BC as the research object, combined with China archaeological database, topography [12].

They examined data related to water control, transportation, and other relevant information, leading to several key findings. First, walled cities, as the cradle of civilization, were more likely to emerge in areas facing greater war risks, such as less rugged plains, narrow valleys, and basins. Secondly, using the double difference method, they found that the spatial difference of early cities can be attributed to the threat of war. Among them, the threat of war is measured by the number of weapons buried in the Neolithic Age (8000-1700 BC) and the number of wars recorded in the Eastern Zhou Dynasty (770-221 BC, the earliest period for which war data can be found) in each grid unit (dividing the territory of modern China into a grid of 100 kilometers by 100 kilometers). Third, the cities formed by the war provided public goods that were beneficial to long-term economic development earlier, which affected the economic and geographical pattern for thousands of years.

In the above research, there are several characteristics worthy of attention. First, before writing appeared, there was no record of war, so how to measure the risk of war became a challenge. The author creatively uses weapons of funerary objects in tombs as proxy quantitative indicators of war risk. This is because, from the Neolithic Age to the Eastern Zhou Dynasty, people in a place only produced or possessed more weapons when they often experienced wars. At the same time, they paid more attention to weapons and cultivated martial culture, so that they had to bring some weapons to the tombs when they died. Secondly, previous studies emphasized the influence of water control, agricultural technology progress, public goods supply, trade, and other factors on the origin of civilization. However, studies by Chen Zhiwu and others show that these factors are more secondary than war factors. Even after excluding the influence of these factors, war still played a leading role in the birth of early civilization. This shows that people in early society are most likely to unite to establish cities, form a complex social management structure and establish a set of rules and order only when they are faced with a huge survival crisis. And rules and order are the core elements of civilization. Thirdly, this discovery is not a special case of China society but is

consistent with the research findings of other social civilizations in academic circles, which shows that this discovery is universal and regular. It can be predicted that in the future, researchers will continue to put forward factors that affect the origin of Chinese civilization, while quantitative historical research provides a platform for comparing different factors together, to identify which ones are truly decisive and which ones are not supported by data.

This just reflects one of the core values of quantitative historical research, that is, excluding some hypotheses that are not supported by data, thus focusing our understanding of history on the real influencing factors [13].

In the second study, Chen Zhiwu and Wang Wanda further investigated whether the economic and geographical pattern of early China development had a long-term impact, and what factors would change this historical continuity. They found that after the Neolithic Revolution (5000 BC-2000 BC), despite the wars and numerous other shocks, in the following thousands of years, until the middle of the 19th century, the areas with higher density of Neolithic sites (equivalent to the areas with higher population density in the Neolithic period) maintained a more developed status in subsequent historical periods.

This continuity is initially determined by geographical elements (i.e., “geographical primacy” features, including topography, climate, soil, etc.), and is maintained by “geographical secondary” features (including state institutions, tangible transportation infrastructure and cultural infrastructure), thus forming path dependence.

The persistence of this stability also supports the view of Hegel and other scholars that ancient China was a static empire. The further question is how this continuity, which lasted for more than 5,000 years, can be maintained. Drawing lessons from Michael Mann's discussion on “national infrastructure capacity”, the author has investigated three types of governance infrastructure.

They are national governance institutions, transportation infrastructure and cultural infrastructure. Regardless of the name and nature of the ruling dynasty, once these three types of infrastructure are built, they all have strong endurance.

Regarding the infrastructure of national governance institutions, they use each grid unit (dividing the territory of modern China into one hundred.

The number of walled cities that appeared between 5000 BC and 221 BC and the density of counties after the Qin Dynasty. The walled cities are typically high population density societies. To protect people living there from internal violent conflicts, local elites must introduce civilized measures and establish rules and order through hierarchical governance structure.

As the local agent of state power, the county officials should perform the functions of collecting taxes and providing public products. It is found that the areas with high density of Neolithic sites (the developed areas in Neolithic period) have more city walls before 221 BC and higher density of county towns after 221 BC, so they will get more resources distribution. In other words, this kind of national infrastructure was originally established to help the central rulers govern their territory, but once it is established, it is difficult to get rid of it. With a few exceptions, it has continued and become a concrete carrier of historical path dependence.

In terms of transportation infrastructure, once the national rulers establish the communication and transportation networks needed for social governance, these networks will be maintained over a long period, serving as another medium for path dependence, thus making the spatial distribution of the development pattern sustainable. By analyzing the official transportation networks built by various regimes from 221 BC to 1840 AD, they found that the accessibility of transportation infrastructure in areas with high Neolithic sites was always much better, and this situation did not change gradually until modern transportation technologies (such as railways) entered China in the late 19th century.

The physical inertia caused by the huge cost of transportation investment in early national construction prolonged for the duration of the spatial

pattern of Neolithic Age and early historical development.

In terms of cultural infrastructure, from the complex society of Neolithic Age in China to the late imperial dynasty, rulers and social elites all realized the governance value of cultural infrastructure, especially in spreading and propagating the hierarchical system, which has been passed down to this day. The empirical analysis shows that from the Neolithic Age to the Iron Age in China, the higher the population density in the Neolithic Age, the more jade funerary objects symbolizing power status were unearthed. In addition, in various historical periods since 206 BC, these areas have been cultivating more Confucian sages, building more temples of sages, and establishing more academies, thus making these places always have a lasting leading position in cultural influence.

Finally, they discussed the factors that led to the reversal of prehistoric economic geography pattern since the Westernization Movement in the 19th century. After the Opium War, China was forced to open, and western powers established treaty trading ports along the coast and along major rivers. Foreign systems and laws are adopted and enforced through extraterritorial jurisdiction, which makes these areas disproportionately exposed to international trade, industrial technology, and modern business methods. Trading ports have also become "enclaves" for foreign nationals, giving birth to new gathering areas with advantages in system, technology, material and human capital and new business practices. Therefore, the areas adjacent to these ports can make better use of foreign trade and modern technologies, such as steamboats and mechanized manufacturing, thus attracting more investment and foreign enterprises. The newly rising urban agglomeration is also the center of modern human capital, as evidenced by the number of modern universities it owns. However, most of the trading ports are far away from the developed areas in the Neolithic period, which makes the old geographical advantages beneficial to agricultural development obsolete. In contrast, the geographical location near the port has become a new geographical advantage, representing a new geographical primary feature. This transformation has accelerated the flow of labor and economic activities to the areas near the treaty port because these areas have higher productivity and faster growth.

Due to the competitive pressure from abroad, China government has also increased investment in coastal areas and waterway areas since the late 19th century, promoting the introduction of industrial technology and modern enterprises, further accelerating the rise of new urban agglomerations. Therefore, the free trade after opening to the outside world and the transplantation of industrial technology and modern business methods have brought new geographical secondary factors, generated new path dependence, and fundamentally reshaped the economic structure of China. The opening-up and maritime trade since the Westernization Movement have finally fundamentally broken the development pattern that China has continued to form since the Neolithic Age for thousands of years. This point will be further explained in the next section.

Maritime trade and the rise of southern China

In the last section, we explained the reasons why Chinese civilization originated in the north and the long-term impact it brought. In this part, experts will focus on the causes of the rise of southern China in the second round of development. The shift of China's economic center of gravity to the south is a problem that attracts more attention in history, especially in the study of economic history. As for the reasons for the shift of the economic center of gravity to the south, different scholars have emphasized the large-scale migration caused by the war, the development of south China agriculture, especially the introduction of Zhan Cheng rice, the improvement of road infrastructure in the south, especially the improvement of waterways and river networks, and the growth of domestic commerce. However, few scholars emphasize the factors of marine trade, and even if there is literature involved, there is a lack of systematic data support. In the latest working paper, Chen Zhiwu, Lin Zhan, and Peng Kaoliang made a

quantitative analysis of the role played by maritime trade in promoting the rise of the South in the Tang, Song and Yuan Dynasties.

Their research takes the government in 1820 as the basic analysis unit and establishes the panel data of the Tang Dynasty (742-976 AD), the Song and Yuan Dynasties (976-1393 AD) and the Ming and Qing Dynasties (1393-1851 AD). It is found that the closer to the city's shipping department (the customs in Ming and Qing dynasties), the higher the population growth rate will be. In the Song and Yuan Dynasties, when the marine trade was encouraged by the government, this effect was particularly remarkable, but in the Ming and Qing Dynasties, when the sea ban was intermittent, this effect was reduced.

The reason maritime trade contributes to faster population growth is due to “Smith-style growth”. Smith's growth is reflected in the expansion and specialization of the market. During this period, the expansion of the market scope was promoted by Arab and Persian Muslim businesspeople, who established sea routes connecting Eurasia and turned the Indian Ocean into the Arab Mediterranean. Arab Muslim merchants arrived in Guangzhou and other locations from the late seventh century, promoting market expansion and the specialization of foreign trade-related industries. One of the most prominent is the development of export porcelain industry. Take the sunken ship “Blackstone” excavated in Indonesia in 1998 as an example. There are 70,000 pieces of cultural relics on this ninth century Arab seamed sailboat with no more than twenty passengers, the largest of which is ceramics, among which the porcelain of Changsha Kiln is more than 50,000 pieces. This fully reflects the profound influence of overseas trade from Yangzhou to the Yangtze River on China's domestic economy.

In view of the fact that porcelain was the largest export commodity in China during the Tang and Song Dynasties (silk was a precious commodity, and the export volume was relatively small, while tea became one of the main exports only in the Ming Dynasty), in order to further prove that maritime trade created the South, they took the density of important kiln sites of each government as a substitute index for their participation in export trade. According to the historians, some kiln sites began to appear in the southern coastal counties in the Tang Dynasty, but most of them were in the north, far from the coast. However, in the Song Dynasty (960-1279) and Yuan Dynasty (1279-1368), due to the prosperity of maritime trade, there were more ceramic kiln sites near the coast. After the implementation of the sea ban in 1371, many coastal kiln sites disappeared in the Ming Dynasty (1368-1644) and the Qing Dynasty (1644-1911).

The author's research found that in the Song and Yuan Dynasties, there were more important kiln sites in the government, which were closer to Shiroishi (Customs). These kiln sites produced porcelain for export.

Further analysis shows that the higher the density of kiln sites, the faster the population growth. However, this effect was in the Song and Yuan Dynasties when the maritime trade was at its peak, and it was much weaker in the Ming and Qing Dynasties because of the intermittent maritime ban.

These analysis results show that the marine trade promoted by Arab Muslim businesspeople after they came to China really contributed to the rise of the southern population and economy, which also stimulated the transformation of the Tang and Song Dynasties.

Although it was mentioned earlier that many researchers explained the southward movement of the economic center in the Tang and Song Dynasties from different angles, they mostly described the southward movement of the economic center but did not explain who and why it started the southward movement of the economic center and did not provide systematic data support.

At the same time, many reasons, such as the introduction of Zhan Cheng rice and the improvement of waterways, may also be the result of the development of foreign marine trade and cannot be independent reasons. The above-mentioned research not only provides systematic evidence to support the

importance of marine trade but also shows that marine trade has brought economic growth, especially the rapid Development of the southern economy, through expanding the market scope and scale and deepening industrial specialization. The development of marine trade in the Song and Yuan Dynasties also greatly reduced the explanatory power of Neolithic site density to population density in this period, indicating that marine trade was an important impact factor to change the early economic and geographical pattern.

China's opening and development

During the Song and Yuan Dynasties, the development of marine trade reached its peak, which reduced the predictive power of Neolithic site density for population density in this period.

However, with the implementation of the maritime ban in the Ming Dynasty, the predictive power of population density in the Neolithic period became incredibly significant and continued until the Opium War. After the failure of the Opium War brought about the opening to the outside world, the development pattern of the Neolithic period finally no longer had significant predictive power.

Missionaries played a key role in the development of the third wave in China. It has been found that they brought scientific knowledge into China and promoted the spread of this knowledge in China.

In addition, they established missionary schools and hospitals in the process of missionary work, which promoted human capital such as education and health, and promoted the development of urbanization. Furthermore, because of their missionary work in China, they got a lot of information about China's commerce and trade, including the distribution of products.

This information was transmitted to European businesspeople in their correspondence with their home countries or after their return to their home countries, thus promoting trade between their home countries and China.

Because of the important value of marine trade in promoting China's modernization, we will make a further introduction here. As mentioned in the second section, since Zhu Yuan Zhang in the Ming Dynasty, the sea ban has been intermittent, and Europe lacks an in-depth understanding of China's business information. In the rapid development of overseas trade after the Opium War, missionaries played a key role in information transmission.

Studies by Chen Zhiwei, Li Xinhao and Ma Chechen show that since the 16th century, missionaries have introduced strange and remote China to Europeans while advocating global missionary work. From 1371 to 1842, China banned foreign trade by sea. Their analysis shows that after China was forced to open its international trade in 1842, the areas where missionaries stayed for a long time usually imported more foreign goods and exported more local products, because these areas were introduced more in missionaries' letters. Missionaries inadvertently removed the information barriers of early foreign traders, promoted the development of China's maritime trade, and laid the foundation for China to become a world trading power in the late 20th century.

Another question related to this is that missionaries have had an important influence on China society, but what factors influenced them to come to China, and how did they choose where to preach after coming to China? At present, there is still a lack of systematic quantitative analysis on these issues. Chen Zhiwei, Hu Sneha and Li Xinhao's latest work papers, through a systematic collection of missionary data, found that.

The printing and dissemination of Marco Polo's Travels in Europe played a key role.

Before Kyle Polo, some Europeans had been to China, but the publication of Travel Notes of Marco Polo was a watershed, which redefined Europeans' understanding of China. As the son of a Venetian merchant, Kyle Poirot came to China with his father nicolo Poirot and his uncle Mafia Poirot in 1275. During the reign of Emperor Kublai Khan of the Yuan Dynasty (1260-1294), he traveled and lived in China for 17 years. As an emissary of Kublai Khan, Kyle Polo stayed in the capital (now Beijing) for

several years and visited many other cities. He also inspected the tax work in Yangzhou and other places and visited Quanzhou and other places. In a word, he was not only an observer of China in Yuan Dynasty, but also a participant in politics at that time. In 1291, Kyle Polo took part in a naval battle with Genoa shortly after his return to China. After the defeat of Venice, he became a prisoner of war. While in prison, Kyle Polo told his cellmate Rusciano about his travel experience, and Rusciano later authored this story into a book, Travels of Marco Polo.

Through detailed quantitative analysis, Chen Zhiwu, Hu Senhao and Li Xinhao found that between 1580 and 1842, China was different.

In the region, the closer to the place mentioned in Marco Polo's Travels, the more likely it is that missionaries will go there and arrive there earlier. To determine the information function played by Travel Notes of Marco Polo and further collect data from Europe, it is found that in Europe, the possibility of local people joining the China Missionary Mission is obviously higher in cities near the printing place of Travel Notes of Marco Polo from 1580 to 1842. Under different statistical analyses, the Travels of Marco Polo has a significant positive impact on the decision of Europeans to join the missionary group and the whereabouts of missionaries.

Conclusion

The above quantitative research on the history of China in ten thousand years shows that war, opening to the outside world, and maritime trade are the core factors shaping the economic and geographical pattern and social culture of China, and the development path of Chinese civilization is obviously influenced by these factors. Among these factors, opening to the outside world and marine trade undoubtedly play a more active role in promoting. Therefore, promoting the “Southern Development Model” and continuing to open wider to the outside world is not only an experience summary of the past hundreds of years, but also an experience summary of the social development history of China in the past 10,000 years.

The rapid development of quantitative historical research in the past decade has deepened our understanding of the history of China. The cases involved in this paper are only part of many quantitative studies on the history of China. However, these cases have shown that by combining large-scale historical data, archaeological data, quantitative analysis methods and social science theories, it is not only helpful to solve controversial problems in historical research, but also to put forward new problems, new perspectives and new discoveries, thus deepening the understanding of China's history. On this basis, it is also conducive to the accumulation of more general knowledge, introducing the knowledge of regularity in China history into different branches of social science, to deepen the understanding of the law of human social development.

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Conflicts of Interest

The authors declare no conflict of interest.

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