

## Aims & Scope

*Contemporary Social Sciences* aims to present the most outstanding research and achievements in the field of social sciences in China. The scopes of research fields for consideration include, but not limited to political science, economics, literature, linguistics, journalism and communication, education, sociology, philosophy, history, law, and interdisciplinary research. *Contemporary Social Sciences* enhances the international discourse of China and seeks to promote communication and cooperation between scholars from China and the rest of the world.

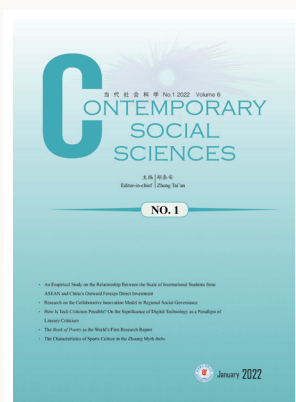
## A Brief Introduction to the English Periodical of *Contemporary Social Sciences*

The English periodical of *Contemporary Social Sciences* is an English bimonthly periodical founded by Sichuan Academy of Social Sciences and approved by the National Radio and Television Administration of the People's Republic of China (formerly the State Administration of Press, Publication, Radio, Film and Television of the People's Republic of China) in March 2016. As the first English periodical sponsored by a local academy of social sciences, it fills the lack of English periodicals by local academy of social sciences nationwide. In accordance with the requirements of the State Press and Publication Administration of Radio, Film and Television, this periodical will "adhere to correct direction of operation, publish outstanding research achievements in the field of social sciences of China, demonstrate the excellent research achievements in the development of western China and China's opening up, promote the academic achievements in order to 'go global' and enhance China's international discourse in the field of social sciences."

*Contemporary Social Sciences* mainly invites well-known scholars at home and abroad for their contributions to cutting-edge and open academic discussions. It focuses on new research achievements about China by foreign sinologists and responds to concerns about Chinese issues from foreign scholars; adheres to problem orientation and attaches importance to interdisciplines and seeks real academic issues and new growth points of disciplines; puts a high value on the research of the basic theories of philosophy and social sciences and research of the heritage and spreading of Chinese traditional cultures and concentrates on presenting the latest research results of Chinese topics to the international community like "the Belt and Road," "Southern Silk Road," "Excellent Chinese Traditional Cultures," "Ecological Environmental Protection," and "China's Western Development," to build an academic platform for exchanges of philosophy and social sciences between China and the rest of the world.

*Contemporary Social Sciences* engages famous experts to join the editorial board. Some of them are from Chinese Academy of Social Sciences, local academy of social sciences and universities, and Party schools nationwide, and some are outstanding sinologists from Harvard University, Cambridge University, and Oxford University. It engages foreign experts with good English and Chinese proficiency as professional reviewers.

The inaugural issue of *Contemporary Social Sciences* was published in October 2016. It is a bimonthly publication according to the requirements of the State Press and Publication Administration of Radio, Film and Television and there are totally six issues per year.



As a journal with social responsibility, *Contemporary Social Sciences* has been dedicated to introducing to the world our excellent social sciences research and establishing a platform for international academic exchange.

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**Publishing:** Editorial Department of *Contemporary Social Sciences*, Sichuan Academy of Social Sciences

编辑出版发行: 四川省社会科学院《当代社会科学(英文)》编辑部

**Typesetting:** Sichuan Yuanjin Culture Co., Ltd.

排版设计: 四川远近文化有限公司

**Printing:** Chuanyin Culture Group Co., Ltd.

印刷: 川印文化集团股份有限公司

**Distribution Scope:** Domestic and International

发行范围: 国内外公开发行

**Postal Issue Code:** 62-613

邮发代号: 62-613

**国内统一刊号:** CN: 51-1771/C

**国际标准刊号:** ISSN: 2096-0212

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地址: 中国四川省成都市青羊区一环路西一段155号

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**Publishing Date:** January 30, 2022

出版日期: 2022年1月30日

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# *A Comparative Study of Development and Reform of Urban-Rural Integration in Chengdu and Chongqing Based on System Theory*

Gao Jie\*

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**Abstract:** Chengdu and Chongqing, as two core cities in the Chengdu-Chongqing economic circle, have always been in the front rank of development and reform of urban-rural integration in China. But due to different basic conditions, ideas and priorities are different in the two cities. This paper establishes an analysis framework based on system theory, conducts a systematic comparison on the development and reform of urban-rural integration in the two cities to achieve a comprehensive comparison study and finds out that: (a) Owing to different basic conditions, Chengdu and Chongqing have adopted different reform ideas and measures. Chengdu places more emphasis on systematic advancement, while Chongqing attaches more importance to key breakthroughs. (b) Chengdu's high level shows that in the practice of urban-rural integration, independent policies and measures in local areas have limited effects. System efficiency can surpass the sum of local areas' efficiencies only if a systematic method is adopted to comprehensively promote policies and measures for institutional innovations in various fields.

**Keywords:** system theory, the Chengdu-Chongqing economic circle, development and reform of urban-rural integration, comparison

**DOI:** <http://dx.doi.org/10.19873/j.cnki.2096-0212.2022.01.001>

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This article is a phased achievement of the National Social Science Foundation Project of China "Research on the exit mechanism and policy optimization of the membership rights of migrant workers' collective economic organizations under the new situation" (Project Approval No. 18XJY012).

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In January 2020, Xi Jinping, general secretary of the Communist Party of China (CPC) Central Committee, presided over the sixth meeting of the Central Committee for Financial and Economic Affairs, where he stressed that the construction of the Chengdu-Chongqing economic circle should be advanced to create a major growth pole for high-quality development in China's western region. In October 2021, a master plan for the construction of the Chengdu-Chongqing economic Circle was officially promulgated, marking the beginning of a new plan for the construction of the Chengdu-Chongqing economic circle towards accelerated high-quality development. As two core cities in the Chengdu-Chongqing economic circle, Chengdu and Chongqing were approved to become the pilot areas for urban-rural comprehensive reform in 2007 and became the national pilot areas for urban-rural integration development in 2019. Chengdu and Chongqing have always been at the forefront of the development and reform of urban-rural integration in China, and both have carried out a series of reforms and explorations on the institutional mechanisms that restrict the development of urban-rural integration. However, reform ideas and priorities of the two cities are different due to different basic conditions. Under the guidance of system theory, this paper systematically compares the development and reform of urban-rural integration in Chengdu and Chongqing, outlines the key points of cooperation and mutual learning based on similarities and differences, and provides a reference for deepening cooperation between Chengdu and Chongqing in the development and reform of urban-rural integration to promote joint development of the Chengdu-Chongqing region and form important growth poles of high-quality development in western China.

## **Establishment of a Theoretical Analysis Framework**

### **Review of Relevant Literature**

The development of the Chengdu-Chongqing region is one of the key areas of research in the field of regional economics in China. Lin Ling, Cheng Biding, Dai Bin, and other experts' research on ideas and reform paths of Chengdu-Chongqing regional development provides important theoretical support for relevant planning and policymaking in the Chengdu-Chongqing region (Lin, Liao, & Liu, 2005; Lin, 2007; Lin, 2012; Cheng, 2008; Dai, 2011). From April 2016 when the Chengdu-Chongqing Urban Agglomeration Development Plan was promulgated, to January 2020 when the Strategic Plan of Further Building the Chengdu-Chongqing economic circle was stipulated, research on the development of the Chengdu-Chongqing region has also been deepening. It is widely recognized in academia that there are significant regional differences between Chengdu and Chongqing, providing the conditions for deepening cooperation and promoting integrated development. Geng et al. (2018), based on the theories of regional economic growth and of supply and demand, comparatively analyzed the development characteristics of Chengdu and Chongqing using data on economic growth from 1986 to 2016, and discussed the regional development paths and strategies of Chengdu and Chongqing as two separate cities. Li (2019), drawing on data regarding economic development indicators of the

Chengdu-Chongqing urban agglomeration from 2008 to 2018, measured and presented the spatial and temporal differences in the economic development of the Chengdu-Chongqing urban agglomeration by means of multi-dimensional mathematical statistics and spatial statistics, and discussed relevant causes and mechanisms. Jin (2020) measured the industrial and functional divisions of labor between the central cities and their peripheral cities in the Chengdu-Chongqing economic circle from 2003 to 2017, and discovered that the industrial and functional divisions of labor between Chengdu and Chongqing as central cities and their peripheral cities showed different trends of evolution: The industrial and functional divisions of labor between Chengdu and its peripheral cities gradually increased while the industrial and functional divisions of labor between Chongqing and its peripheral cities declined slightly. Shi et al. (2021) proposed that the spatial structure can be optimized by seeking “the driving force from the dual-city, breakthroughs at both flanks, and expansion around the axis area and support to the pole,” thus creating a development landscape featuring complementary strengths and shared prosperity across the entire region. Overall, comparisons between Chengdu and Chongqing as two central cities in the Chengdu-Chongqing economic circle are a focus of academic attention, but relevant research is mostly concerned with the regional industrial divisions of labor and spatial structures of urban agglomeration without systematically comparing the two cities’ institutional reforms and policy innovations.

### Basic Viewpoint of System Theory

For more than half a century, “system” has attracted the attentions of many scholars at home and abroad as a research object. In the 1920s, Ludwig Von Bertalanffy, an Austrian-American biologist, founded the general system theory, and the publication of *About General System Theory* in 1945 marked the formation of the system theory. According to the general system theory, a system is composed of interrelated components. These components can be concrete substances or abstract organizations, which interact with each other in a system to form the characteristics of the system. The operation of the system composed of these components has certain goals, and any changes in the components or their structures in the system may affect and change the characteristics of the system (Bertalanffy, 1987). The system has the basic characteristics of integrity, openness, dynamic correlation, hierarchy, and order. The system method is a methodology formed under the guidance of general system theory, and its main point is to reveal the system characteristics and movement laws within the system and the relationships between the system and its elements, among elements, and between the system and external environment, to find the best solutions to.

### Theoretical Analysis Framework of This Study

From the perspective of system science, the integration of urban and rural areas is essentially a process in which social and economic aspects are interrelated, restricted, and interacted. Therefore, this study needs the guidance of system theory, especially the open complex system theory and its methodology. We regard the development and reform of urban-rural integration as a giant and

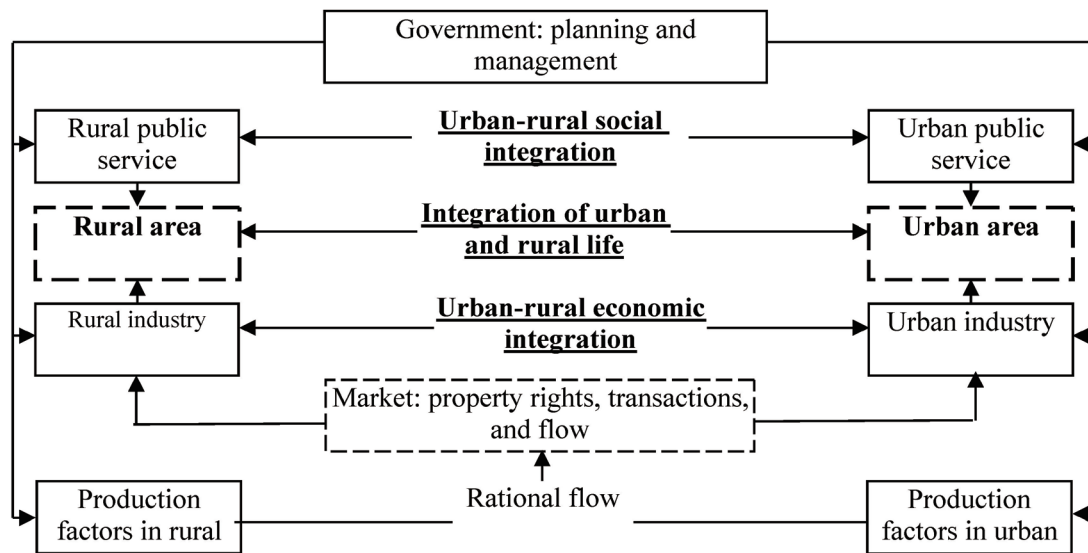


Figure 1 Analysis framework of development and reform of urban-rural integration based on system theory  
Note: The underlined items are system targets and the solid boxes refer to subsystems.

complex system. According to the basic viewpoint of the system theory, we mainly analyzed its system objectives, subsystem composition, and system structure (i.e., the relationships between system and subsystems and between each subsystem). Through the research on the related theories of the development and reform of urban-rural integration, we put forward the following theoretical framework.

From the perspective of the system goal, the development and reform of urban-rural integration is the overall goal that the system needs to achieve. Under the overall goal, the system is supported by three sub-goals, including urban-rural economic integration, urban-rural social integration, and integration of urban and rural life. From the perspective of subsystem composition, it consists of four subsystems, including the planning management subsystem, the production factor subsystem, the urban-rural industry subsystem, and the public service subsystem. From the perspective of internal relationships, firstly, the planning management subsystem acts on the urban-rural industry subsystem, the production factor subsystem, and the public service subsystem through government means, and determines industrial layouts, industrial structures, production factor allocation efficiency, and public service provision levels. Second, the production factor subsystem acts on the urban-rural industry subsystem through market means, and the market allocation level of production factors determines the internal power of industrial development, thus affecting the industrial development levels. Finally, the urban-rural industry subsystem and public service subsystem directly act on urban and rural areas, which determine the realization of urban-rural integration development goals. The urban-rural industry subsystem determines the urban-rural economic integration levels and provides a material basis for urban-rural integration development. Balanced public service is the most direct means to

promote urban-rural coordinated development and provides a guarantee for the development of other subsystems.

### Comparison of the Development and Reform Systems of Urban-Rural Integration in Chengdu and Chongqing

Starting from the national pilot areas for balancing urban and rural comprehensive coordinated reforms, both cities have carried out a large number of reforms and explorations. Chengdu has actively explored the aspects of determining, registering, and certifying rural property rights ownership and orderly transfers, urban and rural unified household registration system reforms, village-level public service and social management reforms, and grassroots governance mechanism innovations, and has achieved fruitful reform results. Several of its reform measures provided a basis for the revision of national laws and the introduction of relevant policies. Chongqing's land ticket trading system reforms, migrant workers' household registration system reforms, and rural three-rights mortgage financing system reforms have also achieved great influence. In 2019, the western part of Chengdu and that of Chongqing simultaneously became the pilot areas for urban-rural comprehensive reform, further clarifying the experimental focuses of reform, including promoting the free flow of urban and rural elements, and building a platform for the coordinated development of urban and rural industries.

### Planning Management Subsystems: Comparison of Spatial Development Strategies

With the advancement of urbanization, both cities have implemented spatial optimization strategies that are beneficial to the development and reform of urban-rural integration (see Table 1). In the report of the 13th CPC Municipal Congress in 2017, Chengdu clearly stated that the scope of the central city would be expanded to 11 administrative districts plus high-tech zones and the Tianfu New District. It would implement the cross strategy of “advancing eastward, expanding southward, controlling westward, reforming northward, and excellently developing the center,” and promoting the transformation from “two mountains with one city” to “one mountain with two wings.” In the 2020

Table 1 Comparison of Urban and Rural Spatial Development Strategies Between Chengdu and Chongqing

Aspects Compared	Chengdu	Chongqing
Urban and rural spatial pattern changes	Implemented the cross strategy of “advancing eastward, expanding southward, controlling westward, reforming northward, and excellently developing the center,” and changed from “two mountains with one city” (Longmen Mountain, Longquan Mountain, and central city) to “one mountain with two wings” (Longquan Mountain, central city, and eastern city new district)	Constructed the main city area composed of 21 districts and formed two groups: “one district, two clusters (main city area, the Three Gorges Reservoir Region town clusters in northeastern Chongqing, and Wuling Mountain town clusters in southeastern Chongqing).”
Urban core area changes	Expanded from the original five districts plus high-tech zones to 11 administrative districts of first and second circles plus a high-tech zone and the Tianfu New Area.	Expanded from 9 districts in the original main city to 12 districts in western Chongqing with a total area of 28,700 square kilometers.

municipal government report, Chongqing clearly put forward that the main metropolitan area would be composed of 21 districts to form a spatial pattern of “one district, two clusters.” Both cities strive to create conditions for deepening the integration of urban and rural development by widening the urban development framework and promoting the expansion of urban core areas.

## Production Factor Subsystem

### Labor force elements: comparison of household registration system reforms.

The household registration system is an important institutional factor that determines the mobility and allocation efficiency of labor factors. Chengdu and Chongqing both took the household registration reform as a key point of reform and innovation. Both cities carried out the household registration system reform earlier in China and issued household registration reform policies with pioneering significance in China in 2010 (see Table 2). On August 1, 2010, Chongqing issued the *Implementation Measures for Rural Residents' Household Registration System Reform in Chongqing (Trial)*, which further reduced the restrictions on the conditions of “transferring rural households into cities,” and set the household registration conditions at three levels which moderately relaxed the registrations in the main urban areas, further opened the registration in the districts and counties, and fully opened the registration in towns. Farmers settling in the municipality will enjoy urban

Table 2 Comparison of Household Registration System Reforms Between Chengdu and Chongqing

Aspects Compared	Chengdu	Chongqing
Contents of reform	Residents can move freely, and their registered residence is consistent with their actual residence. Farmers can bring property rights into the city in exchange for employment social security instead of losing contracted land and homesteads. Remove the inequality of urban and rural rights attached to household registration and realize equal basic public services and social welfare such as education, housing, and social security under the background of unified household registration.	Promote the population to gather in small towns, districts, and counties as well as the main urban area in 1000 square kilometers by stages, establish a smooth transfer channel of household registration, focus on guiding qualified migrant workers, especially the new generation of migrant workers, to settle in cities voluntarily, and properly solve the historical problems.
Targets	By 2012, Chengdu will realize the goal of unifying urban and rural household registration, eliminate the differences of urban and rural residents' identities, and establish unified management of household registration and residences.	From 2010 to 2020, Chongqing will realize the goal of relocating 10 million of people from “rural to urban” areas, and form a household registration system with reasonable mobility, fair rights and interests, and integration of urban and rural areas.
Application conditions	No conditions are required for rural residents in this city. Migrant workers (regardless of from rural or urban areas) who have stable employment or commercial housing after university graduation can all apply.	Rural residents who have worked or been in business for more than five years, or purchased commercial housing, or invested in industries and paid taxes can apply in legally stable residences.
The relationship between urban households and rural property rights	Rural residents can keep their rural property rights even if they choose to live in the city instead of using them to exchange employment social security as a premise.	Rural residents do not have to lose their rural contracted lands, homesteads, and forests.
Provisions on the transfer of urban residents to villages and towns	Urban residents can settle in rural areas and move their household registration into villages and towns where they reside now.	None.

employment, social security, housing, education, medical care, and other public services, but they need to give up rural contracted lands, homesteads, forests, etc. In 2010, Chengdu issued the *Opinions on Realizing Free Migration of Residents by Unified Household Registration in Chengdu's Urban and Rural Areas*, which clearly means that the difference between urban and rural resident identities was eliminated. Residents could move freely, and the registered place of household registration is to be consistent with the actual residence. Farmers could settle in cities with their rural property rights instead of using them in exchange for employment social security.

After entering the stage of urban-rural integration development, both cities have issued opinions on deepening the reform of the household registration system according to the *Opinions of the State Council on Further Promoting Reform of the Household Registration System* (see Table 3). Specifically, Chengdu issued the *Opinions of the Chengdu Municipal Government on the Implementation of Promoting Reform of the Household Registration System* and supportive management measures in 2017. The city started a new household registration policy featuring a dual-track scheme encompassing conditional and cumulative score household registration, established a comprehensive residence permit system, and implemented a uniform household registration policy for both urban and rural populations within or outside the city, thereby achieving “zero threshold” for

Table 3 Comparison of the New Round of Household Registration Reform in Chengdu and Chongqing

Aspect	Chengdu	Chongqing
Policies issued	<i>Opinions of the Chengdu Municipal Government on the Implementation of Promoting Reform of the Household Registration System</i> (CFF (2017) No. 23), <i>Management Rules of Chengdu Municipal Government on Household Registration by Residence Permit Scores (Interim)</i> , and <i>Management Rules of Chengdu Municipal Government on Registration of Households Transferred-In (Interim)</i>	<i>Opinions of Chongqing Municipality on the Implementation of Promoting Reform of the Household Registration System</i> (YFF (2015) No. 54)
Optimizing household registration conditions and approaches	Implementing a dual-track scheme encompassing conditional and cumulative score household registration (registration of household transferred-in and registration by residence permit scores).	Improving differentiated conditional household registration policy for the relocated local population; advancing household registration of non-local populations in a steady and orderly fashion.
Implementing a uniform household registration system for both urban and rural populations	Completed in the previous stage.	Canceling the discrimination on the basis of properties of rural and urban households and uniformly registering all the population of the municipality resident households.
Establishing the residence permit system	<ul style="list-style-type: none"> <li>■ Establishing a gradient basic public service provision mechanism with a residence permit as the carrier.</li> <li>■ With residence permit as the carrier, establishing a residence permit score management system and a cumulative score-based household registration policy with lawfully stabilized employment and residence as main indicators.</li> </ul>	<ul style="list-style-type: none"> <li>■ Establishing a gradient basic public service provision mechanism with a residence permit as the carrier.</li> <li>■ Eligible residence permit holders may apply for household registration at their dwelling places.</li> </ul>

the rural population seeking house renting and household registration. In 2015, Chongqing issued the *Opinions of Chongqing Municipality on the Implementation of Promoting Reform of the Household Registration System*. According to the Opinions, the previous condition that rural people needed to give up their rural properties in order to be eligible to urban household registration was abandoned. Instead, the municipality started to implement a uniform household registration system for both urban and rural populations and gradually loosened the household registration conditions for relocated populations within the municipality. For non-local people wishing to obtain household registration, a steady and orderly approach has been adopted, and the Opinions proposed the tentative establishment of a household registration system by a cumulative score for non-local people within the central urban function area and the urban function expansion area, as well as the implementation of the residence permit system. However, the approaches and methods of applying for household registration based on residence permits have not been clarified. Comparatively, Chengdu adopted a uniform household registration policy for urban and rural populations within or outside the city and clarified the detailed rules for household registration based on residence permit scores, introducing a larger extent of reform.

Additionally, both cities are paying attention to guiding urban talents to go to the countryside. Chengdu is the first city that has formulated the rural planner policy and has introduced and trained more than 13,000 professionals and technical who are talents urgently needed, such as rural planners and technology leaders. Chongqing has also implemented the policy for encouraging “artists and three types of professionals” (engineers, planners, architects, and artists) to go to the countryside. The reform directions of the two cities are basically similar, and the specific contents can be further communicated and learned from each other.

#### **Land elements: comparison of rural land system reforms.**

Chengdu has made many explorations in promoting the integration of urban and rural land systems. It started the reform of the rural land property rights system in 2008 and formed a systematic reform mechanism, including confirming the right to issue certificates, building a trading platform, and transforming the circulation policy. Although Chongqing also made some attempts, it failed to fully integrate all the aspects. Firstly, Chengdu has fully completed the actual measurement and confirmation of land and housing property rights throughout the city. Chongqing also started the reform of its rural land property rights system following Chengdu, but it did not carry out the confirmation and certification of rural land throughout the city and only implemented the confirmation and certification of forest rights in line with the national forest rights reform. Secondly, in terms of building a trading platform, Chengdu has taken the lead in establishing a relatively complete circulation platform system and is at the forefront of the country in system architecture, functional responsibility positioning, guarantee system establishment, and policy support. Chongqing has established a rural land exchange, which focuses on the transactions of “land ticket,” which is an indicator linked to urban and rural construction land. At the same time, Chongqing provides services for the transfer of rural land’s contractual management rights.

With respect to the innovations of collective construction land transfers, both cities focused on pilot projects for market access of collective construction land. In 2015, the Pidu District of Chengdu and the Dazu District of Chongqing were included in the list of pilot projects of the Ministry of Land and Resources for carrying out reforms on the “Three Types of Land.” The two local governments are formulating relevant policies for market access of collective construction land. The difference between the two cities is that Chengdu places more emphasis on realizing the same rights and prices for collective construction land and urban land. It clearly stated that “the right to use collective construction land can be transferred by mortgage” and “the right to use collective construction land can be transferred by agreement, bidding, auction or listing.” On the other hand, Chongqing emphasized: “To support the rights of rural collective construction land and paid and reasonable circulation and transfer of quotas across regions by using the quotas replacement and turnover policy of construction land.”

With respect to compensated renouncement of contracted management right of rural land, the Liangping District of Chongqing Municipality, as the national pilot zone for rural reform, experimented with compensated renouncement of the right of the contracted management of rural land in 2016, creating a renouncement mechanism featuring multi-player synergy and encompassing “the contract issuing party has the renouncement channel, the withdrawal party has the renouncement intention, the undertaking party has the demand for land, and the government has the policy for support,” and a diversified land exit model characterized by an “integration of land exit and use.” Although Chengdu did not become the national pilot zone for the reform, it still managed to issue the *Guiding Opinions of The Chengdu Municipal Government on Normalizing the Exit from Contracted Management Right of Rural Land* (Interim), aiming to normalize the exit procedures for contracted management right of rural land and substantially protect rural residents’ interests in land.

Table 4 Comparison of Pilot Reforms of Rural Land in Chengdu and Chongqing

Pilot Reform Zone	Chengdu	Chongqing
Reform of the rural land property system	Took the lead to implement the rural property rights system reform in 2008, identified rural property rights and issued certificates across the entire region, and established China’s first comprehensive transaction platform for rural property rights—Chengdu Rural Property Rights Exchange.	Upon the approval by the State Council in December 2008, Chongqing established China’s first Rural Land Exchange to pioneer the land ticket transaction system and provided services for the transfer of contracted management right of rural land.
Reform of marketization of collective construction land	In 2015, the Pidu District of Chengdu became the pilot zone for the “Three Types of Land” specified by the Ministry of Land and Resources, prioritizing the marketization of collective construction land.	In 2015, Chongqing Municipality became the pilot zone for the “Three Types of Land” specified by the Ministry of Land and Resources, prioritizing the marketization of collective construction land.
Compensated renouncement of contracted management right of rural land	In 2017, the Chengdu Municipal Government issued the <i>Guiding Opinions of The Chengdu Municipal Government on Normalizing the Exit from Contracted Management Right of Rural Land</i> (Interim)	As a pilot zone for national rural reform, the Liangping District of Chongqing took the lead to implement compensated renouncement of contracted management right of rural land in 2016.

### **Capital elements: comparison of rural financial innovation.**

Both cities have tried to play a guiding role for financial funds, developing new financial institutions in rural areas, and innovating in financial products concerning rural property rights. They have a strong commonality in specific measures, among which the reform of the rural “three rights” mortgage financing system in Chongqing and the agricultural loan system (Nong Dai Tong) in Chengdu are the most prominent reform highlights. Through improving the relevant policy system, standardizing the operational process, and establishing risk compensation and guarantee mechanisms, Chongqing’s rural “three rights” mortgage financing system reform has reduced the institutional obstacles for mortgage financing of rural land’s contractual management rights, rural residential houses and forest rights. Chengdu’s agricultural loan system (Nong Dai Tong) is a rural financial service platform established in July 2017 based on the reforms related to mortgage financing of rural property rights. It integrates the information of financing supply and demand through the platform of “Internet Plus Finance,” which not only realizes accurate information exchange between agricultural business entities and financial institutions, but also addresses the issue that financial institutions are unwilling to provide agricultural loans in consideration of risk sharing. Comparatively, the two reforms are highly complementary. Chongqing provides a more systematic and innovative policy while Chengdu accelerates the alignment of market supply and demand through “Internet Plus” technology, which can be the starting point for the next cooperation.

### **Urban-Rural Industry Subsystems: Comparison of Industrial Development Orientations**

Based on respective advantages, such as transportation area and historical evolution of industrial formation, Chengdu and Chongqing have their own emphasis on industrial development orientations. Chengdu is a consumption center while Chongqing is an important manufacturing base. According to the industrial orientations specified in the 13th Five-Year Plan concerning the two cities (see Table 5), Chengdu emphasizes the balanced development of manufacturing and service industries while Chongqing clearly regards manufacturing as the main driving force of its economy. From this point of view, Chongqing is closer to the industrial policy orientation of giving priority to the development of heavy industry in the early stage of forming urban-rural economic dualism in China, and its employment absorption capacity for industries may become a major obstacle in the process of urbanization while Chengdu is not only more developed in the service industry, but also more inclined to labor-intensive industries in industrial structure, and its employment absorption pressure in the process of urbanization is relatively less.

### **Public Service Subsystem: Comparison of Urban and Rural Public Service Reforms**

Both cities have focused on the implementation of relevant reforms to promote the equalization of urban and rural public services. In terms of public services, Chengdu has mainly taken the following

Table 5 Comparison of Industrial Development Orientations Between Chengdu and Chongqing During the 13th Five-Year Plan Period

Aspects Compared	Chengdu	Chongqing
Industrial development orientation	<p>Speed up the construction of advanced manufacturing as the forerunner and form a new industrial development pattern including advanced manufacturing, modern service industry, and urban modern agriculture linkage development.</p> <p>Advanced manufacturing: Highlight the development of electronic information, automobile, rail transit, aerospace, and petrochemical industries. Accelerate the development of biomedicine, precision machinery and intelligent manufacturing equipment, energy conservation, environmental protection, new materials, and new energy industries. Optimize the development of food, building materials, metallurgy, and light industries.</p> <p>Modern service industry: Vigorously develop modern logistics, financial services, information services, science and technology services, emerging services, and other productive services; promote the upgrading of life services such as commerce and trade circulation, tourism, cultural creativity, and health and community services.</p>	<p>Accelerate new industrialization, modern service industry development, agricultural modernization, and build an important national modern manufacturing base.</p> <p>Modern manufacturing: Develop and expand strategic emerging industries such as electronic core components, Internet of Things, new energy vehicles, and smart cars; transformation and upgrading of automobile, electronic information, equipment, chemical, materials, food, textile, and other consumer goods industries and energy industries, and other traditional manufacturing industries.</p> <p>Modern service industry: Vigorously develop productive service industries, build an important domestic functional financial center, an important national logistics hub, an internationally renowned tourist destination, and cultivate a strategic emerging service industry.</p>

measures. Through the establishment of a transportation network system integrating urban and rural areas, Chengdu has comprehensively carried out standardized construction and upgrading of public facilities for such fields as rural education, culture, and health, comprehensively improved the level of rural infrastructure, and taken the lead in establishing a basic insurance system for the elderly and a basic medical insurance covering both integrating urban and rural areas. Through comprehensively supporting reforms in public finance, village-level public services, and social management, the social security gap between urban and rural residents has been greatly narrowed, and the basic balance of urban and rural public services in health care, social security, culture, and environmental protection has been achieved at the institutional level. Chongqing got started with improving the allocation mechanism for achieving balance in public resources, promoted the reform of the division of financial affairs and expenditure responsibilities of basic public services, determined the scope of common financial affairs in basic public services, and increased investments in basic public services in urban and rural areas. It formulated the *Implementation Plan for Standardized Construction of Basic Public Services in Chongqing*, and comprehensively promoted the equalization of basic public services in urban and rural areas in terms of education, health, elderly care, and culture.

## Conclusion

In 2007, the two cities were approved as the national pilot areas for urban-rural comprehensive reform. At that time, Chengdu covered an area of 12,400 square kilometers and governed 19 districts

(county-level cities) and counties, with a resident population of 12.58 million and an urbanization rate of 62.6 percent. Chongqing then had an area of 82,400 square kilometers and 40 districts (counties). At the end of 2007, Chongqing's resident population was 28.16 million, and its urbanization rate was 48.3 percent. Due to different basic conditions, Chengdu and Chongqing have adopted different reform ideas and measures. Chengdu places more emphasis on systematic advancement while Chongqing attaches more importance to key breakthroughs. The reform of Chengdu's planning management, production factors, industry, and public services is relatively balanced and coordinated, and its reform of urban and rural planning integration is implemented first, laying a foundation for the integration of production factors, industrial development, and public services. Its reform measures to promote the free flow of production factors, such as land, labor, and capital between urban and rural areas are also coordinated with industrial development measures, such as balanced development of the manufacturing service industry and the integration of agricultural, commercial, cultural, and tourism development. The integration of urban and rural transportation and the equalization of public services,

Table 6 Comparison of Development Levels of Urban-rural Integration Between Chengdu and Chongqing in 2007 and 2019

Index		Chengdu		Chongqing	
		2007	2019	2007	2019
Urban-rural economic integration	Agricultural labor productivity (yuan/person)	13,109.8	44,021.5	6,400.5	34,395.0
	Labor productivity of non-agricultural industries (yuan/person)	60,832.7	198,804.9	41,976.0	175,945.0
	Ration or Ratio of urban-rural labor productivity	4.64	4.52	6.56	5.12
	Deviation degree of three industrial structures (%)	38.0	23.8	69.6	54.5
	Employment proportion of rural employees in non-agricultural industries (%)	29.1	55.8	21.3	29.1
Urban-rural social integration	Urbanization rate of resident populations (%)	62.6	74.4	48.3	49.1
	Urbanization rate of the registered population (%)	53.5	62.5	27.1	66.8
	Difference between urbanization rate of resident population and urbanization rate of registered population	9.1	11.9	21.2	17.7
	Per capita health care consumption expenditure ratio of urban and rural residents	3.37	1.32	4.82	1.87
	Per capita expenditure ratio of urban and rural residents on culture, education, and entertainment	4.55	2.06	7.34	2.03
Integration of urban and rural life	Per capita disposable income ratio of urban and rural residents	2.63	1.88	3.91	2.51
	Per capita consumption expenditure ratio of urban and rural residents	2.93	1.69	4.30	1.97
	Difference degree of Engel coefficient between urban and rural residents	7.2	3.37	17.5	3.70

Note. ① The data was cited from Chengdu Statistical Yearbook 2008 and 2020 and Chongqing Statistical Yearbook 2008 and 2020.

② The deviation degree of three industrial structures ( $n=1, 2, 3$ ). It indicates the relative proportion of the added value of the industry and the relative proportion of the labor force of the  $i$ th industry. This index is used to measure the benefit of the industrial structure, which reflects an asymmetric state between labor structure and output value will be structure. The more asymmetric the two, are the higher the deviation and the lower the benefit of industrial structure.

③ Employment proportion of rural employees in non-agricultural industries = (Number of rural employees—Number of employees in the primary industry)/Number of rural employees, which shows the degree of development of the second and third industries in rural areas.

such as medical care and education not only promote the integration of urban and rural society, but also provide strong support for the free flow of urban and rural production factors and coordinated development of industries. This systematic way is conducive to achieving focused fruitful local results. However, Chongqing has made breakthroughs in key areas, such as “land ticket” transactions and the reform for the household registration system of migrant workers. The reform of these key aspects has helped Chongqing achieve remarkable results in improving economic efficiency, but it is insufficient in improving the balance of urban and rural development. From the perspective of three sub-goals of urban-rural economic integration, social integration, and life integration, the development results of urban-rural integration between Chengdu and Chongqing do differ in some aspects (Table 6).

In the aspect of urban-rural economic integration, five indicators were selected for analysis: agricultural labor productivity, non-agricultural labor productivity, urban-rural labor productivity ratio, deviation degree of three industrial structures, and employment proportion of rural employees in non-agricultural industries. Agricultural labor productivity, non-agricultural labor productivity, and urban-rural labor productivity ratios reflect the operational efficiency and differences between urban and rural economic systems. The deviation degree of three industrial structures is an important method used by academia to measure whether industrial structures and employment structures are balanced. The closer the absolute value of industrial structure deviation degree is to 0, the higher the matching degree between industrial structures and employment structures is (Liu, 2019). The employment proportion of rural employees in non-agricultural industries reflects the development degree of rural non-agricultural industries, and this index can reflect the integration degree of urban and rural industries. Compared with the data in 2007 and 2019, all indicators of Chengdu and Chongqing have been significantly optimized. The ratio of labor productivity between urban and rural areas in Chongqing has been reduced from 6.56 to 5.12, and the gap between urban and rural economic development efficiency has been significantly reduced, which is closely related to the reform of its key areas. The deviation degree of Chengdu’s three industrial structures has been reduced from 38.0 to 23.8, the symmetry between employment structures and output value structures has been further improved, and the proportion of non-agricultural employment of rural employees has increased from 29.1 percent to 55.8 percent. According to the comparison of data 2019, the labor productivity of Chengdu’s agricultural and non-agricultural industries is higher than that of Chongqing, and the ratio of urban-rural labor productivity is lower than that of Chongqing so the difference between urban and rural labor productivities is smaller than that of Chongqing. The deviation degree of three industrial structures is lower than that of Chongqing so the employment structures and output value structures are relatively symmetrical, and the industrial structure benefit is higher. The employment proportion of rural employees in non-agricultural industries is 26.7 percent higher than that in Chongqing, and the level of urban-rural economic integration is relatively high.

In the aspect of urban-rural social integration, five indicators were selected for analysis: urbanization rate of the resident population, urbanization rate of the registered population, difference between urbanization rates of the resident population and the registered population, per capita

expenditure ratio of urban and rural residents on health care, and per capita expenditure ratio of urban and rural residents on culture, education, and entertainment. Based the special national conditions of China's household registration system, it is necessary to consider the urbanization rates of the resident population and the registered population to comprehensively evaluate the urbanization development level. The difference between the urbanization rates of the resident population and the registered population can reflect the restrictions of the household registration system on the mobility of urban and rural populations to a certain extent. The per capita expenditure ratio of urban and rural residents on health care, cultural education, and entertainment can reflect the balanced degree of urban and rural residents in public services, such as medical care, education, and culture from different aspects. The urbanization rates of Chengdu's resident population and registered population are much higher than those of Chongqing, and the difference between them is much lower than that of Chongqing so the flow of the population between urban and rural areas is relatively high, and the urbanization process of the population is leading. From 2007 to 2019, the difference between the urbanization rate of Chongqing's resident population and that of its registered population decreased from 21.2 percent to 17.7 percent, but the difference between the two is still at a high level and 5.8 percentage points higher than that of Chengdu. This reflects that on the one hand, Chongqing's household registration reform has achieved certain results, but at the same time, it is still restricted by the reform progress of other subsystems, such as industry. In terms of the consumption expenditure ratio of urban and rural public services, the balance level of urban and rural public services in both places has been significantly improved. The per capita expenditure ratio of urban and rural residents on health care of Chengdu is lower than that of Chongqing while the per capita expenditure ratio of urban and rural residents on culture, education, and entertainment of Chengdu is slightly higher than that of Chongqing.

In the aspect of integration of urban and rural life, three indicators were selected for analysis: the per capita disposable income ratio of urban and rural residents, the per capita consumption expenditure ratio of urban and rural residents, and the difference degree of Engel's coefficient between urban and rural residents. The per capita disposable income ratio of urban and rural residents is the most commonly used indicator in academia to comprehensively reflect the degree of urban-rural dual structures while the per capita consumption expenditure ratio of urban and rural residents and the difference degree of Engel's coefficient between urban and rural residents can comprehensively reflect the difference degree of living standards between urban and rural residents. Whether it is 2007 as the starting point of reform or 2019 to reflect the effectiveness of reform, the per capita disposable income ratio of urban and rural residents and the per capita consumption expenditure ratio of urban and rural residents in Chengdu are lower than those in Chongqing, and the per capita disposable income ratio of urban and rural residents is only 1.88. According to international experience,<sup>①</sup> Chengdu has entered the transition period from urban-rural dual structures to urban-rural integration while Chongqing is

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① It is generally believed that when the urban-rural income ratio is  $\geq 2$ , the city is in the state of urban-rural dual structure. When the ratio is equal to or more than 1.25 but less than 2, it is in the transition period from dual structure to urban-rural integration. When the ratio is less than 1.25, its process of urban-rural integration is basically completed.

still in the state of urban-rural dual structures. The difference of Engel's coefficient between urban and rural residents in the two cities is close to and less than five percent.<sup>①</sup>

The development of urban-rural integration involves all aspects of economy and society and touches on deep institutional obstacles. The goal is not to remove the limitations and obstacles in a certain local area, but to promote profound changes comprehensively and systematically in various systems and fields, and finally form an institutional mechanism for urban and rural integration, thus laying an institutional foundation for realizing scientific and harmonious development. Therefore, it is urgent to study the goal, structure, and function of the development of urban-rural integration from a systematic point of view. Chengdu represents a city which has entered the middle-to-last stage of urbanization, and the gap between its urban and rural areas is relatively moderate while Chongqing represents a city which urbanization rate is still around 50. Chengdu has the conditions to adopt systematic advancement while Chongqing can adopt key-point-based reform. Chengdu's high level shows that in the practice of urban-rural integration, independent policies and measures in local areas have limited effects. System efficiency can surpass the sum of local areas' efficiencies only if a systematic method is adopted to comprehensively promote policies and measures for institutional innovations in various fields.

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① The difference between urban and rural Engel coefficients can be defined as the difference between the Engel coefficient of non-rural residents and the Engel coefficient of urban residents. It is generally considered that when the difference of Engel coefficients is less than 5 percent, the quality of life of urban and rural residents tends to be the same. When the difference is 5-10 percent, the quality of life is quite different, and the city concerned is in the transitional period from dual structure to urban-rural integration. When the difference is more than 10 percent, there is still a great gap in the quality of life between urban and rural areas, and the dual structure between urban and rural areas is obvious.

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(Editor: Xiong Xianwei)

# *An Empirical Study on the Relationship Between the Scale of International Students from ASEAN and China's Outward Foreign Direct Investment*

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**Abstract:** With the further development of economic globalization since the establishment of ties between China and the Association of Southeast Asian Nations (ASEAN) 30 years ago and the continuous increase in the scale of international students in China, the training of international talents has become an important approach to avoiding the risks of transnational investments. We established panel data by selecting variables from the period 2006 to 2017, including the scale of international students coming from ASEAN to China, the gross amount of China's outward foreign direct investment (OFDI), and the GDP per capita of ASEAN countries to further explore the correlations among these variables. We applied a panel-vector autoregressive (PVAR) model to conducting a Granger causality test, a Gaussian mixture model (GMM) regression analysis, a Monte Carlo-based impulse response analysis, and variance decomposition of the data. The results show that the growth of OFDI exerted an obvious positive impact on the inflow of international students from the countries along the Belt and Road (B&R) within a short period, the growth of the scale of international students coming from these countries to study in China had a strong positive effect on OFDI, the training of international talents was conducive to promoting the scale of transnational investments, but the overall quality was not very high, and its economic contribution rate was low. It is also found that OFDI and the scale of international students from the countries along the B&R promoted the GDP growth to a certain extent and the positive accumulation effect fluctuated due to external factors. Therefore, it is suggested to expanding the scale of OFDI and improving China's core competitiveness in international student education. Intensive management of investment factors should also be conducted along with sound development of training mechanisms for international talents.

**Keywords:** ASEAN, scale of international students in China, GDP per capita, outward foreign direct investment

**DOI:** <http://dx.doi.org/10.19873/j.cnki.2096-0212.2022.01.002>

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Foundation project: National Social Science Foundation Project "Measurement and Evaluation on the Performance of Education Policies for Targeted Poverty Alleviation of Severely Impoverished Areas" (71864032); "A Study on Imbalance and Optimization of Preferential Policies for Higher Education of Minorities in Xinjiang" (71663044).

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## Research Background

The China-ASEAN community is a fundamental embodiment of the vision of “building a community with a shared future for mankind” in China’s neighboring countries. ASEAN countries are different from other countries along the B&R in that they have cultivated a community of ethnic origin with China due to the substantial number of Chinese immigrants moving southward. Therefore, they have closer economic ties with China and can even be regarded as a bridgehead of the 21st Century Maritime Silk Road. General Secretary Xi Jinping spoke highly of the bilateral relationship at the Special Summit to Commemorate the 30th Anniversary of China-ASEAN Dialogue Relations on November 22, 2021. He announced the establishment of the China-ASEAN comprehensive strategic partnership to build a peaceful, safe, secure, prosperous, beautiful, and amicable home together. This marked a pioneering initiative to develop amity and cooperation between China and its neighboring countries under the context of deepening economic globalization and profound changes in the international pattern.

The ten ASEAN member states are located between the Indian Ocean and the Pacific Ocean, adjacent to or separated from southern China by sea. Over the years, the implementation of China’s OFDI policies has exerted a synergizing effect on the integration of regional economics, trade agreements, and policies. During the period from the conclusion of the Investment Agreement on China-ASEAN Free Trade Area (CAFTA), from 2009 to 2017, China had an annual average outflow of US\$9.343 billion and a stock of US\$47.294 billion for direct investment in ASEAN, with annual growth rates of 38 percent and 32.96 percent respectively (Zhu & Sun, 2019). The Statistical Bulletin of China’s OFDI shows that the country’s investment flow to ASEAN reached US\$10.28 billion in 2016, growing by nearly 64 times since 2005. It also states that China’s OFDI flow and stock in ASEAN were US\$14.119 billion and US\$89.014 billion, up by 41.2 percent and 27.46 percent respectively over 2016 (Fu & Wang, 2019). In the meantime, the Confucian culture has become a shared ideological core for Chinese and ASEAN cultures. Cross-border migrant populations, featuring a large size with the same origins but different destinations, have played a significant role in bringing talents to promote regional cooperation and have become a driving force, irreplaceable by other factors, such as politics and economics. International students from countries along the B&R, as the subjects of education service trade, play a unique and essential role in promoting trade development in Southeast Asia. The training of international students in China has also become an important approach to increasing returns on investments and facilitating coordinated regional development.

## Literature Review

Concerning the analysis of correlations between OFDI and regional economic development

of ASEAN, we found that Xiao and Liu (2017) studied the economic ties between China and ASEAN member states from temporal and spatial perspectives. The results show that China's economic growth has a strong positive spillover effect on ASEAN countries, and the two sides are interdependent in space while the relations among ASEAN member states are competitive and complementary in terms of economic growth. In addition to boosting regional industrial economies, China's OFDI is also aimed at enhancing the transformation of the reverse knowledge spillover effect and strengthening cooperation on resources. Lin, Tan & He (2019) studied the influence of China's OFDI in ASEAN with the gravity equation and a Quantile model and found that in terms of the trade effects, there is significant spatial heterogeneity, and for the influence of OFDI outflow, there is a remarkable marginal effect, and China's OFDI in ASEAN is mainly used for seeking resources. The types of international investments are determined by the interactions of multiple external and internal factors. By studying the efficiency and influencing factors of China's OFDI in ASEAN countries, Fu & Wang (2019) found that the host country's indicators, such as market scale, economic development level, trade openness, legal system, and government efficiency have a positive effect on the efficiency of China's OFDI while spatial distance, stability and the status of democratic freedom of the host country impede the improvement in China's investment efficiency. On the whole, opportunities and challenges coexist for economic exchanges between China and ASEAN. Bai (2019) analyzed the investment value of ASEAN and found that China's OFDI in ASEAN features significant increases in direct investment quality, continuous expansion of investment fields, and large differences in the scale of OFDI in various member states of ASEAN. The findings also show some insufficiencies, such as a small scale and low industrial level of direct investments and a gradual decline in China's gross investments in these countries in recent years.

Concerning the analysis of the characteristics of training international students in China and taking human capital as one of the core factors of economic development, we found that Kenneth J. Arrow (1962) put forward on the basis of economic externality theory of Alfred Marshall (1890) that external spillover of technologies can stimulate an economy so that stronger cultivation of international talents is not only a necessary foundation for coordinated regional economic development, but also an important approach to increasing the commodity exports of the host country and realizing the transformation of reverse knowledge spillover. The Study in China Program released in 2010 by the Ministry of Education of China set a goal of making the country the top destination of international students in Asia. In terms of the education of ASEAN students in China, the Chinese government also proposed the "Double 100,000 Plan," which aimed to make the number of students coming to China or going to ASEAN both reach nearly 100,000 by 2020. Wang (2015) pointed out in his research that the education of international students in China is encountering bottleneck issues, such as the low proportion of students graduating from world-leading universities or with higher academic degrees, and the increase in the number of international students highly related to the major of

the Chinese language and culture. After analyzing the features of higher education cooperation between China and ASEAN, Wang (2019) concluded that the cooperation on language teaching is characterized by equivalence while technological cooperation is unidirectional. She also found that the selection of cooperation partners is differentiated, and the cooperation process is mainly led by governments and implies competition among ASEAN member states. Although the educational system for international students from countries along the B&R has developed significantly, issues still exist, such as a low proportion of international students with higher academic degrees, the scale of students' training limited to Chinese language and culture, and insufficiency in the level of international higher education.

Concerning the analysis of correlations between OFDI and the training of international students in China, the breakthrough for further developing bilateral trade of CAFTA lies in the exchanges of experience and know-how of regional higher education under the context of cooperation on international higher education. Yang (2012) summarized in his studies the foundation and achievements of China and ASEAN's cooperation on higher education. He held that economic and trade cooperation had laid a good foundation for bilateral cooperation on higher education, and the two sides have reached a consensus on the global combined effect of higher education so that innovations in approaches and diversity of participants will continuously open new chapters for China and ASEAN's cooperation on higher education. Jiang (2007) believed that if international students come to China mainly for the purpose of receiving short-term training, which is considered low-end education service trade output, then China would easily fall into the trap of comparative advantage, which means "an unfavorable position of a country in international trade due to structural defects arising from producing and exporting primary and labor-intensive products by fully depending on the comparative advantage of its natural conditions."

Generally speaking, there is plenty of literature on China's OFDI in ASEAN. Previous studies analyzed the status quo of China's OFDI from many perspectives and provided a good theoretical basis for promoting sustainable development of OFDI, but most of the studies adopted the perspective of economics and analyzed factors, such as direct investment efficiency and return as well as trade facilitation while they did not pay much attention to the role of human capital. Moreover, there are few high-quality references that explore the educational development of international students from ASEAN and most of the studies take the internal development framework of higher education as the theoretical perspective and attach such keywords as educational resources, educational cooperation, and cultural exchanges as the objectives of their research. They seldom explored deeper reasons behind these students' overseas study from the perspective of economic development demand, even though market demand is often one of the driving forces for human capital flow. In view of this situation, we related China's OFDI in ASEAN to international students from these countries and delved into the push-pull effect behind high-caliber talent flow by analyzing external factors through a PVAR model. We sifted through how economic factors affect competition for human resources and proposed suggestions for further studies.

## Research Design

### Selection of Variables and Data Sources

On the premise of ensuring the completeness of data as much as possible, we selected the same span of years (2006 to 2017) and took the number of ASEAN students in China, China's OFDI in ASEAN, and GDP per capita of ASEAN countries as research samples to establish a panel data.

#### The number of ASEAN students in China (*st*).

Lucas (1988) proposed in his human capital spillover model that worldwide economic externality is caused by human capital spillover. In recent years, the ten ASEAN member states, as one of the key sources of international students in China, have witnessed a growing trend of increase in the overall scale. Through an analysis based on Altbach's push-pull theory, it can be observed that a student's choice of the country for his or her overseas study is often the result of a struggle between the push and pull factors. Therefore, changes in the scale of international students can be regarded as a key indicator of the comprehensive strength of a country. To ensure data completeness, we took the numbers of ASEAN students in China from 2006 to 2017 as one of the variables. The data was mainly sourced from *Concise Statistics on International Students Studying in China*.

#### China's OFDI (*in*).

OFDI refers to an investor living in one economy, who controls or has a significant management influence on enterprise(s) located in another economy (Jiang, 2007). It not only acts like an important bridge for promoting scientific and technological exchanges among economies, but is also a key indicator affecting the labor markets and financial structures. Our study therefore took China's OFDI in ASEAN from 2006 to 2017 as a variable. We sourced the data mainly from the *Statistical Bulletin of China's OFDI*.

#### GDP per capita (*gp*).

GDP per capita is a crucial indicator for measuring regional economic levels. We used the price levels in 1990 as a benchmark and calculated the values of GDP per capita of ASEAN member states along the B&R through price index research methods. The data was mainly sourced from the *International Statistical Yearbook*. To avoid multicollinearity and heteroscedasticity that may arise in the analysis process, this study took the logarithm of the above variables respectively, as *lnst*, *lnin*, and *lngp*.

### Modeling

Based on our literature review, we determined that previous studies on China's OFDI delved more into such factors as basic conditions and openness of the host country that may affect OFDI growth by making a fixed-effects regression model. They seldom studied the external effects and results brought about by international students in China on free trade. Therefore, we established a PVAR model by using panel data (2006-2017) of the ten ASEAN member states as the research sample to further explore dynamic interactions between the scale of ASEAN students in China and OFDI, and

GDP per capita of ASEAN during these years. It observed the impacts exerted by one variable upon another through GMM parameter estimates, Monte Carlo-based impulse response analysis, and variance decomposition of variables to clearly identify internal relations between human capital and OFDI in the globalization of free trade, and to offer theoretical reference to healthy and long-lasting development of bilateral relations on the premise of understanding the non-linear logic of influence between the two factors.

For the vector autoregression (VAR) model, variables were taken as endogenous, and an explanatory variable was set as the lag between the corresponding variable and other variables. The model uses a group of regression equations to explain the interactions among the variables. The VAR model was first proposed by Christopher A. Sims in 1980. Since it has a strict requirement on data length and risk of reducing the degrees of freedom of data and the accuracy of parameter estimations due to its requirements for the capacity and scale of parameters, it is often used for large time-series analyses. In 1988, Holtz-Eakin modified the VAR model by offsetting its downside, but keeping its practice of taking variables as endogenous to propose the PVAR model, which allows each sample to have different individual effects and a time effect on the cross-section. We set the dynamic model of relations among *lnst*, *lnin*, and *lnpg* as follows:

$$Y_{i,t} = \alpha_0 + \sum_{j=1}^n \alpha_j y_{i,t-j} + \beta_i + \gamma_t + \varepsilon_{i,t}$$

In the above model: *i* stands for an ASEAN member state; *t* stands for an individual time span for observation; *j* stands for the lag order;  $\beta_i$  and  $\gamma_t$  stand for individual fixed effect and time effect, respectively;  $\varepsilon_{i,t}$  is the stochastic disturbance of the model;  $Y_{i,t}$  is the endogenous system generated from such variables as *lnst* (number of international students in China), *lnin* (China's OFDI), and *lnpg* (GDP per capita of ASEAN member states).

## Data Analysis and Evaluation

### Unit root test.

Data was analyzed and evaluated before an empirical analysis to enhance the reliability of the results. For this study, a well-established LLC method was used to conduct a unit root test of the data to avoid the occurrence of spurious regression and multicollinearity on the premise of ensuring data stationarity. The null hypothesis is that the series have a unit root and the test equation consists of a constant term and a trend term. See Table 1 for the analysis results.

Table 1 Results of the LLC-based Unit Root Test

Variable	P Value	Conclusion
<i>lnst</i>	0.1565	Non-stationary
<i>lnin</i>	0.0000	Stationary
<i>lnpg</i>	0.3063	Non-stationary
$\Delta$ <i>lnst</i>	0.0090***	Stationary

Variable	P Value	Conclusion
$\triangle lnin$	0.0000**	Stationary
$\triangle lnpg$	0.0190***	Stationary

The results show that the original series *lnst* and *lnpg* fail the stationary test while the series *lnin* agrees with the null hypothesis at the level of 1percent. It was found by applying a first difference method to the data that  $\triangle lnst$  and  $\triangle lnpg$  reject the null hypothesis at the level of 1 percent and  $\triangle lnpg$  proves that the series does not have a unit root at the level of 5 percent.

### Cointegration test.

To avoid the occurrence of spurious regression, a cointegration test was conducted on the original sequence with a null hypothesis of “whether cointegration exists in the sequence.” A cointegration relationship expresses a stable and dynamic balance between two linear growth amounts, and more likely, the interactions among multiple economic aggregates featuring linear growth and dynamic equilibrium of their own evolution. A cointegration test can determine whether there is a long-run equilibrium among OFDI (*in*), the scale of ASEAN students in China (*st*), and the GDP per capita of ASEAN member states (*pg*). In the test results, as shown in Table 2, *Gt*, *Ga*, *Pa*, and *Pt* are obtained by calculating the standard error based on the residual term of the model. *Gt*, *Pa*, and *Pt* significantly reject the null hypothesis at the level above 1 percent, and *Ga* fails the test. Therefore, it is held in this paper that there is long-run stable cointegration between *lnst* and *lnin*.

Table 2 Results of the Cointegration Test

Statistics	Value	Z-value	P Value
<i>Gt</i>	-2.901	-4.585	0.000
<i>Ga</i>	-5.038	0.454	0.675
<i>Pa</i>	--12.706	-7.322	0.000
<i>Pt</i>	-6.866	-6.866	0.002

### Determination of the lag order.

A VAR model can be made based on the completed cointegration test, but before this, an optimal lag term is a prerequisite to data validity. If the selected lag phase is too short, then it cannot well reflect the dynamic change of the model. If it is too long, then it may reduce the forecast effect of the model. Based on MBIC, MAIC, and MQIC, we determined the lag order of the model by adopting the principle of “the smaller the value, the more appropriate the lag order will be.” The results in Table 3 show that the original sequence data presents an ideal state with a first-order lag.

Table 3 Definitive Results of PVAR Model with Optimal Lag Phase

Lag Order	MBIC	MAIC	MQIC
1	-85.88090***	-33.52564***	-52.45565***
2	-62.42482	-25.25947	-38.69367
3	--39.37606	-17.42063	-25.35902
4	-11.20059	-4.445069	-6.887651

### The unit circle test.

A robust model is a prerequisite to subsequent analysis, which often relies on observing the position of the root of a characteristic equation in a unit circle to estimate the stability of the model. The result is shown in Fig. 1. For the estimated model, all of the four roots of the AR characteristic polynomial lie in the unit circle, and their reciprocals (i.e., the root value) are all close to 0. It is therefore deemed that the estimated model is stable.

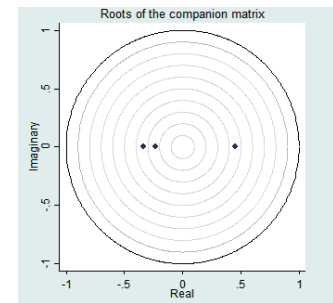


Figure 1. Positions of the Roots of the Characteristic Polynomial in a Unit Circle

## Empirical Analysis

### Granger Causality Test

The cointegration test results show that there is long-run and stable cointegration among OFDI (*in*), the scale of ASEAN students in China (*st*), and GDP per capita of ASEAN member states (*pg*), but they cannot prove whether there is causality between every two variables. Therefore, a Granger causality test was conducted to explore whether there is a causal relationship among the variables. The results are shown in Table 4 below.

Table 4 Results of the Granger Causality Test

S/N	Null hypothesis	F Statistics	P Value	Conclusion
1	$lnst \rightarrow lnin$	0.010	0.918	Agree with
2	$lnst \rightarrow lnpg$	6.645	0.021	Reject
3	$lnin \rightarrow lnst$	8.968	0.003	Reject
4	$lnin \rightarrow lnpg$	2.318	0.128	Agree with
5	$lnpg \rightarrow lnin$	0.007	0.931	Agree with
6	$lnpg \rightarrow lnst$	7.599	0.006	Reject

For the Granger causality test, the null hypothesis is that there is no causality between X and Y. The above results show that  $lnst \rightarrow lnpg$ ,  $lnin \rightarrow lnst$ , and  $lnpg \rightarrow lnst$  all reject the null hypothesis. This means that *lnst*, *lnin*, and *lnpg* are respectively the cause of *lnpg*, *lnst*, and *lnst*.  $lnst \rightarrow lnin$ ,  $lnin \rightarrow lnpg$ , and  $lnpg \rightarrow lnin$  did not pass the test of significance. This means that *lnst*, *lnin*, and *lnpg* are not Granger causality of *lnin*, *lnpg*, and *lnin*. It can be seen from the above that the scale of international students has a close causal relation with the host country's economic development level, and OFDI is a significant impetus to increase the scale of international students in China.

### GMM Regression Analysis

Based on the causal relation identified among OFDI (*in*), the scale of ASEAN students in China

(*st*), and GDP per capita of ASEAN member states (*pg*), the GMM method was applied in this study to obtain estimates of coefficients of the model. The results are shown in Table 5.

Table 5 GMM Estimates of the PVAE Model

Dependent Variable \ Statistics	<i>lnst</i>	<i>lnin</i>	<i>lnpg</i>
L. <i>lnst</i>	0.81693*	0.94672***	0.38130***
	0.052	0.003	0.006
L2. <i>lnst</i>	0.01003	0.02723*	-0.04821
	0.958	0.086	0.895
L. <i>lnin</i>	0.26923*	0.24386*	-0.04163
	0.092	0.028	0.246
L2. <i>lnin</i>	0.04899	0.11559	-0.00815
	0.918	0.470	0.527
L. <i>lnpg</i>	0.38479**	0.46424**	2.08641*
	0.011	0.028	0.095
L2. <i>lnpg</i>	0.10712	1.96102	0.74419
	0.779	0.146	0.249
R-sq	0.9817	0.9261	0.8922

The results show that with a lag of one phase, *lnst* has a noticeable influence on *lnst*, *lnin*, and *lnpg*. The contribution coefficient of *lnst* to *lnin* is 0.94672, and at the level of 1percent, it shows clearly that the scale of international students in China has significantly promoted a further increase in OFDI. The contribution coefficient of *lnst* to *lnpg* is 0.38130, smaller than that of it to *lnin* and *lnst*. With a lag of two phases, only *lnst*'s contribution to *lnin* passed the test of significance and the contribution coefficients of *lnst* to *lnst*, *lnin*, and *lnpg* decreased somewhat. Especially, the coefficient of L2. *lnst* for *lnst* is -0.04821. The underlying reason may lie in the long periodicity of the return on human capital investment and the high instability and hysteretic nature of the return due to influences from many factors.

*lnin* pulls *lnst* and *lnin* to a certain extent. It can be seen from the above table that the contribution coefficients of *lnin* to *lnin* and *lnst* are 0.38479 and 0.46424 respectively and significant at the levels of 10 percent and 5 percent, but the contribution level is still low and has much room for improvement. The contribution coefficient of *lnin* to *lnpg* is -0.04163, mainly due to the reason that most of the ASEAN member states are underdeveloped or developing countries and their relatively poor infrastructure has lowered short-term return on OFDI considerably. For L2. *lnst*, it can be seen that *lnin* does not have enough subsequent power to promote *lnin* and *lnst* while the contribution coefficient of *lnin* to *lnpg* is -0.00815, which means that the negative effect is restrained somewhat, further proving the hysteretic nature of the return on OFDI.

*lnpg* is a significant Granger cause of *lnst*. In terms of GMM regression results, *lnpg* for *lnst* passed the test at a 5 percent significance level with a contribution coefficient of 0.38479, while its

contribution coefficients to *lnin* and *lnpg* are 0.46424 and 2.08641, which are comparatively low. From the regression results of two phases, we can see that the contribution coefficients of *lnpg* to *lnst*, *lnin*, and *lnpg* are 0.10712, 0.9261, and 0.74419, respectively, mainly because countries in Southeast Asia are at different levels of economic development so that limited education resources and levels lowered the enthusiasm of international students coming to China from these countries. On the other hand, the scale of OFDI is mostly determined by gross national product (GNP). Although OFDI helps ASEAN member states develop their infrastructure, its return is not high, so that in the short term, it softens GDP growth.

### Monte Carlo-Based Impulse Response Analysis

As the PVAR model is a kind of dynamic model and not built on the basis of an economic theory, it is difficult and insignificant to explain the estimate of a single parameter. In addition, the regression

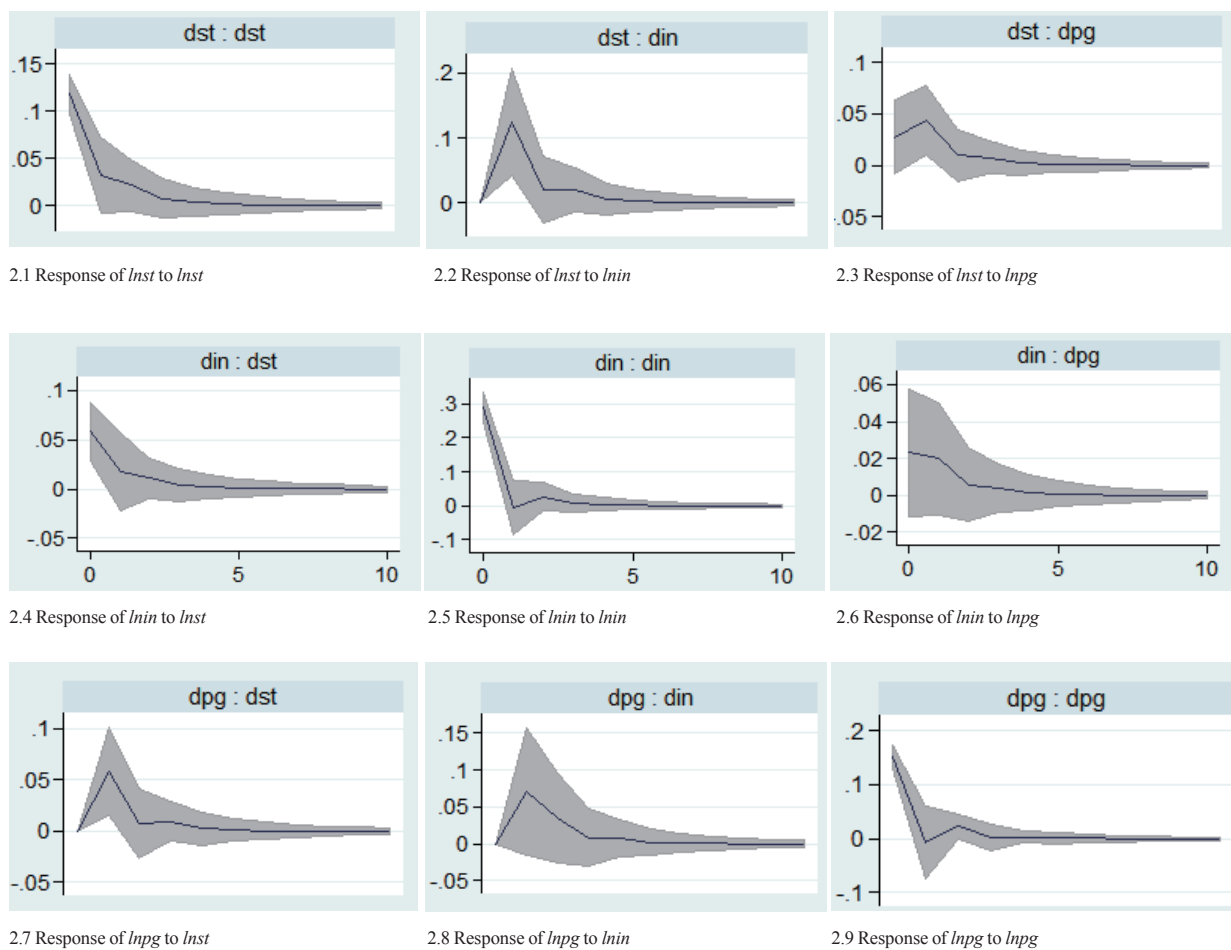


Figure 2. Impulse Response Among the Number of ASEAN Students in China, China's OFDI, and GDP Per Capita of ASEAN

Note: The horizontal ordinate indicates the number of traced lag phases of the impulse response function. The ordinate expresses the degree of response. The curve stands for the impulse response functions.

coefficient of an explanatory variable obtained only through GMM estimation cannot fully reflect the relations among each variable. Impulse response function, however, can reliably simulate the dynamic influence path by which a variable impacts another variable on the condition that other variables remain unchanged. On this basis, a Monte Carlo-based impulse response analysis was also conducted in this study, with the results as shown in Fig. 2.

Fig. 2.1, 2.2, and 2.3 express respectively the impulse responses of the number of ASEAN students in China to *lnst*, *lnin*, and *lnpg* within ten phases. It can be seen that *lnst* impacts itself greatly in the first two phases, but has little impact in the following phases. This demonstrates that for ASEAN students, they feature group activities for selecting the destination of their overseas study, but the subsequent pull effect is obviously inadequate after the short-term enthusiasm. The impact of *lnst* on *lnin* rises quickly within one to two phases and drops after reaching its peak. In the third phase, it remains stable and its role in promoting decreases gradually. *lnst* promotes *lnpg*, but the maximum limit of its impact effect is less than 0.05, representing a weak influence.

With the rise in the scale of OFDI, both the number of ASEAN students in China and the GDP of these countries grew as well. It can be seen from Fig. 2.4, 2.5, and 2.6 that in the short term, OFDI has an obvious impact on *lnst*, *lnin*, and *lnpg*. With additional phases, the value is close to 0. Especially *lnin*'s impact on itself drops to 0 from its peak at a point near the first phase, showing that the impact effect of OFDI is weak and the subsequent investment scale is shrinking. All are related to investment cycles, expectations of return, and other influencing factors. In addition, the peak values of impact effects of *lnin* on *lnst* and *lnpg* are 0.05 and 0.02 respectively, featuring a positive yet slight influence. The continuous growth of OFDI still relies on a direct increase in the OFDI amount.

The national economic level is one of the premises and key reference indices for expanding the scale of international students. We can see from Fig. 2.7 that *lnpg* has an obvious impact on *lnst*, and the value drops after the third phase and becomes flat, showing a noticeable overall accumulation effect. In Fig. 2.8, the average impact effect of *lnpg* on *lnin* is higher than that on *lnst*, mainly due to multiple non-linear influences between GDP and the scale of international students and the weakening of the impact effect by other factors. The GDP level is one of the direct forces for driving OFDI growth. *lnpg* can drive the growth of itself as well. The impact of *lnpg* on *lnpg* in subsequent phases is volatile and cannot maintain a stable and long-run growth, as shown in Fig. 2.9.

### Variance Decomposition

The next step of this study was to use variance decomposition to obtain the contribution rates of impact responses of different equations to the variance of each variable fluctuation. Through variance decomposition, the forecast variance of a variable within a system can be broken down to each disturbing term to obtain valuable information about the influence of each stochastic disturbance on variables in the model, as shown in Table 6 (Guo, 2013).

Table 6 Variance Decomposition of the Causality Relationships Among *Inst*, *lnin*, and *lnpg*

Forecast Horizon	Phase No.	<i>lnin</i>	<i>Inst</i>	<i>lnpg</i>
<i>Inst</i>	1	0.1973	0.8027	0.0000
	5	0.2257	0.5446	0.2297
	10	0.3352	0.4614	0.2034
<i>lnin</i>	1	1.0000	0.0000	0.0000
	5	0.5907	0.2508	0.1585
	10	0.4227	0.3430	0.2343
<i>lnpg</i>	1	0.0217	0.0312	0.9472
	5	0.1016	0.0918	0.8066
	10	0.1232	0.1437	0.7331

The results of variance decomposition in Table 6 show that, first, ASEAN students in China have a growing influence on transnational investment development while the influence on GDP growth suffers a dip due to the long cycle of talent dividend. In phase 1, *Inst*'s contribution rates to *lnin*, *Inst*, and *lnpg* are 19.73 percent, 80.27 percent, and 0, respectively. This indicates that the changes in the scale of international students in China are mainly due to a group effect. The scale has an indirect and small boost to OFDI growth while its contribution to GDP is not evident in phase 1, so there is a lag. With the increase of phases, *Inst*'s contribution to *lnin* rises to 33.52 percent, while *Inst*'s contribution to *lnpg* gradually weakens in phase 10. Second, the growth of the gross amount of OFDI is a key foundation for driving OFDI. Therefore, in the above results, the contribution of *lnin* to *lnin* contributes a substantial proportion. In phase 5, the contribution rates of *lnin* to *Inst* and *lnpg* gradually rise to 0.2508 and 0.1585. In phase 10, the contribution rates of *lnin* to *lnin*, *Inst*, and *lnpg* are 0.4227, 0.3430, and 0.2343. This indicates that OFDI not only attracts international students to come to China, but also contributes to coordinated regional economic development. Third, GDP growth mainly depends on direct increases in GNP. In phase 1, *lnpg*'s contribution rate to *lnpg* is 0.9472 while its contribution rates to *lnin* and *Inst* rise to 0.1232 and 0.1437, in phase 5 from 0.0217 and 0.0312, though the overall contribution is still low. GDP per capita is still the main factor for promoting regional economic development.

## Conclusions and Suggestions

Based on the above analysis, we can conclude that rapid increases in China's OFDI in ASEAN countries have provided more possibilities for further comprehensive cooperation between China and these countries. The training of transnational talents has a positive significance on the return of direct investments and national economic growth, but the interactions among OFDI (*in*), the scale of ASEAN students in China (*st*), and GDP per capita of ASEAN member states (*pg*) have obvious differences and a hysteretic nature. On this basis, we sifted through data concerning

exchanges between ASEAN and China from 2006 to 2017 and used a PVAR model to explore and analyze the long-run dynamic relations among the three factors and made the following observations:

First, OFDI (*in*) and the scale of ASEAN students in China (*st*) significantly promote and depend on each other, but the overall accumulation effect is not strong. As most of the ASEAN countries feature underdeveloped infrastructure, China's OFDI in these countries greatly offset the shortages in their industrial economy, while on the other hand, there are increased investment risks and a long cycle of investment returns. In the meantime, frequent international trade is bound to create huge development space for transnational talent markets and promote their development. The training of high-caliber talents can enhance the transformation efficiency of reverse knowledge spillover and boost the vigorous development of industrial economies. OFDI is highly relevant to the scale of ASEAN students in China. The results of this study show that OFDI plays a dominant role in the two factors and the investment characteristics of OFDI have a certain guiding effect on the flow of international students.

Second, *in*, *st*, and *pg* feature a sharp increase in the pulling effect on themselves within the short term, but they all lack subsequent power and decline rapidly. Their pulling strength is shown as  $lnin > lnpg > lnst$ . ASEAN countries have noticeable regional advantages with China. The launch of the B&R Initiative has opened economic and trade markets between China and its neighboring countries. The establishment of CAFTA has especially pushed forward further development of OFDI through geographical advantages. The market immediately responded positively to this incentive at the first stage of OFDI, but due to restrictions from the economic levels of ASEAN countries and their return capacity, subsequent motivation for OFDI input is insufficient, and as the cycle of market returns is too long, most investors are taking a wait-and-see attitude. Meanwhile, China's higher education for international students is still at its initial stage and developing rapidly. The training of international students generally focuses on humanities. The high-quality output of core technologies is still insufficient. This largely weakens its appeal and regional advantage to international students.

Third, *in*, *st*, and *pg* also feature positive external influences, but they present an obvious lag in terms of overall timeliness. The level of funds support and transnational talent reserves are indispensable production factors. *lnst* and *lnin* promote *lnpg* significantly, but as talent dividends feature diversity and uncertainty, it cannot have a direct effect on economic growth in the short term and underdeveloped infrastructure also increases the cycle and risk of industrial profits. Currently, OFDI and the scale of international students in China show a certain positive effect accumulation, but they also have an obvious lag phase. Economic growth still relies on the pulling effect of the country itself. Therefore, it is necessary to continuously enlarge the input of OFDI and expand its scale. In the meantime, attention should be paid to improving education quality for international students and strengthening the training of technological talents. Regional economic development should be promoted in coordination with the development of human capital, while transnational

investment risks should be effectively avoided to positively transform the reverse knowledge spillover effect.

Based on the above points, we put forward several suggestions for further development of the relations between the scale of ASEAN students in China and China's OFDI as follows: (a) to expand the scale of OFDI and establish a sustainable management system. Infrastructure in ASEAN countries has become a bottleneck for their economic growth. If more funds can be invested in their infrastructure construction, then a favorable condition can be created for cross-border trade. A sustainable management system should also be established in line with the development features of CAFTA to guide the efficient and effective use of funds and lay a solid foundation for later investments. (b) enhance higher education levels to strengthen the core appeal to international students. The small proportion of highly educated international students is a key issue nowadays. As China does not have a complete training system for international students, it is not that attractive to highly educated international students, while foreign students without advanced degrees are generally attracted by preferential policies and not very strict requirements for graduation. Therefore, China's higher education level for international students should be enhanced, and breakthroughs should be made to enable international students to conduct studies and make achievements in their interested fields. (c) establish a communication channel for talents and cultivate internationalized scientific research innovation teams. High-caliber talents in China should be encouraged to "go global," and domestic and overseas academic and cultural exchanges should be strengthened to provide platforms for localized scientific research teams. The spirit of "learning from practice" should be advocated to strengthen the accumulation of tacit knowledge to enhance the absorption of spillover technologies in trade contacts and cultivate a wealth of high-quality international talents with core competitiveness. (4) manage investment factors in an intensive way and improve regulation mechanisms to enhance fund conversion rates. Quality, content, concentration, and combination types of investment factors should be regulated and adjusted to enhance returns. The reverse knowledge spillover effect should be used to adjust industrial structures, preoccupy the market and internalize advantages. Relevant preferential policies should be released to direct OFDI to highly sophisticated industries at a large scale. Financial advantages should be fully used to maximize the reverse spillover effect of technologies.

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(Editor: Xu Huilan)

# *Analysis of the Concept and Connotation of the New Economy and Reconstruction of Its Development Path: A Study Based on Chengdu's Practices*

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**Abstract:** In order to promote the transformation and development of China's economy and cope with the realistic challenges posed by the global economic recession and slowing domestic economic growth, the Fourth Session of the 12th National People's Congress adopted a strategic resolution on developing the "new economy" and fostering new drivers of growth. Chengdu, capital of Sichuan province, is one of the cities in China which firstly begin to carry out the layout of the new economy development. While achieving results, it also faces many troubles due to its insufficient cognition of the connotation, definition, and path of the "new economy." The paper is based on a theoretical study in combination with the new economic development of Chengdu's five new paths, to analyze the concept and connotation of the "new economy." It also analyzes from the perspective of higher dimensional reconstruction and new strategic path of economic development, in order to add some insights to the theoretical study and to promote better strategic value of the new economy.

**Keywords:** new economy, Chengdu, perplex, reconstruction, strategic path

**DOI:** <http://dx.doi.org/10.19873/j.cnki.2096-0212.2022.01.003>

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## Introduction

Studies show that the term “new economy” originated from the United States and refers to the economic system led by the high-tech industry driven by the information technology revolution represented by IT in the 1990s (Li, 2016). At that time, the public cognition of the new economy was mainly concentrated in the tertiary industry, which was dominated by the application of information technology. With the development of science and technology, especially the rise of artificial intelligence (AI) and the Internet of Things (IoT) technology, the new economy is nowadays no longer limited to the tertiary sector. It also involves the primary and secondary industries, including new applications, new models, and new ideas that are based on technological transformations. The most typical one is the sharing economy (Jiang, 2018). Chengdu started developing the new economy in 2017, focusing on five new economic forms, i.e., smart economy, digital economy, sharing economy, flux economy, and green economy. Many innovative practices have been carried out. For example, seven application scenes, such as smart cities, entrepreneurship and innovation platforms, and modern supply chains were planned and fostered (Lin, 2020); a new economic service organization system of “government + think tank + entrepreneur organization” was perfected (Min et al., 2020); and a list of urban opportunities for Chengdu was developed (Zhou, 2019). According to available data, Chengdu ranked fourth in the aggregate index of the new economy in China in 2017. By the second half of 2020, it ranked new first-tier cities in China. It achieved a breakthrough in unicorn companies. The number of the new economy companies increased to 360,000, and the venture capital received increased to RMB52 billion. The revenue of the new economy exceeded RMB400 billion. Chengdu ranked third nationwide in terms of the new economic vitality index and the scale of new occupations. The rapid rise of the new economy has become a new driving force for high-quality economic development. However, disputes and blind spots exist in the current understanding of the concept and connotations of the new economy, leading to bias in its development path. Therefore, the article analyzed the concepts and connotations of the new economy for clarification.

## Concepts of the New Economy and Its Origin

Since the birth of the concept in the 1990s, “new economy” has been endowed with various new connotations, and the cognition of the theoretical circle is also varied. Some believe that the new economy is a technological concept, such as Zhang Ruimin, president of Haier Group, and Wang Mengkui, an economist. They define the new economy as an economy with sustainable development driven by new technology and based on digital knowledge and network technology, with innovation as the core (Zhang, 2000; Li, 2001). Or it can be understood as a high-tech

industrial chain formed by the mutual infiltration of mathematical, biological and physical technologies generated by information technology as the main force (Xie, 2018). In this regard, scholars predict that information technology will be the main driving force of the new economy in the next 15-20 years (Li, 2017). Some believe that the new economy is a new economic form, which is the concentrated embodiment of the knowledge-based, innovative, green, sharing, open, digital and personalized economic types (Ren et al., 2020). It is a new round of economic activities and economic forms, typical of which is the “digital economy” (Chen et al., 2017). Moreover, it can create effective demand with its own supply (Shu, 2019). Of course, some scholars have integrated the concepts of technology and form, and believe that the new economy is an economic activity or business mode with high human capital input, high technology content and relatively innovation (Cheng et al., 2017), which includes new technology, new industries, a new business mode and a new mode.

It is undeniable that various understandings of the concept of the new economy in the theoretical community have theoretical foundations and practical significance. However, most of them are defined based on certain individual characteristics or special performances from a predetermined industry or professional perspective. Relatively speaking, the third group’s connotations are instructive, but they are not formed from a higher strategic dimension. Therefore, it is still challenging to form a more general and broad sense of understanding. Overall, it is difficult to form an agreed-upon concept for the new economy.

## **An Overview of the New Economy Development at Home and Abroad**

### **Overview of Foreign Development**

Data show that Germany proposed Industry 3.0 in the 1960s, which required the integration of information technologies, such as automation, computers, and robotics into manufacturing; Germany attempted to stimulate industrial transformations by promoting the development of information and communication technologies. The US put forward the “National Information Infrastructure Construction Plan” in 1993, trying to build a national computerized information system (Long et al., 2020). Japan also put forward the strategy of “Nation Based on the Creation of Science and Technology” in 1994 and actively developed the world’s leading high-tech (Ji, 2005). With the development of the new economy in various countries, these industrial powers witnessed a sharp decline in the proportion of manufacturing industries and a rapid increase in the proportion of service industries in their GDP, thus giving impetus to the new stage of breakthrough developments in their national economies. At the beginning of the 21st century, countries like the US, which proposed and pioneered the concept of the new economy and implemented new economic development strategies, all achieved economic transformations and upgrading, and ranked among the major economies in the world.

## Overview of Domestic Development

In February 2016, Chinese Premier Li Keqiang explicitly mentioned the new economy for the first time and included it in the government work report as the government's policy agenda. In October 2020, the Fifth Plenary Session of the 19th Central Committee of the Communist Party of China (CPC) further proposed the long-term goal of basically realizing new industrialization, IT application, urbanization, and agricultural modernization and building a modern economic system by 2035, which indicates the direction for China's new economic development. In addition, the CPC Central Committee and the State Council clearly demanded the acceleration of the development of "three new" economies with new industries, new business forms, and new business models as the core content. The new economy has also entered the national statistical system. By 2019, China's "three new" economies accounted for 16.3 percent of GDP, with a growth of 9.3 percent. The average annual growth rate was two percentage points higher than the current GDP growth rate.<sup>①</sup> The new economy has formed a new driver for economic development and significantly stimulated the national economy.

## The Main Problems That the New Economy Development Faces at Present—Take Chengdu as an Example

At present, while the new economy is developing vigorously, it also faces many practical problems, among which some are technical and some are theoretical. But in fact, the core problem is that the connotation of the new economy is not accurate enough to make the practical logic of developing the new economy been properly understood.

### The Connotation of the "New Economy" Is Not Comprehensive

Since the development of the new economy was advocated in China, all regions and cities have rushed to accomplish the major parts of the new economy, among which the most obvious feature is the focus on high-end technological industries. Practices of attracting and fostering enterprises are targeted at the development and application of high technology and are vigorously promoted. Such practices include attracting leading companies, cultivating gazelle companies, and fostering unicorn companies, which are blooming. Behind this seemingly prosperous boom, however, no one has ever seriously considered the fundamental question of what the new economy actually is. They basically comply with a tacit game standard that only new technologies and applications, such as the Internet, big data, and cloud computing can be called a new economy. Based on this, many new technology companies focusing on high-tech applications are rapidly gestating. However, some traditional companies, sectors, and industries, such as agriculture-related fields do not have a strong sense of participation. In this regard, some have also raised questions about whether the new economy refers to the basic transformation of the traditional economy or the cultivation of a new segment of the old economy. Although they have broadened their horizons, they still portray the new economy from

a concrete and static perspective. Therefore, it is difficult to reach a consensus.

### **An Inaccurate Grasp of the Path of Developing the New Economy**

In the process of developing the new economy, many cities have constructed a logical path according to their own realities. For example, Shanghai takes the path of using new infrastructure to support the new economy, new connections to enable new consumption, and new services to create a new ecology;<sup>①</sup> Hangzhou takes the path of digital industrialization, industrial digitization, and urban digitization.<sup>②</sup> Early in 2017, Chengdu put forward five new development paths, with new technologies, new organizations, new industries, new business forms, and new models as the core content. Three years later, the city revolved around new subjects, new tracks, new carriers, new scenes, and a new ecology as the core contents to carry out path reshaping and dimension upgrading. The micro dimensions have been upgraded from the technology and organization to the subject and carrier; the meso dimension has been upgraded from the industry and business form to the track and scene; the macro dimension has been upgraded from model to ecology. Although the new path is more in line with the future orientation of the new economy, it still has immature aspects. First, the connotations and orientations of the five new paths are not sufficiently compatible. For example, the understanding of new tracks is limited to industries, emphasizing the commitment in various industrial subdivisions to developing new tracks. The definition of new subjects is narrow, without realizing that enterprises are only one form of the subject. It focuses only on leading enterprises and pays little attention to the interactive behaviors of multiple subjects in the markets. The understanding of new scenes is representational. It only focuses on the construction of the scenery represented by niche consumption, but does not consider the construction of sites. As a result, the scenery is separated from the site, or there is scenery but no site, making it difficult to achieve the Bilbao effect.<sup>③</sup> The most typical example is the large number of government-supported Internet-famous sites in Chengdu and its surrounding areas. Most of them are temporary consumption spaces and can hardly have long-term and sustainable development. Second, the internal logic of the five new paths is not sufficiently accurate. In the beginning, it was believed that the five aspects in the five new paths would show a parallel relationship, i.e., the five aspects would depend on each other and develop in parallel (Fig. 1). Later, it was argued that they should show a progressive relationship, i.e., they should logically evolve according to their content (Fig. 2). In fact, neither the parallel nor progressive relationship can accurately reveal the internal relationships between each part. The parallel relationship cannot clearly divide the boundaries of each parallel part, and the progressive relationship can hardly clarify the logical connection of each link. Neither of them can achieve a high degree of adaptation between the concrete concept and the

① Full execution of online new economy in Shanghai. xinhuanet.com/Xinmin Evening News; [http://www.sh.xinhuanet.com/2020-06/09/c\\_139126051.htm](http://www.sh.xinhuanet.com/2020-06/09/c_139126051.htm)

② Embracing the new economy and releasing new vitality in Hangzhou, Zhejiang. People's Daily Online; <http://www.chinaxiaokang.com/chengshi/2020/1207/1091882.html>

③ The Bilbao effect is also known as the miracle of the museum, of which the museum community is proud. It refers to a phenomenon whereby Bilbao became prosperous due to the agglomeration of a large number of architectural masterpieces. This example of changing the destiny of a city is described by the *New York Times* as a miracle, which is known as the Bilbao Effect.

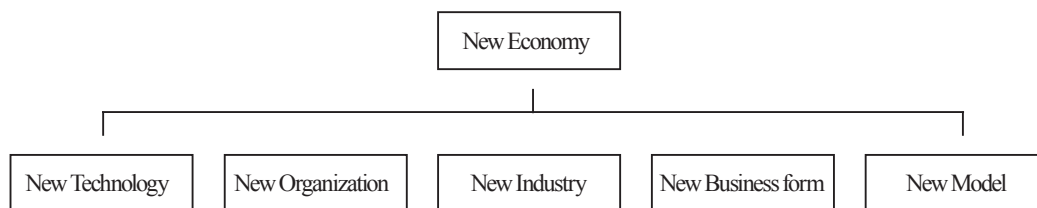


Figure 1: Development path of the new economy in Chengdu – five new (parallel diagram 2017)

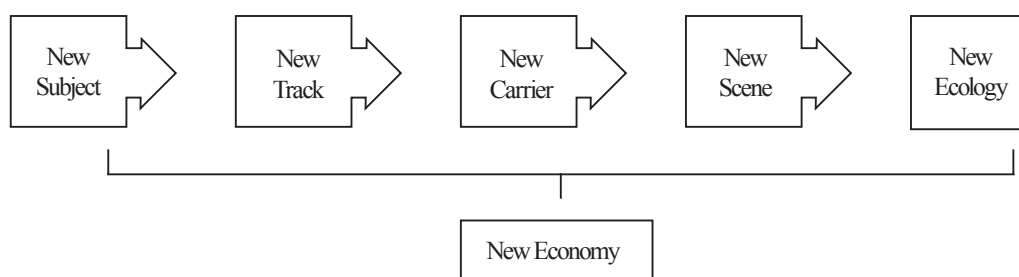


Figure 2: Development path of the new economy in Chengdu – five new (progressive diagram 2021)

embedded logic. Therefore, the explanatory power of the five new paths is greatly reduced.

## Re-Analysis of the Concept and Connotation of the New Economy

It is not difficult to see that the premise of finding a realistic and rational path for the development of the new economy is to accurately define the concept of the “new economy” and its connotation.

### A New Understanding of the Concept of the “New Economy”

The concept of the new economy has undergone reciprocal corrections and continuous supplements from technologies to forms. Technologies, factors, and models have continued to iterate. From this logic, defining the new economy in any single dimension from any time node can hardly ensure the lasting stability of its conceptual expression and connotation. Based on this reality, this article defines the new economy as a comparative state of economic development from the abstractionism of the historical development trajectory.

The comparative state has three meanings. The first one is a dynamic connotation. That is, the comparative state means continuous change. It is not defined based on a certain stage, a certain type, or a certain characteristic, but refers to a dynamic development phenomenon. The second one is a comparative connotation. That is, the comparative state is a relative rather than absolute concept, which means that it is never judged by chronological order. Any model or object with comparative advantages

can be classified into the scope of the new economy. The third one is a boundary connotation. The orientation of the comparative state is not limited to the target image or industry differentiation, nor is it limited to the form rhythm and model selection. The technologies, models, concepts, etc., that can better meet the needs of current and future economic and social developments are all new economies. New economies include not only emerging industries and business forms, such as the Internet+, the Internet of Things, cloud computing, and e-commerce in the tertiary industries, but also intelligent manufacturing and large-scale customized production in the manufacturing industries. Family farms that are conducive to the promotion of moderate-scale operation and the joint-stock cooperative system in the primary industry, as well as the integrated development of rural primary, secondary, and tertiary industries, are also regarded as new economies.<sup>①</sup>

### **A New Understanding of the Connotation of the “New Economy”**

It is of realistic value that Chengdu condenses the connotation of the new economy into “five new,” but it is obviously lacking scientific integration, including historical track, image representation, content direction and law expression in terms of its content. Here, the author makes the following clarification.

#### **The new track is based on the concept of factor selection.**

The term “track” has been widely used, starting in 2015. At that time, traditional industries, in the context of the Internet, were divided into many new sub-industries, such as Internet+ medical and Internet+ autos. Investors considered these tracks to be market gimmicks. However, the new tracks from the government’s perspective could explain the entire new economic form. From the perspective of orientation, it is a specific required direction based on market participation and public management. In addition, it is abstracted from higher-dimensional objects of sectors and industries. It is manifested as an essential element of serving the public and public participation and contains the process of fair competition and rule-based elimination. Therefore, from the perspective of respecting needs and willingness, the economic aspects that meet the characteristics of tracks are the factors. This is because factors are not only homogeneous in economic participation, but also competitive, which is in line with the focus and purpose of the government’s public management. In addition to traditional factors (i.e., land, labor, capital, and technology), the new economy regards data as a new element. Therefore, for the new economy, new tracks are the new factors represented by data. The development of new tracks refers to the innovative development and use of data-centered new factors.

#### **The new scene is based on the concept of aggregation of elements.**

The term “scene” originally referred to scenes in dramas and movies. It was then gradually applied to various disciplines, such as sociology and communications. Its interpretation has also changed from a purely spatial bias to the sum of the relationships between people and the surrounding

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① Li Keqiang: To develop the new economy is to cultivate new drivers and promote the economic transformation of China. [http://www.gov.cn/guowuyuan/2016-03/16/content\\_5054244.htm](http://www.gov.cn/guowuyuan/2016-03/16/content_5054244.htm)

scenery. Its core consists of hard factors, such as sites and scenery, as well as soft factors, such as related spaces and atmospheres (Tan et al., 2018). From this perspective, a scene is essentially an interactive combination of different sites and scenery. In the economic field, a scene is used to describe a scenario or form in which various economic activities interact with participants. New scenes refer to more innovations in more forms, content, and relationships in general economic scenarios. In this regard, the article believes that for the new economy, a new scene is the superposition of the factors of economic activities, such as objects, space, and relations, and their interactions. The supply of new scenes is a process of aggregating the people, things, and relations in the market to pursue changes.

#### **The new subject is based on the concept of process participation.**

In philosophy, the term “subject” refers to a person who can understand and manipulate an object. In the economic field, the definition of the subject is usually generalized to refer to an organization or individual that undertakes a certain role or carries out corresponding activities. It contains three dimensions of connotations. From the dimension of attribute characteristics, subjects refer to natural persons and legal persons. From the dimension of economic boundaries, subjects are divided into market entities and non-market entities. From the dimension of relationship stickiness, subjects refer to direct subjects and indirect subjects. Based on these connotations, new subjects should be multiple parties involved in specific supply and demand sectors, including the supply side, demand side, and intermediate party. Therefore, for the new economy, a new subject is an economic participant with stronger adaptability and innovation abilities after being transformed by the new environment. To cultivate new subjects is to provide necessary factors and service support to guide the growth and development of new subjects.

#### **The new carrier is based on the concept of functional services.**

In science and technology, carrier specifically refers to certain things that can transmit energy or carry other things. It also generally refers to all things that can carry other things and the intermediary things used in the process of state changes. Wu et al. (2001) argued that a carrier of economic development is a platform that can stably carry, transmit, and catalyze economic growth for a long time and play a core supporting role. It includes factor carriers, industrial carriers, geographical carriers, socio-economic relation carriers, and ownership carriers. Inspired by this, the article believes that the understanding and definition of a new carrier should focus on three aspects: a) the carrying space for the existence and activities of subjects; b) the necessary supporting services required for the activities of subjects; c) the co-product of self-formation and artificial guides. Therefore, for the new economy, a new carrier is a space that serves the growth and development of economic subjects. The construction of a new carrier refers to opening a space for the activity of a new subject and improving the service functions of the space.

#### **The new ecology is based on the concept of linkage and interaction.**

Ecology originally referred to the state of living and development of organisms in a certain natural environment. It also refers to various physiological characteristics and living habits of organisms. Later, the field of social science research introduced this concept and derived concepts, such as economic

ecosystems and industrial ecosystems. According to the literature, an ecosystem embodies a new industrial development model and a new industrial development layout (Yuan, 2004). Economic ecology regards the human, political, cultural, institutional, and natural ecological environment resources as internal components of the economy (Wang, 2005). In other words, economic ecology is a concept integrating all factors and subjects in economic activities, emphasizing universal connections and activity rules. Therefore, for the new economy, the new ecology is a systematic manifestation of the material base, object-subject, and rule relationships in social activities based on all economic factors. To create new ecology is to build a more standardized, efficient, and orderly factor and rule system.

### Reorganization: Logic in the Development Path of the New Economy

The core of reconstructing the development path of the new economy lies in looking at and clarifying the starting point, process, and goals of the development of the new economy from the perspectives of both the government and the markets. That is, efforts will be made to fully coordinate the decisive role of the markets in the allocation of resources and give better play to the government's regulatory and management roles. Through the analysis of Chengdu's five new paths, it is easy to find that only the concepts and connotations of the new track and the new ecology involve a government perspective, while the rest focus more on market perspectives or market behaviors. On this basis, it is possible to clearly and scientifically define the logical path for the development of the new economy. That is, the government's track construction and macro-control of data-centered new factors are regarded as the starting point.

Efforts should then be made to guide the market to compete and develop around the data factors, and further promote the survival of the fittest among subjects, the practice of model innovation, and the evolution of functional clusters. All these are systematically constrained by institutional rules. Finally, all these efforts are combined to build a benign and sustainable new economic ecosystem (Fig. 3). In short, the new track is the starting point, specifically indicating data-centered factors; the new ecology is the goal, specifically indicating economic laws and development patterns; new subjects, new carriers, and new scenes are all processes, which specifically indicate the presence of

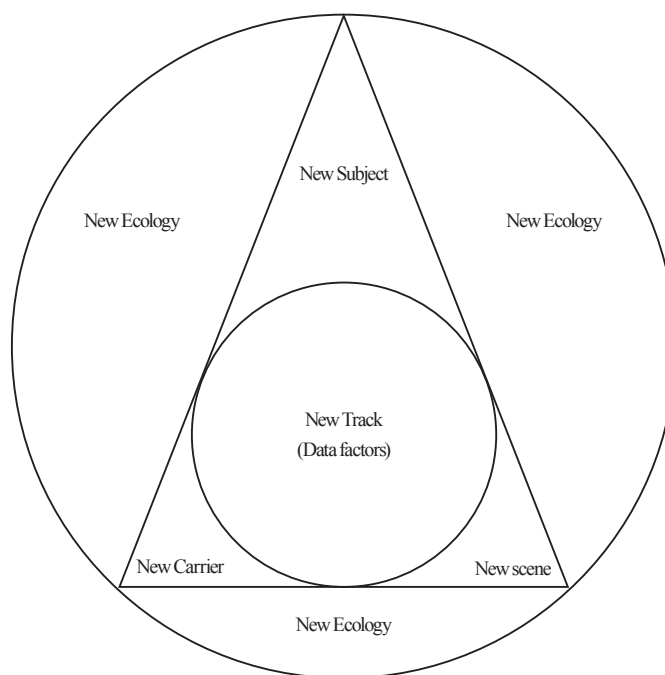


Figure 3: Development path of the new economy (Compound)

the various contents of market economic activities.

The rationality of the development path of the new economy in compound logic is embodied in three aspects. First, it is reasonable to use data factors as the starting point. Factors are the most basic conditions of social and economic activities. Subjects, carriers, scenes, or others all use and rely on factors. Therefore, the attribute characteristics of the factors are highly consistent with the concrete representations of the tracks. They all have basic, public, and open foundations. New tracks also mean the innovative choices that are made based on the factors of traditional tracks. In addition, data factors have become the consensus of economic and social development. Han Feng emphasizes in his book *Blockchain and the Wealth of Nations—Future Wealth Based on Global Credit Algorithm Consensus* that the consensus on wealth based on personal data and accounts is the future trend, and wealth is credit resources. Therefore, whether it is market competition or regional development competition, data monetization will be the essence in the future. In addition, in April 2020, the government issued *the Opinions of the CPC Central Committee and the State Council on Building a More Complete Factor Market Allocation System and Mechanism*, which officially listed data as one of the five major production factors. These theoretical foundations and policy orientations are highly consistent in supporting the rationality of data factors as a starting point. Second, it is reasonable to take ecology creation as the goal. Economic ecology is essentially a macro summary of a virtuous circular economy system, and it is the goal of all economic activities and economic research. Political ecology and economic ecology comprise all economic and social relations. This further proves that a new ecology is undoubtedly the direction and goal of the development of the new economy. Third, it is reasonable to take building new carriers, cultivating new subjects, and supplying new scenes as the process. As mentioned above, new subjects, new carriers, and new scenes are essentially the contents related to market perspectives or market activities. For example, the construction of new carriers represented by industrial functional zones, to a large extent, relies on the cluster development of traditional primary market subjects. Governmental support has promoted their professionalization, standardization, and systemization. The introduction and fostering of new subjects, mainly representative enterprises, is based on the rational study and selection of market development by investment operators. The supply of new scenes, which are innovated and iterated based on various niche needs, is also a result of the interactions of multiple parties involved in consumer relationships. Therefore, new subjects, new carriers, and new scenes are equivalently regarded as the process and results of the market movement. It should be noted that these are only a part of the process. Other contents may be added as required by future developments.

## Comments and Suggestions on Promoting Sustainable Development of the New Economy

Setting foot in the new era, implementing new concepts, and building a new pattern are important components of the plan for promoting high-quality economic development. However, a targeted and overall consideration is yet to be taken. Based on the above analysis and investigation, this article puts

forward some opinions and recommendations based on the five new paths to explore the valuable experience that can be implemented, promoted, and replicated.

### **Accelerating the Building of a Data-Centered New Ecology Development Path**

At present, many cities in China, represented by Hangzhou, have implemented the strategic blueprint of government-oriented big data factors and applications. Chengdu should give serious attention to this and show investors' insights to seize the trend of data factors as early as possible. First, Chengdu should develop a big data resource platform and explore various methods, such as independent development or cross-domain cooperation to build a public big data service carrier for future industrial development and industry iterations. Second, the reserve of talents for big data should be deployed to speed up the recruitment of leading talents in the big data field. It is more important to rely on universities and research institutes to implement big data talent cultivation projects to pool potential talents. Third, it is necessary to deploy the hardware foundation for data applications. Specifically, facilities and equipment should be set up and planned for big data application scenarios, such as artificial intelligence, unmanned driving, and digital finance to be well prepared for application competition.

### **Cultivating Vigorously a New Economy Underpinned by Consumption**

In the context of the new economy, the traditional market consumption logic of demand-driven supply can no longer apply to all situations. Innovative supply to stimulate potential demand has gradually become the unspoken rule of the market. Therefore, the horizon for the cultivation of new subjects must be broadened. It is appropriate not only to pay attention to the production side, but also to attach importance to the consumer side and intermediate links. This will drive a virtuous market cycle by cultivating the entire industry chain and creating a new economy-focused business environment. As a city with high consumption vitality, Chengdu should make more efforts to cultivate all the subjects of consumption. First, new subjects of consumption supply should be cultivated. Especially, joint efforts should be made to solve the pain points of the supply chain, e.g., to improve logistics, warehousing, venues, and facilities, to create a production-end environment with convenient supply sources. Second, new subjects for consumer demand should be cultivated. Policy tools should be leveraged as much as possible to generate consumption dividends for consumer groups, raise salaries, lower prices, and reduce the intermediate costs of consumption. The city should also respect diversified and innovative consumption patterns and guide consumers to use more funds for daily consumption. Third, new subjects of consumer assistance should be cultivated. That is, vigorous support should be provided for the development of various industry associations, alliances, and market think tanks to give full play to their decision-making support roles in enhancing market supplies and accelerating the supply-demand cycle.

### **Optimizing and Improving the Rule-Based New Economic Ecosystem**

Compared with the traditional economy, the new economy has more breakthroughs and is

more uncontrollable. Chengdu must always remain vigilant and seek early regulation and ecology development for the new economy. The first focus should be on property rights management. The city should recognize and value the importance of digital property rights, form and strengthen the awareness of digital property rights and centralized management. The city also needs to actively explore the use of blockchain technologies to accelerate the exploration of digital rights confirmation and to improve digital capabilities to firmly hold the lifeblood of financial capital. The second attention should be paid to institutional constraints. That is, the city should speed up the formulation of rules and regulations for privacy protection and authorized use of information to stifle information crime in the cradle. The third focus should be on mechanism innovations. The city should actively promote simultaneous digital transformations of the management systems. In this manner, Chengdu will continue to innovate in and use more digital tools to strengthen and enhance its ability to create a new ecology for the new economy.

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(Editor: Xu Huilan)

# *Research on the Collaborative Innovation Model in Regional Social Governance*

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**Abstract:** Reforms in social governance are promoted by changes in social environments. Social governance models cannot be constant, and the rise of every innovative governance model is inseparable from an ever-changing society. The theoretical connotation of the collaborative innovation model in regional social governance is mainly reflected in its agents, actions, and processes. The fundamental requirements of the collaborative innovation model in regional social governance are de-administration and market-based. The key elements of the collaborative regional social governance model include: delegating power from central authorities, transferring selected social governance affairs, enhancing the development of governance capabilities in social governance agents, diversifying these agents by giving full play to the agency to strengthen the concept of collaborative governance for social governance agents, strengthening the establishment of the governance system, and ensuring the normal progress of the governance processes. The collaborative innovation model in regional social governance should be built in three aspects: a system of institutional norms, an evaluation indicator system, and law-based collaborative governance.

**Keywords:** regional social governance, collaboration, innovation model

**DOI:** <http://dx.doi.org/10.19873/j.cnki.2096-0212.2022.01.004>

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## Theoretical Implication of the Collaborative Innovation Model in Regional Social Governance

With the development of the science and technology industry, human society, in general, has entered the era of frequent and rapid information exchanges through vast and electronic communication networks. The rapid dissemination of information, the accelerated development of democratic processes around the world, and the awakening of citizens' self-consciousness have brought rapid structural changes to the original social governance model. The new public management movement aims to reform the social governance model and to bring changes to the society. Although the new public management movement has not fundamentally changed the traditional content and model of social management, and the concept of "treating citizens as customers" seems outdated, it has proposed specific requirements for "streamlining administration and delegating power," which indicate the direction and goal of collaborative social governance (Yao & Ye, 2020).

"Collaborative" refers to a harmonious state between each component or molecular unit within a system, and shows how a balanced open system can go from a disorderly state to an orderly state or from an orderly state to a more orderly state with the help of its internal non-linearity when the change in the external environment has reached a certain peak. Based on different perspectives, we believe that collaborative governance refers to the process in which diverse social agents take actions to address their common public affairs, realize social governance goals, and unleash the advantage of collaborative governance through mutual assistance, cooperation, and integration. First, the governing agents are diverse; besides the government, they include social organizations and citizens. Second, governance is a continuous process. The world is constantly changing, and reforms in social governance are promoted by changes in social environments. Social governance models cannot be constant, and the rise of every innovative governance model is inseparable from an ever-changing society. The fundamental requirement of the worldview of dialectical materialism is that everything must be based on reality and practice. Agents of social governance must focus on the realities of the society, learn from the experience of history, analyze previous governance models based on specific current conditions, and propose innovative ideas about adaptations to social governance models. Third, governance boundaries are the scope and scale of governance that are formed based on the key capabilities of governing agents and their interactions with other governing agents in society. Fourth, behaviors of governance are proactive. Fundamentally, social governance is the collection of many positive actions. Collaborative governance emphasizes shifting the focus of social management from government to social units. Collaboration among multiple governing agents is conducive to unleashing flexibility, diversity, and agency to address social issues and respond to emergencies. Relevance (sociality) makes every governing agent in society realize that the result of social governance is closely related to everyone and every organization in the entire society. When the society shares the achievements in its governance, the governance behaviors of the agents can be positive and proactive,

instead of oppressive and passive. Finally, analyzing the governance functions and the diversity of agents in collaborative governance makes up for some of the downsides in traditional social governance models. For example, in the traditional governance model, the government “takes over” social issues. As social issues become more complicated and the division of labor becomes clearer, the government would find it difficult to make its governance covering all aspects of society and achieve corresponding good results. In a model where a diverse group of agents participate in social governance, their collective power can make up for some of the insufficiencies in governance solely by the government. Collaborative governance can satisfy public interest, and interests of individuals within social organizations to reach the goals of social governance.

### **Basic Requirements of the Collaborative Innovation Model in Regional Social Governance**

“Collaborative governance” originated from “Synergetics,” established by German physicist Hermann Haken. “Synergetics” states that when a system is in a chaotic state, to some extent, a synergistic effect exists among the large number of sub-systems that constitute the main system, and qualitative change will happen at the critical point and will transform the system from a chaotic state to a new stable state (Sun, 1989, p. 41). Essentially, collaborative governance is a model of governance in which multiple agencies participate. Based on the current social conditions in China, the diverse needs of society have made collaborative governance inevitable. In the traditional social governance process, public services were usually provided mainly by local governments. When government service is not able to satisfy the ever-increasing service demand of citizens, diverse power in social governance becomes especially crucial. Thus, innovative collaborative governance came into being. To truly meet the requirements of promoting the modernization of state governing capacities and governing systems put forth by the 19th National Congress of the Communist Party of China (CPC), it is necessary to create a balance between the state and the society in social governance to achieve coordinated development and collaborative governance of both the nation and the society.

To achieve regional collaborative development, de-administration for social organizations is indispensable. The overall status-quo of social governance in China is that although the government supports non-government forces to participate in the process of social governance to provide better public services, measures to streamline administration and delegate relevant power if necessary have not been effectively taken so that de-administration has not yet been fully achieved in social governance. For example, urban residents committees, each as a local self-governing organization in its community, should fully reflect the general will of community residents, but based on our investigations and analyses, sub-district nowadays tend to delegate administrative tasks to urban residents committees, thus gradually administrativizing them. This deviates from the purpose of de-administration. In addition, some local governments use a project-based system to purchase public services from society. To obtain funding from government projects, many social organizations have

changed their relationship with the government and become subordinates. When these organizations participate in social governance, they tend to express the will of the government and it is difficult for them to self-govern, self-serve, and self-innovate in social affairs. It is worth noting that many local governments have not yet fully understood the diversity of agents in social governance. Based on our investigations, the pursuit of short-term immediate effects is an important driving factor. Regional collaborative governance includes not only intra-regional coordination, but also intra-regional cooperation between the government and other governing agencies. To truly achieve collaborative social governance and motivate self-governing organizations and citizens to participate in social governance, de-administration for self-governing organizations is essential. First, citizens' participation in social governance needs to be increased. When the government is formulating and adjusting social governance policies, it should consult and fully consider people's opinion. Active participation of citizens will allow their will to be better expressed to policymakers and public policies to be more open, more reasonable, and more practical, reflecting the collective will of the broadest masses and safeguarding the immediate interest of the vast majority. Second, it is also necessary to cultivate the ability of social organizations to participate in social governance. Improving and cultivating the ability of social organization to participate in social governance is an important step. Various policies and funding should be used to support and guide social organizations in their participation in social governance and unleash their functions. In the collaborative governance model, the role of the government should be to formulate guidelines and policies for the development of social governance, and specific social affairs should be handed over to specialized, and socialized social organizations, which are agents in the self-governance of society. Their self-governance and self-monitoring also enrich the connotation of the rule of law in modern society.

## **The Collaborative Innovation Model in Regional Social Governance**

### **Delegation of Power and Transfer of Selected Social Governance Affairs**

“A wise leader should put his people in positions that can unleash their strengths instead of exposing their weaknesses. Then, everything can be achieved, and all meritorious services will be performed.”<sup>①</sup> Allowing social organizations to be in positions where their strengths can be best utilized will greatly reduce the possibility of making mistakes and improve the accuracy and scientificity of decision-making. A government is not omnipotent, nor is it the caretaker of citizens, so it cannot and should not take over all public affairs. With the development of society, the government has begun to abandon the rule of utilizing the power obtained from the traditional hierarchy to maintain its regulation of social order. Instead, the government has started sharing public power with social agents and delegating to social agents the tasks that it is not good at or on which it may not be

<sup>①</sup> See Guanzi: *Comments on the Situation*.

able to make accurate decisions so that it can focus on affairs where it must exercise public power. To establish a collaborative governance model, the legitimacy for social governing agents to exercise power needs to be recognized, so the state needs to make an institutional arrangement that empowers agents in society to participate in and take responsibility for social governance. The task of the government is not to compete with society for the ownership of public power, but to provide a good institutional environment for it. The government should unite different parties for social governance through its guidance, be a good leader in this process and establish a reasonable and open governance system.

### **Enhancing Governance Capacity of Social Governing Agents and Diversifying Them**

To use something, one must first strengthen it. Enhancing the capacity of social governing agents will help them share the responsibility of social governance with the government and promote society to develop on a good and healthy path. The rationalization of authority in Max Weber's description of traditional hierarchy is outdated. In modern society, establishing the authority of government depends on the people. Government is not the product of God or nature; it is the product of the people (Samuel, 2008). Government is produced by the people. Its legitimacy no longer comes from the "mandate of heaven" or "the divine." Instead, it comes from the approval and voluntary obedience of the people. People nowadays are different from those in the past, as they have their own different demands, and the model of collaboration satisfies the need of the public to participate in social governance. In addition, the participation in social governance by a wide range of social agents is not only a means in the social governance model, but also more importantly a manifestation of democracy. The participation of diverse social agents can effectively restrain the emergence of corruption in the government, and it can significantly improve the degree of democratization and political transparency. Overall, a service-oriented government and local social forces reinforce each other, as social forces require the government to provide a good governance environment. The government thus transforms from being regulation-oriented to being service-oriented. On the other hand, a service-oriented government can promote rapid development of social forces and use its establishment and innovation to ensure healthy development of each agent in social governance.

### **Giving Full Play to the Agency and Enhancing the Understanding of Social Governing Agents for Collaborative Governance**

The governance conception of governing agents needs to be cultivated in two ways. First, collaborative governance needs to be recognized by those in power. Based on the social features in China, social governance with Chinese characteristics is a process under the CPC leadership and guided by the government and diverse social governing agents actively participate in the governance of social and public affairs and jointly promote the harmonious and orderly development of society. Different from Western countries which mostly feature a multi-party system, the CPC leadership is the defining feature of Chinese socialism. As the holder of public power, the government is not

only the administrative agency that formulates and implements policies, but more importantly, the connection between the Party and the people. For thousands of years, ancient rulers governed individuals by issuing orders, but in our ever increasingly complex society, the relationships between behavioral agents have become increasingly dependent, and social governance is usually more complicated than social management. Decisionmakers should fully realize that the aim of promoting the establishment of a collaborative governance framework is not to undermine the positions of those in power within social governance, but to expand the range of governing agents and make them join hands with the government to govern the society together, giving full play to the huge strength of the socialist system. Therefore, those in power should recognize the legitimacy of other governing agents and seek common grounds while reserving differences during governance decision-making processes, respecting the opinions of every social governing agent, and considering their input in the development of various social governance policies formulated by the government. We should adhere to the goals of establishing a community of social governance and seeking common development, and continuously move forward towards collaborative governance. Second, collaborative governance requires the recognition not only of those in power, but also of other social governing agents. Social organizations, citizens, and enterprises should improve their understanding of collaborative governance, be aware of their roles as social agents, and reach a consensus on the goals, interests, and needs of social governance. Agents of social governance need to safeguard national interests and at the same time follow and observe the rules. In addition, as each governing agent may act on its own interest, it is necessary to restrain such an inclination. Governing agents negotiate and may surrender part of their self-interest to maximize joint interests.

### **Strengthening the Establishment of the Governance System and Ensuring the Normal Progress of the Governance Process**

The role of the system is that it can clarify the rules under which social governance operates, and the rights and responsibilities of each governing agent. By clarifying the rights and obligations of individuals, the system can regulate individual behavior. It is the result of applying conventions to social governance and the fundamental guarantee of social governance. As we move forward in time, different social demands will arise, and meeting these demands always challenges the regulating ability of the existing system. With the awakening of citizenship and continuous advancement of urbanization, if individual or collective demands of people or social organizations cannot be satisfied in time, people may join the political life through unionizing individuals or collectives. This type of political participation manifests itself as the advancement of democratization in countries that have developed an appropriate governance model and an advanced system. Conversely, in societies that lack reasonable rules and have backward systems, riots will usually break out. This also shows that if the existing system cannot meet the needs of individuals for their participation in politics and of its own for expansion, then social governance cannot be effectively improved in social governance. Within the framework of the collaborative governance system, all agents of social governance must strictly

follow the pre-determined rules of collaboration. Every citizen and social organization must adjust their requirements and demands according to the regulations of the system and pursue them in a reasonable way through legal channels.

Institutionalizing the collaborative governance model can not only effectively improve the transparency in the governance process, reduce the rate and possibility of making mistakes, but also clarify the goals and processes of governance and reduce the time costs of collaborative consultations. At the same time, it can make clear the responsibilities of agents so that they will not be able to push their luck or pass the buck. In addition, during the institutionalization process, the specific conditions in China need to be considered and, on this basis, useful experience of other countries can be drawn on to establish a social governance system that suits the conditions of China. During the establishment of the implementation pathways of the innovative collaboration model of social governance, the difference in politics, economy, and culture between different countries should be fully considered. Merely talking about the good practice of other countries is nothing more than rhetoric, since the same advanced system may not work well in every country. The design of social governance systems is not changeless, and adjustments based on national conditions and local features are needed. The importance of localization to the establishment of a system is self-evident. Ignoring the role of localization will not only fail to achieve the initial goals but also cause incalculable damage. As a developing country, under the leadership of the Communist Party of China, China has always adhered to the path of socialism with Chinese characteristics based on its national conditions to develop a socialist system suitable for China.

## **Establishing the Collaborative Innovation Model in Regional Social Governance**

### **The System of Institutional Norms for Collaborative Governance**

The modernization of social governance is the overall requirement for the governance system and capacity. To modernize the social governance system and capacity is to “institutionalize, scientify, standardize, program, and refine the social governance system, and ensure that the governing agents adopt a way of thinking and methods under the rule of law and the legal systems to govern the society, thereby transforming advantages of socialism with Chinese characteristics in all aspects into increased effectiveness of social governance” (Xu, 2014; Wang & Xue, 2015).

#### **Laws and regulations in social governance.**

In a society based on the rule of law, its legal system is deemed as the ideal guarantee “common good” and guidance to all members of the society for their duties. One of the more important roles of the rule of law is that if a set of basic rules and regulations is pre-established and its application is both consistent and predictable. People may expect less controversies and disputes (Li, 2019, pp. 133—154). The rule of law is an important means of modernizing regional social governance, and efforts should be made to enhance the awareness and capability of the rule of law for residents in urban

and rural communities. The Third Plenary Session of the 18th CPC Central Committee proposed, “Adhering to governing by the rule of law, strengthening protections under the rule of law, and using the way of thinking and methods of the rule of law to resolve social conflicts.” The rule of law is the fundamental guarantee of order in modern society, and it can improve the effectiveness and legitimacy of social governance. The level of the rule of law in social governance is the key variable that determines its level of modernization (Tang, 2014). Without the rule of law, it will be difficult to carry out social governance and achieve corresponding goals (Chen, Chen & Chen, 2020). In order to promote regional economic development in China, collaborative institutional norms should include: (i) the system of rules and regulations. One important aspect in the establishment of a social institutional system for modern governance is to formulate corresponding local social governance regulations based on city characteristics. Currently, only a few cities in China have formulated corresponding local regulations on social governance, and most of them are in the form of rules, policies, and other normative documents, characterized by lack of stability and standardized local social governance legislation. Therefore, local regulations and government rules that clarify rights and responsibilities and are easy to implement should be formulated to provide a legal basis for overcoming challenges in social governance. (ii) the implementation system for the rule of law. “Laws cannot implement themselves.”<sup>①</sup> The gap between the generality of law and its specific application needs to be bridged by judicial decision-making. The effective implementation of various systems is the key to realizing the rule of law, and it will be difficult to achieve without an effective implementation system. Therefore, some scholars believe that the legal decision-making mechanism should be improved and implemented, and openness of processes, standardization of discretion, and normalization of behaviors should be promoted. The mechanism of the rule of law for resolving social conflicts and public crises should be strengthened and improved to make the rule of law a long-term and institutionalized means for this purpose (Yin, 2014; Wang & Xue, 2015; Chen, 2018). (iii) the supervision system for the rule of law. Without supervision, the rule of law cannot be really achieved, so the supervision system plays an important part in developing the rule of law. In the process of establishing a supervision system for the rule of law, the key points and difficulties in supervision should be identified, and the system should be established by stages and categories. In this regard, some scholars believe that supervision should be strengthened against issues including abuse of power, taking bribes, bending the law, playing favorites, and committing irregularities to establish and improve a three-dimensional and all-day supervision network for the rule of law (Yu, 2020; Chen, 2018). (iv) the protection system for the rule of law. The process of modernizing social governance is the process of comprehensively promoting the rule of law, so a unified public network of legal service should be established. Modern information technology should be utilized, to promote the intellectualization of collaborative social governance.

① See Mencius: *Li Lou (Part A)*.

### **Policies and regulations for social governance.**

Policies and regulations for social governance are important as they provide important guidance for directions, protections and actions for social governance. In this regard, the Shenzhen Special Economic Zone and the city of Nanjing have successively formulated corresponding systematic regulations on social governance. In 2018 and 2019, Sichuan and Chongqing signed the “1+12” Cooperative Agreement and the “2+16” Special Plan respectively to promote their joint participation in national strategies, including the Yangtze River Economic Belt and the New Land and Marine Routes for Western Regions. In 2019, they jointly promoted nine key tasks, such as the construction of open channels and platforms, joint prevention and controls for ecological environment, interconnections of infrastructure, and industrial cooperation, and co-prosperity. They also made progress in promoting market integration, collaboration, and sharing of public services, such as establishing the “Sichuan-Chongqing Patent Administration and Law Enforcement Collaboration” platform, a collaboration and interconnection mechanism for food production, and a mutual assistance mechanism for supervising special food production and operations. In addition, they collaboratively maintain the order of fair competition in the market.

### **Self-governing norm of social governance.**

The self-governing agents are the creators and observers of self-governing norms. Accelerating the establishment of a democratic, open, and inclusive system of self-governing norms, building a community of social governance in which people can all assume and fulfill their own responsibilities and improving the level of socialization for social governance are important parts of modernizing community-level social governance. In terms of the establishment of self-governance in regional social governance, the premise of establishing a social self-governing normative system is a comprehensive implementation of the rule of law and at the same time it is necessary to improve the mechanisms of community-level self-governance (including institutional mechanisms, operational, and protection mechanisms), the mechanisms of self-governance in enterprises and institutions (including the role of unions, protecting the rights and interests of staff, and resolving internal disputes), and the establishment of a self-governing normative system in cyber virtual space (the subject, content and object of the regulating activity) (Yu, 2020).

## **Building the Evaluation Indicator System of Collaborative Governance**

### **Enhancing the public safety evaluation indicator system.**

Maintaining public safety, social stability, and the long-term stability and peace of a socialist country with a people’s democratic dictatorship is the common goal of the state and the people. Public safety was an important part of science and technology development during the 2006–2010 period. Its content is comprehensive, not only including the safety of water resources, ecological environment, and energy, resources but also covering the safety of national information systems, medical insurance, and the military. The public safety system in China mainly includes the national security system for the prevention and control of emergencies, the national public safety deployment and planning system, and the national disaster risk prediction and assessment system. As China has been attaching great importance

to establishing better public safety, governments at all levels have been increasing their investments in public safety. The work on public safety has achieved great progress, but some issues still exist in practice. Therefore, the public safety evaluation indicator system must be enhanced in order to utilize effective information in the evaluation of indicator projects to provide feedback that will allow timely discovery of public safety issues and offer data that is necessary to make effective corrections and improvements.

Table 1: Enhancing the Public Safety Evaluation Indicator System

Enhancing the Public Safety Evaluation Indicator System			
Indicator System for Environment and Resources	Ecological Environment	Water Resources	Other Energy
Indicator System for National Disaster Prevention and Relief	National Disaster Risk Prediction and Assessment	National Disaster Prevention System	National Disaster Relief System
Indicator System for National Development of Public Safety	Public Safety Development and Planning	Assessment of the Deployment and Planning for Public Safety Development	
Indicator System for Public Safety Emergency	National Safety Protection for Emergency Prevention and Control		
Other	National Information System	Medical Insurance, Food and Drug Safety	Military Security and Law and Order

### Constructing the evaluation indicator system for the governance of virtual communities.

Gene A. Youngblood proposed the word “virtual community” in 1983. In 1993, Howard Rheingold defined virtual community as social aggregations that emerge from the Net when enough people carry on those public discussions long enough, with sufficient human feelings, to form webs of personal relationships in cyberspace (Lee, 2021). We believe that based on this definition, a virtual community is a collection of social relations formed among people who are active on the Internet (digital communication network) to conduct a series of activities. Compared to the real society, the virtual community is asymmetric, anonymous, and formed online, which makes it relatively difficult to govern and poses some challenges to social governance. However, a virtual community is essentially an extension of the real world, so the establishment of the governance system for virtual communities can also be an extension of the real social governance system. Therefore, an evaluation indicator system for the governance of virtual communities also needs to be established based on the difficulties in virtual community governance.

The first issue in virtual community governance is cyber-violence, which stems from issues related to information asymmetry between the Internet and real society. One important criterion for the level of virtual community governance is the incidence and resolution of cyber-violence cases. There is great practical significance for using cyber-violence as an evaluation indicator for virtual community governance.

Big data has been widely collected and is being used to discover multiple patterns of personal behaviors, so the protection of online privacy and intellectual property should also be included in the evaluation system of virtual community governance. The right of information is described as the right to “control the flow of information about the right-holder” (Posner, 1977, p. 393). Privacy is a fundamental right, essential to autonomy and the protection of human dignity. It serves as

the foundation upon which many other human rights are built. The right to privacy in the virtual community is an extension of the right to privacy in real society. Based on the classification of rights in the civil law, the right to privacy on the Internet is a typical personal right. The right to privacy on the Internet refers to all kinds of private information and activity spaces enjoyed by citizens which must not be violated by others according to the law, which prohibits anyone from revealing the private information of other citizens or defaming them on the Internet (Li, 2010). Therefore, it is absolutely necessary to protect the privacy and intellectual property of Internet users and to include the protection of online privacy and intellectual property into the evaluation indicators of virtual community governance.

These three main indicators are critical for building an effective evaluation indicator system for virtual community governance, protecting the rights of the virtual community (to comply with socialist values), and monitoring indicators of cyber-violence and the protection of online information and personal privacy. These indicators can also reflect issues in virtual community governance that need to be addressed, and the implementation of these indicators is mainly supervised through regional collaborative governance.

Table 2: Construction of an Evaluation Indicator System for Virtual Community Governance

Construction of an Evaluation Indicator System for Virtual Community Governance			
Value of Virtual Community	Fairness	Justice	Abiding by Law
Cyber-Violence Monitoring Indicators	Monitoring Agents	Monitoring Responsibility	Monitoring Procedure
Indicator for Protecting Online Information and Personal Privacy	The Scope of Personal Information Protection	Penalties for Improper Use of Personal Information	Remedies for Personal Information Violation

### **Innovations in the social mentality evaluation indicator system.**

Social mentality refers to people's cognition of social phenomena based on their own values. Issues related to social mentality are worthy of great concern, but how to measure and evaluate changes in social mentality is a complex subject. Most current studies have analyzed and explained the concept of social mentality and its function and formation mechanisms (Ma, 2008). We believe that it is, and will continue to be, very difficult to quantify social mentality as an issue of social ideology. In the design of the specific indicator system, the reality of collaborative social governance in each region should be seriously considered, and the system should be built layer by layer, gradually increasing in depth by following the formation process of social mentality. The social mentality evaluation indicator system mainly includes three aspects, the core ideology of socialism, social norms, and citizens' self-consciousness, which is also the formation process of social consciousness. First, the self-consciousness of citizens forms self-cognition. Then, the core values and the culture of a nation are formed. Finally, the national consciousness and culture are defined and translated into normative documents, such as laws and regulations, thereby having a binding effect on the society. This is also a relatively complete evaluation system. Therefore, the social

mentality evaluation indicator system mainly includes three layers, the core ideology of socialism, social norms, and citizens' self-consciousness.

Table 3: Innovations in the Social Mentality Evaluation Indicator System

Innovations in the Social Mentality Evaluation Indicator System						
Indicator for the Core Ideology of Socialism	Conception of Freedom		Conception of Equality		Conception of Justice	Conception of Rule of Law
Indicator for Social Norms	Legal Norms		Ethical Norms		Business Norms	Norms of Life
Indicator for Citizens' Self-Consciousness	Sense of Security	Sense of Belonging	Sense of Justice	Sense of Achievement	Sense of Happiness	Other

### Reconstructing the evaluation indicator system for cultural governance.

The culture of a nation is the main embodiment of its spiritual cohesion and value orientations, and the cultural soft power is also an important part of the comprehensive national power of the country. The quality of culture is the touchstone for the quality of society, and the establishment of a cultural governance evaluation indicator system is an important part of building a regional collaborative governance system. Based on the actual situation of regional social governance in China, the cultural governance evaluation system can be constructed from three aspects, the core value system of society, the cultural quality of citizens, and the development of the cultural industry. The core values of society create the core structure of it. This is repeatedly emphasized in this study. Social values are at the absolute core and are the most important part of constructing social ideologies, because they reflect the spiritual core of a nation and a society. The framework of our governance institutions and the social governance systems are based on the core values of society. The core value system of society constitutes the spiritual connotations of the Chinese people. The cultural quality of citizens determines the overall cultural quality of society, so if we are to examine the national cultural quality, the individual cultural quality of every citizen needs to be examined. A great social culture can significantly promote and influence the cultivation of citizens' cultural quality. The cultural industry is an important carrier for the culture to manifest itself as material power. It is part of the core competitiveness in every country's development in modern society, and an important indicator of the cultural soft power. Therefore, the development of the cultural industry should also be included in the evaluation indicators of cultural governance.

Table 4: Reconstruction of the Evaluation Indicator System for Cultural Governance

Reconstructing the Evaluation Indicator System for Cultural Governance				
Indicator for Core Values of Society	Conception of Patriotism	Conception of Dedication	Conception of Integrity	Conception of Friendship
Indicator for the Cultural Quality of Citizens	Education Level of Citizens	Citizens' Recognition of Social Culture	Main Means of Citizens' Cultural Life	Citizens' Evaluation of Social Culture
Indicator for the Cultural Industry's Development	Cultural Talents	Cultural Infrastructure	Cultural Protection	Cultural Innovation

### Improving the evaluation indicator system of social stability.

Social stability is the premise and foundation of regional development. Only when a society is

stable can it contribute to regional economic and cultural development. Social stability is also the basis for maintaining national political, economic, and cultural security. With the analysis of the development experience of various countries in the world, it is not difficult to notice that the more developed regions are often regions where societies are particularly stable. Conversely, places that have experienced constant warfare are often relatively less-developed in terms of social and economic growth. Therefore, the role of stability in ensuring the harmony and development of society is self-evident. The social stability evaluation indicator system should be improved to better monitor and quantify social and economic stability, political stability, leading social idea stability, and the stability of social life. After studying the social stability indicator system, we found that a few features need to be added to the system. First, it needs to be ensured that the social, economic, cultural, and political systems should be constructed following the rule of law, which means that the legal system should be mostly complete and effective. Second, it needs to be ensured that the social, economic, cultural, and political systems should be operating in a controllable manner and should not grow out of control. Finally, it needs to be ensured that the social, economic, cultural, and political institutions should be pragmatic and reasonable.

Table 5: Improving the Evaluation Indicator System of Social Stability

Improving the Evaluation Indicator System of Social Stability			
Indicators for Economic Stability in Society	Price Stability	Stability of Economic Growth	Stability in People's Living Standard
Indicators for Political Stability in Society	Unity of Ideology	Similarity in Value Orientation	Identical Political Beliefs
Indicators for Stability of Social Ideas	People's Ideas	People's Values	People's Views
Indicators for Stability in the Order of Social Life	Work Order	Travel Life Order	Other Life Order

### Reshaping the decision-making risk evaluation indicator system.

As the social and economic reforms continue to deepen in China, various social issues have also emerged and may cause certain instability and risks in Chinese society. Therefore, in the process of promoting social and economic reforms, the decision-making risk assessment system needs to be constantly improved to cope with the ever-changing social environment and various social issues that may arise. It is necessary to continue to reshape the decision-making risk evaluation system. The evaluation of decision-making risks is mainly divided into two aspects: external risk and internal risk (Hao, 2015).

Table 6: Reshaping the Decision-Making Risk Evaluation Indicator System

Reshaping the Decision-Making Risk Evaluation Indicator System			
Indicators for External Risk	Politics (Good Law and Governance)	Economy (Balanced Development)	Social Satisfaction
Indicators for Internal Risk	Legitimacy of Decision-Making	Rationality of Decision-Making	Effect of the Decisions (Evaluation)

## The Rule of Law in Collaborative Governance

### The rule of law in the collaborative innovation system in regional social governance.

To better explain and discuss the rule of law in the collaborative innovation system in regional social governance, we need to divide the system into multiple dimensions based on the logic structure. The first dimension should contain the concept of collaborative social governance. However, it is worth noting that so far, academia has not yet agreed on a clear and unified definition of social collaborative governance. Typically, when discussing this issue, some scholars tend to refer to collaborative social governance as “direct social governance cooperation or collaboration between different urban agglomerations” (Liu & Niu, 2018). In addition, since the emergence of collaborative social governance was accompanied by a series of concepts, including regional economic integration and regional social governance, this concept has been referred to as “intra-regional collaborative governance” in other studies. The second dimension of the collaborative innovation system in regional social governance should contain the concept of social innovations. At the national level, the concept of a social innovation system can be traced back to the National Science and Technology Conference in 2006, where Hu Jintao emphasized “building regional innovation systems with their own characteristics and advantages.” The regional innovation systems he was referring to were actually social innovation systems, top-down extensions of the overall national innovation system at the regional social level.

In terms of the rule of law in the collaborative innovation system in social governance, we believe that the following issues should be addressed. First, in researching the rule of law in the collaborative social governance systems, scholars are currently focusing on the main methods and pathways for realization. In terms of methods, the rule of law is the foundation of modern national governance, and the inherent requirement of national governance is to implement the rule of law (Zhang, 2014). Therefore, building a framework for the rule of law in social governance, creating a good atmosphere for the rule of law, constantly improving the procedures for the rule of law, and raising the standards for the rule of law in social governance are indispensable for achieving the rule of law in the collaborative innovation system in regional social governance, and an important optimization factor. Efforts need to be made simultaneously on four different levels: legislation, law enforcement, justice, and law-abiding requirements to push forward level by level social governance by using the law as a tool and adhering to the rule of law in establishing the collaborative social governance systems. Second, in terms of the pathways to achieving the rule of law in the collaborative systems, the main view is that good law and good governance must go hand in hand. Like the old saying goes, “Laws cannot implement themselves.” However, in terms of specific recommendations for laws, some scholars believe that the study should not be limited to the scope of current statutes, but should also cover common law and other laws in life (Luo & Zhou, 2016), such as establishing and improving reward systems, blacklist systems, information disclosure systems, publicity systems, and

compliance assistance, and promoting public interest litigation (Jiang, 2019). In terms of application, scholars believe that governance agents can use administrative measures to achieve a negotiation-based and agreement-based regulatory model (Ji, 2017). For some social issues, means other than laws can be used in their resolution, but the use of these means must be constrained within the framework of the constitution and law (Zhao, 2019). In addition to the studies above, there are many refined areas in academic research on the rule of law in collaborative social governance, such as revitalizing and protecting the rights of private enterprises and the private economy (Yue, Li & Xiong, 2013), the linkage of community work (Jiang, 2019), and intra-regional innovation capacity building in knowledge, technology, and services as well as protecting intellectual property by law (Mu, 2012). In general, there are many research results on the rule of law in social governance, and scholars in China have mostly affirmed the importance and scientificity of the rule of law in promoting the innovation and modernization of social governance.

#### **The rule of law in collaborative innovation capacity in regional social governance.**

The connotation of the rule of law in Collaborative Innovation capacity in social governance.

To better understand the rule of law in collaborative innovation capacity in regional social governance, it is necessary to deconstruct this concept and propose a simple definition. By analyzing and summarizing relevant prior studies, we found that there is a great deal of controversy about the definition of collaborative innovation capacity, but fundamentally, it is generally held that collaborative innovation capacity in regional social governance, especially in intra-regional urban agglomerations, refers to the close relationship between cities in space, economy, transportation, and communications, and this is the basis for forming social space networks with regional characteristics. The governance capability of a system is reflected in the aspects of enterprises, scientific research institutions, and universities in the network, the relationship network among them, and the flow of resources, such as talents, information, and funding (Chen, 2021). Some scholars believe that this concept includes at least the following core characteristics: innovation efficiency, availability of innovation factors and resources, sharing of innovation achievements, and sustainability of innovation capabilities (Xie, 2015). In terms of the rule of law and the collaborative innovation capacity in regional social governance, we believe that the rule of law in this context refers to a way of thinking and a way of governance, and the implementation of this concept throughout the whole process of the building collaborative innovation capacity in regional social governance.

#### **The reasons to promote the rule of law in collaborative innovation capacity in regional social governance.**

The main reasons are as follows. The first reason lies in the need of intra-regional economic integration since the reform and opening up. From the development of the social governance concept in China, we know that the rapid social and economic development since the reform and opening up has accomplished great benefits, but has also given rise to many social governance issues, such as market blockade, market protection, insufficient market competition, and imperfect market factors, which have affected collaborative development of regional economy (Li, 2009). Based

on the collaborative social and economic development needed to further advance the reform and opening up, the resolution of various intra-regional issues will also need to be achieved through intra-regional collaboration. The law as a means, and the rule of law as a goal of social governance, are indispensable parts of the process of the rule of law in collaborative innovation in social governance. The second reason is the social governance demand for collaboration, participation, and common interests (Liu, 2013). The mobility of economic resources and factors of production, like talents, will inevitably lead to complex and diverse social governance issues. Therefore, orderly intra-regional collaboration on social governance issues can effectively avoid wasting administrative resources at the intra-regional level, thus helping to ensure that intra-regional local governments can resolve public service and welfare issues in a unified way (Liu, 2013). In solving major livelihood issues in social governance, adherence to the rule of law can also allow the government to truly identify its role—to be service-oriented. The third reason is the need for fair development in intra-regional societies. Under the premise of administrative division, the social governance agents (especially administrative agencies) of intra-regional public service affairs may tend to pass the buck or conduct repeated law enforcement activities (Xu & Li, 2016), while the lack of public services at the margins may lead to unfair allocations of social resources. Therefore, social governance with intra-regional collaboration can maximize fair distribution of administrative and social resources (Ma, 2013). The rule of law, as the common belief of social governance agents, and the law, as the common authority, serve as the yardstick, which will help reach a consensus on social governance within the framework of the law.

### **Specific content of the rule of law in collaborative innovation capacity.**

After analyzing the emerging and existing problems of collaborative innovation capacity in social governance, we realized that the best way to improve collaborative innovation capacity in social governance systems and to solve these issues is to implement the concept of the rule of law and make good use of the means for the rule of law. Therefore, research on the rule of law in collaborative innovation capacity in social governance systems has become the top priority. We believe that the rule of law in collaborative innovation capacity in social governance systems should mainly include the following aspects. First, intra-regional social governance agents should firmly establish the rule of law thinking. Social governance agents must have the capacity for collaborative innovations in social governance, and the most important agents in a region are the administrative agents which exercise public power. Therefore, intra-regional local governments at all levels should firmly establish the rule of law thinking and the awareness that “the task is to promote the rule of law and to promote the rule of law is the task,” and they should always act and govern according to the law. The law can be an important linkage for intra-regional local governments, and the belief in the rule of law can unite the power of them. Under this premise, collaborative innovation capacity of in social governance systems will surely improve in a steady and consistent manner. Second, in addition to the agents of public power, the establishment of non-governmental and social organizations must be enhanced to cultivate effective social agents for collaborative governance. The rule of law thinking is not a simple response to acting in accordance with the law; it also includes cultivating the rule of law thinking in

social agents. The best way to achieve this is to let all types of social agents participate in the process of collaborative governance. To enable social organizations to abide by the law, their rule of law thinking needs to be established. This is not only sharing responsibility with the government, but also improving the capability of collaborative governance. The ability of social governance agents to take positive collaborative actions, depends on the knowledge that the rule of law will inevitably play a strong and positive role in promoting the rule of law in collaborative innovation capacity in social governance systems. The third is to normalize the education of community residents on the concept of the rule of law. The rule of law allows people to organize their lives in a safe and predictable way. As community residents are important objects of social governance, it is extremely important to cultivate the rule of law thinking of them, to help them understand the importance, fairness, and rationality of the rule of law. They need to understand that only through the rule of law can their interests be truly protected. Fourth, in terms of the development of judicial agencies, intra-regional judicial agencies should actively explore collaborative models, strive to break down various barriers between regions, enhance cooperation and exchange, and allow judicial agencies to firmly establish their images as defenders of the rule of law, which will play an important role in enhancing regional collaborative governance capabilities.

The rule of law is a way to resolve social conflicts in a rational and peaceful manner, and it is the best social governance model currently developed by any human society. The best practices and methods of implementing the rule of law in social governance innovation and coordination capabilities should focus on the cultivation of the rule of law thinking of the cooperating subjects in the region, and this thinking should be cultivated and supported throughout the process of social governance.

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(Editor: Gerald)

# *The Legal Logic in the Practice of Poverty Reduction in Rural China in the One Hundred Years Since the Founding of the Communist Party of China*

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**Abstract:** Three major poverty reduction models have successively been adopted in the poverty control led by the Communist Party of China (CPC), namely relief-based poverty alleviation, which focused on adjusting the production factors of land, development-driven poverty alleviation, and targeted poverty alleviation. In the process, the target of finding a rational position for the principal function of poverty alleviation has been gradually realized: the approach of poverty alleviation has gradually adjusted from micro to macro, from direct to indirect; while the management has transformed from mobilization-based to rule-of-law based. Rules that link policies and laws, as well as a rule-of-law model of the poverty reduction of a developing country that is led by party committees and governments, has been formed, and an illustrative sample of poverty control has been created, which provides experience based knowledge to the anti-poverty practices in developing countries. In the future, it is necessary to further realize the protection of the rights of the people in comparative poverty and the proceduralization of poverty reduction administrative behaviors, as well as to formulate a unified "Poverty Reduction Law" when the time is ripe, to protect the rights of the people in comparative poverty in the post-poverty-alleviation era.

**Keywords:** poverty control, leadership of the Communist Party of China, rule of law

**DOI:** <http://dx.doi.org/10.19873/j.cnki.2096-0212.2022.01.005>

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On July 1, 2021, at the celebration of the 100th anniversary of the founding of the CPC, General Secretary Xi Jinping declared that China has built a moderately prosperous society in all respects and brought about a historic resolution to the problem of extreme poverty in China” (Xi, 2021). This means that China has reached the first sustainable development goal in the United Nations’ “2030 Agenda for Sustainable Development” ten years ahead of schedule. In the one hundred years of poverty reduction history under the leadership of the CPC, a series of institutional systems and methods have been formed around the allocation of land resources, resource development, and targeted poverty alleviation in rural China (Li, 2020), important related issues concerning the targets, the subjects, methods, and supervision have been solved while the establishment of a scientific, institutional, and rule-of-law system of poverty reduction has been promoted. In the past century since the founding of the CPC, the poverty reduction system in rural China is an important achievement of the localization of Marxism in China. It has secured the people’s right to life, development, and equality. The process can be divided into three stages, namely “focusing on the production factor of land,” “focusing on development and empowerment,” and “focusing on precise identification, assistance, and management.” A poverty governance mode that is based on the leadership of the CPC, led by the government, and takes targeted poverty alleviation as the major method has been formed while an illustrative sample of poverty reduction has been completed in China through practice. This study focuses on the results achieved through the development of the rule of law concerning the construction of consistent institutional norms in the rural poverty reduction led by the CPC since its founding, especially after the 18th National Congress of the CPC, and how the poverty reduction in China can continue to advance through the rule of law in order to consolidate existing achievements.

### **The Theoretical Basis and Ideological References for the Practice of the Rule of Law in Rural Poverty Reduction Led by the Communist Party of China**

The ideals of the CPC in leading the practice of the rule of law in rural poverty reduction have always taken the poverty reduction thoughts in the Marxist political economy as the theoretical foundation for poverty reduction efforts. The Marxist thoughts concerning the poverty reduction of the western world have been refined to select the useful and neglect the useless, and have been integrated with the poverty reduction ideals in the traditional cultural concepts of ancient China so that poverty reduction ideals with Chinese characteristics could be created and the development of the poverty reduction theories of Marxism could be realized.

#### **Poverty Reduction Ideas in Marxist Political-Economic Theory**

Karl Marx proposed an anti-poverty path based on his criticism of the poverty problems in capitalist societies. Marx analyzed the “general law of capitalist accumulation” in *Das Kapital*, in which he focused on the theory of surplus value, to reveal the secrets of capitalist exploitation

and the essence of the pauperization of the proletariat. He held that “such kind of advances in the production means of capitalism, like all its other historical advances, were achieved at the cost of the complete pauperization of the direct producers.” Citing extensive information, Marx explained a basic tendency of capitalist production, which is to develop surplus labor without limit. He pointed out that the root and essence of working-class poverty is the loss of the means of production while capitalist private ownership is the institutional root cause of working-class poverty. He also explained the law of history that capitalism would inevitably be replaced by socialism and communism. The Marxist political economic theory holds that institutional change is the primary way to eliminate the problem of poverty. With highly developed productivity and the full flow of material wealth, poverty will inevitably be eliminated. With highly developed productivity and a full surge of material wealth, poverty will definitely be eliminated. This idea provides methodological guidance and guides to action for the proletariat to fight poverty. However, the difference in social production means and productivity development levels determine that the anti-poverty concepts in different historical periods have characteristics from the times they are in. This also determines that the poverty problems in a socialist society are essentially different from those during the capitalist era in which Marx lived. In the practice of poverty control, the CPC has recognized that the root cause of widespread poverty in a socialist society lies in the underdevelopment of productivity in the primary stage of socialism, which is fundamentally different from poverty under the capitalist system. The CPC’s cognition and innovation on poverty control have further enriched the theoretical system of Marxist political economics. Under the guidance of the Marxist anti-poverty theory, the CPC has steadily alleviated and eliminated poverty since its founding one hundred years ago, explored a new path to poverty alleviation with Chinese characteristics, and accumulated its own experience in establishing a rule-of-law system for poverty eradication.

### **Poverty Reduction Ideas in the Traditional Concepts of Ancient China**

The thoughts of social security in Chinese history can be traced back to *Shangshu* (The Book of Documents), which cites Gao Yao’s and Yu the Great’s discussions including, “It is wise to be able to observe the talent of a person” and “It is necessary to benefit the people in order to give them a peaceful life.” In later days, these ideas have gradually developed into social security ideologies with far-reaching effects. First is the idea of storing grain to prepare for shortages. To prevent famine, ancient China established a grain storage system, which relied on state power to ensure the basic survival of the members of society. The chapter of *Wangzhi* (Royal Regulations) in *Liji* (The Book of Rites) stipulated that “without storage for the use of nine years, it is called insufficient; without storage for the use of six years, it is an emergency; without storage for the use of three years, the country is not qualified as a country” (Dai, 2019, pp. 145–177). The chapter of *Offices of Earth* in *Zhouli* (Rites of Zhou) explained twelve requirements of “shortage management,” including “distributing relief supplies,” “lowering taxes,” “reducing the mobilization

of labor,” and “suppressing the robbers and thieves,” in order to store grain and prepare for shortages (Wan, 1998, pp. 51–104). In the Han dynasty, the ever-normal granary and charity granary systems were established. During the Tang and Song dynasties, the social relief system of China was finalized. There were more types of granaries used for relief while the relief measures had gradually become routine. Second is the idea of caring for elderly persons and children. The chapter of *Liyun (The Conveyance of Rites)* in *Liji (The Book of Rites)* depicts the social ideals that “widowers, orphans, elderly persons without a family, and people with disabilities should all be taken care of” (Dai, 1998, pp. 96–105). The chapter of *Wufu (The five aids)* in *Guanzi (Writings of Master Guan)* advocates to “assist those in urgent needs,” which is mainly realized by systems, such as “feeding the elderly,” “taking care of young orphans,” “subsidizing widowers,” “visiting patients,” and “comforting victims.” In the Song Dynasty, “nursing homes” were set up in the capital to accommodate widowers, orphans, and the elderly without family. “Relief shelters” were set up in various prefectures and counties to care for the poor and sick while “charity gardens” were built to accommodate elderly and disabled persons. In the Qing Dynasty, special agencies were set up to take charge of social relief measures, such as poverty relief and orphan care. Third is the idea of mutual assistance between people. This idea was derived from the opinions of Mohism during the Spring and Autumn Period and Warring States Period. The chapter of *Jianai (Inclusive Love) Part One* of *Mozi (the Mohist Canon)* proposes that, “If all people in the world can love each other,” “the world will be governed well.” The chapter of *Teng Wen Gong Part One* of *Mencius* also advocates to “help each other” and “be friendly to the neighbors.” In addition, non-governmental welfare facilities for mutual aid between people, such as clan fields and school-owned fields also existed in ancient Chinese society. Apart from being used in ceremonies of sacrifice, the land-rent income was also used to subsidize and care for the households in the clans that were in difficulty, or to pay salaries to teachers and subsidize the living of poor students. The social security thoughts of ancient China involved the tradition of placing the responsibility in the hands of officials, causing discussions of on governmental responsibility to emerge earlier than in western societies. The implementation of social security was also relatively complete, involving not only poverty relief, but also diverse charity systems including social welfare facilities.

### Poverty Reduction Thoughts in Welfare State Theory

The welfare state theory originated from “socialism of the chair” advocated by Adolph Wagner of Germany and “Fabian socialism” born in the United Kingdom (Kang & Hu, 1991, p. 532). The theory holds that the state should provide basic social welfare to the public. The modern social and economic structure has encouraged people to rely heavily on society so that the state has no choice but to shoulder the responsibilities that were once assumed by families and communities (Sun, 1997, p. 175). The welfare state theory takes welfare economics and Keynesianism as its theoretical pillars. It holds that the state should adopt appropriate tax policies to redistribute national income and implement social welfare policies, such as social insurance

and unemployment allowances to secure the livelihoods of the people while taking measures to stimulate investments and consumption in order to ensure economic prosperity. Adjustments have been made according to neoliberal theories in the 1980s, so that theoretical viewpoints of welfare policy theory revolve around basic presuppositions, such as “public welfare is a basic social right of citizens” and “welfare distribution is a basic obligation of the government.” The system of welfare distribution was born due to the interactions between politics and economics in capitalist countries. The institutionalization of public welfare policies exerted political and economic effects. The reform of the political system legitimized citizens’ social rights and the citizens’ welfare has been guaranteed by law. Through negotiations, the working class reached compromises on welfare with the bourgeoisie, and the proceduralization and institutionalization of negotiating for welfare were realized so that the welfare state theory was proven in practice. Concerning the political functions of the welfare state theory, the welfare distribution system enhances citizens’ trust in the state, thereby promoting the legitimacy of governance. From a practical point of view, developing countries have also learned from the values of the welfare society theory, which has enriched the policy basis for public management in developing countries (Xie, 2020). However, in the poverty control of China, the theory has presented a people-centered nature of “universal welfare.” It constitutes a socialist welfare distribution mode that belongs to the fundamental system, which has developed and transcended the westernized versions of traditional welfare theories.

### Poverty Reduction Thoughts in Human Rights Theory

The theory of human rights was born in Europe in the seventeenth century and was developed by the bourgeoisie in the struggle against feudalism. When human rights theories were being developed during the proletariat movement, the concepts of human rights were further expanded, and “political rights” had been gradually developed to cover the economic, social, and cultural fields. The Marxists believe that the essence of human rights is realized by labor. Among the rights of people, the right to life and the right to development are in a holistic system. Human rights do not exist a priori, nor are they natural rights deduced based on humans’ rational premises. Human rights are embodied as developed social practices and are social rights that are normative and ideal, and the establishment of a rule-of-law system and institutionalization for human rights is necessary.

The *Declaration on the Right to Development* in 1986 confirmed the concept that the right to development is an “inalienable human right” (Song, 1993, p. 179). The *Vienna Declaration and Program of Action* stated that extreme poverty and social exclusion constitute a violation of human dignity” and advocated “the promotion of human rights and efforts to combat extreme poverty.” The right to development means that everyone in the world has the right to participate in, promote, and enjoy economic, social, cultural, and political development. Poverty hinders economic, social, cultural, and political development and directly deprives people of the right to development. The alleviation and elimination of poverty is the basis for the full realization of the

right to development (Li, 2016). Article 33 of the *Constitution of the People's Republic of China* stipulates that, “The state respects and protects human rights.” Since 2009, China has announced three phases of national human rights action plans. The targets include “steadily providing adequate food and clothing for the poverty alleviation targets,” “tackling key problems of poverty relief for the concentrated and contiguous poverty-stricken areas,” “establishing a long-term mechanism for rural dilapidated house transformations,” “strengthening the development-oriented poverty reduction for the disabled in rural areas,” “comprehensively safeguarding citizens’ economic, social, and cultural rights, ensuring equal access for all people to such services,” and “lifting the entire population who live under the current poverty line out of poverty.” The process of poverty reduction in rural areas led by the CPC is also a process of all-around development of China’s human rights cause. It has always embodied and included the strategies, targets, and tasks of liberating and protecting the people, as well as allowing the development of the people.

### **The Process of Practicing the Rule of Law in the Poverty Reduction Efforts of the CPC**

During the period of the New Democratic Revolution, the CPC implemented the system of “land-to-the-tiller,” granting land ownership to poor farmers; after the founding of the People’s Republic of China, the land reform consolidated the basic socialist system and laid the foundation for China’s poverty reduction. Since the reform and opening up, with the “Eighth Five-Year Plan” as the official starting point, the CPC has adhered to the development-driven poverty alleviation model that involves “guidance by the governments, the transformation of the growth model, and strengthening the capability of self-development for poverty alleviation targets,” and has gradually improved the design of education and infrastructure systems. Since the 18th National Congress of the CPC, “targeted poverty alleviation” has prevented the poverty alleviation process to overextend and become disorganized. It has enhanced the stability, scientific nature, and standardization of poverty reduction, and accumulated institutional experience for the development of poverty alleviation under the rule of law.

### **The Poverty Reduction Model with Land Distribution as an Important Element**

For some time after the founding of the CPC, the rural poverty reduction under the leadership of the Party revolved around the distribution of land. This was due to several long-standing problems in China, including the low level of productivity, the large poverty-stricken population in rural areas, and the large share of agriculture in the national economy.

During the period of the New Democratic Revolution, the CPC realized that issues faced by farmers, especially the rural land issue, were the fundamental issues of the Chinese revolution. Under the historical circumstances at that time, a land system reform was the only way to improve the living conditions of the poverty-stricken people, and to provide the needed material foundation for the revolution. The general policy of carrying out agrarian revolution and organizing armed uprisings was formulated at the “August 7th Meeting” in 1927 (Ma, 1980). In 1928, Mao Zedong

presided over the formulation of the *Jinggang Mountains Land Law* and the *Xingguo Land Law* and implemented the policy of “confiscation of public land and land of the landlord class” and “immediate distribution to poor peasants.” After three years of practice, the guidelines for the agrarian revolution were developed and implementation instructions included “rely on the poor peasants and farm laborers, unite with the middle peasants, restrict the rich peasants, and eliminate the landlord class.” In 1937, the total resistance against Japanese aggression started. The CPC further advanced the land reform in the revolutionary base areas and started relief work through land distribution and reduction of rent and interest. In September 1947, the *Outline of the Land Law of China* summarized the legal experience formed during the agrarian revolution, implemented the “land-to-the-tiller” system on a larger scale, ensuring that the people in the liberated areas could enjoy broad and equal land ownership. The legal regulations related to land distribution in the liberated areas laid the institutional foundation for solving the extreme poverty problems in China at that time. In this early phase, the experience was accumulated, and it later benefited the implementation of poverty reduction with Chinese characteristics after the founding of the People’s Republic of China.

In the early days since the founding of the People’s Republic of China, the agricultural population accounted for a large proportion of the country’s total population, while the poverty-stricken people were mainly concentrated in the rural areas. The poverty reduction efforts had to be focused on the distribution and utilization of the means of production, in which land was the most important element. Concerning land issues, Mao Zedong offered a series of opinions and resolutions, and approved opinion papers and reports, including *Regarding Land Reform and Financial Work*, *Consulting Opinions on the Strategies Aimed at Rich Peasants*, *Opinions on Spring Plowing*, and *Land Reform and Cadre Training Work*. After that, the *Agrarian Reform Law of the People’s Republic of China* was issued and implemented. The first nationwide land system reform was carried out as the land ownership system of farmers was implemented. Judging from the actual effects of the land reform, after three years of land system reform across the country, the purchasing power of the people in 1953 increased by about 25 percent. The “rapid increase of the purchasing power of farmers” (Liao, 1952) alleviated poverty in rural China. During this period, the CPC guaranteed the right to life of the rural poor by the socialist reforms focused on land, and laid the material foundation for the poverty reduction efforts in the period.

As of 1978, there were 250 million rural poor people in China, and the poverty incidence was 30.7 percent. With the advancement of the reform and opening-up, the CPC led the rural villages across the country to implement the innovative household responsibility system, which was, in effect, the land responsibility system originating from Xiaogang Village. Regulatory documents, including the *Regulation of the Trial Implementation of Agricultural Technology Responsibility System*, and the *Interim Measures for the Administration of Rural Land Responsibility System Contracts in Beijing* (Gan, 1989, pp. 518–519) confirmed the effectiveness of the system. The “No. 1 central document” in 1984 extended “the period of land contracted management,” stating that

“the period of land contracted management should generally last more than fifteen years” (Zhang, 2008). In the same year, 99 percent of the basic accounting units in rural China completed the reforms concerning the household responsibility system. The *Decision of the Central Committee of the Communist Party of China on Further Strengthening of Agriculture and Rural Works* issued in November 1991 ordered the established “household responsibility system” to be “a basic system” of the rural economy of China. By the legislation of the National People’s Congress, the *Amendment to the Constitution of the People’s Republic of China* issued in 1993 formally defined the “household responsibility system” as “the sector of socialist economy under collective ownership by the working people.” It demonstrated that due to the changes of times and the needs of social development, the distribution methods for rural land, which was dominated by land as a means of production, needed a major adjustment. It also indicated that the innovation and development of the rural relief method dominated by land distribution were affirmed by the national fundamental law. As of 1993, the national poverty incidence had dropped to 8.7 percent, and the population without adequate food and clothing had dropped to eighty million (Yao, 2017, p. 12).

### **A Poverty Reduction Model with Poverty Alleviation and Development as an Essential Element**

The poverty alleviation and development under the leadership of the Party is a poverty reduction model led by the party committees and governments which gathers diversified social forces, uses the market economy as the main means, and carries out mobilization with policies to assist the poor to increase their income and stimulate the economic growth in poverty-stricken areas. Its characteristic lies in “focusing on the long-term development of poverty-stricken areas and regarding the change of basic production conditions as the core of the work.” Poverty alleviation and development place more emphasis on the equalization of basic public services, including adhering to the development-driven poverty alleviation policies, realizing the effective connection between poverty alleviation and development and the rural minimum living security system, and encouraging and helping the poor who are able to work to get rid of poverty through their own efforts.

#### **Top-Level planning and implementation.**

With the advancement of the reform and opening, China has begun to rebuild the system and mechanism of anti-poverty actions, transforming poverty alleviation based on relief and disaster relief to development-driven poverty alleviation, that is, transforming from a “blood-transfusion” type of poverty alleviation to a “blood-formation” type of poverty alleviation. In 1993, the Leading Group under the State Council for the development of Impoverished Areas changed its name into the State Council Leading Group of Poverty Alleviation and Development, marking the formation of a government-led poverty governance system responsible for poverty alleviation and development. In 1994, the *Priority Poverty Alleviation Program* (1994–2000), China’s first-ever special poverty alleviation plan, was formulated and implemented. It is committed to

“provide adequate food and clothing to 80 million impoverished rural residents within seven years, the end of the 20th century.” The China’s Agenda 21 passed by the executive meeting of the State Council in 1994 established that eliminating poverty by the promotion of rapid economic growth is a state obligation and determined to implement sustainable development strategies. The Central Committee of the CPC and the State Council have jointly issued the *Opinions on Improving the Work Relating to Agriculture and Rural Areas* six times. The documents proposed changes that promote institutionalization, including the acceleration of the adjustments of rural regional planning, establishing a quality standard system as well as an inspection and testing system that are unified and authoritative for agricultural products, reforming the promotion system for agricultural science and technology, strengthening the construction of rural markets, safeguarding the legitimate rights and interests of farmers (migrant workers), implementing rural land policies, deepening the reform of the grain circulation system, protecting the interests of the major producing areas and grain growers, and accelerating the reform of the rural financial system. In 1996, the Central Committee of the CPC and the State Council issued the *Decisions on Effectively Easing the Burden of Farmers*. In the following year, the *Decisions of the Central Committee of the Communist Party of China and the State Council on Providing Adequate Food and Clothing to Poverty-Stricken People in Rural Areas* propose to “combine the support from the state” with the “cadres’ and the general public’s own efforts in the poverty-stricken areas.” In 2001, the *Outline of Development-Driven Poverty Alleviation in Rural Areas (2001–2010)* was implemented to realize the participatory poverty alleviation strategies which take “empowerment,” “participation,” and “capacity building” as the core. Under the guidance of this poverty reduction concept, the party committees at all levels have formulated many internal regulations and internal regulatory documents. The local people’s congresses and governments at all levels have also begun to experiment with local legislative practices under the theme of “poverty alleviation and development,” to safeguard the poverty alleviation efforts in rural China through decentralized legislation and regulation establishment.

### **Rural education investment.**

Rural education is of fundamental, leading, and overall importance in poverty alleviation and development. “The vigorous development of education is the key to alleviating and changing the problems of poverty and uneven regional development.” In 1996, the State Education Commission and the Ministry of Finance signed the agreements of responsibility for the National Compulsory Education Projects in Poverty-Stricken Areas with twelve provinces, marking the formal implementation of the poverty alleviation projects for education. Since 2001, the special fund from “National Compulsory Education Fund for Poor Students” has been used to subsidize the miscellaneous and living expenses of the primary and secondary school students in poverty-stricken areas and old revolutionary base areas in Western China. A system to provide free textbooks for primary and secondary school students with financial difficulties in rural areas has been established. In 2002, the Ministry of Education, the State Development Planning

Commission, and the Ministry of Finance jointly implemented a pilot “one-off-fee” in for rural villages’ compulsory education in major counties involved in national poverty alleviation and development. During the compulsory education stage, any school concerned should only charge students a reasonable and affordable one-off fee. In 2002, the *Circular on Improving the Management System of Compulsory Education in Rural Areas* established and improved the “supervision and inspection, commendation and reward, and accountability systems.” The *Decision of the State Council on the Reform and Development of Basic Education* in 2002 and 2003 and the *Decision of the State Council on Further Strengthening Rural Education* successively promulgated and established a management system for rural compulsory education that has “local governments take responsibility, adopts hierarchical management, and is county-based.” The *Notice on Deepening the Reform of the Rural Educational Expenditure Assurance Mechanism* in 2005 exempted students from tuition and miscellaneous fees at the stage of compulsory education in rural areas and improved the wage assurance mechanism for primary and secondary school teachers working in rural areas. In 2006, the Leading Group for the National Reform of the Rural Educational Expenditure Assurance Mechanism was established. In the same year, a system of exempting tuition, miscellaneous fees, and textbook fees for rural compulsory education was implemented. As of the end of 2018, China had formulated a unified construction standard for urban and rural schools, gradually unified the staffing standards for teachers in urban and rural areas, realized a unified standard benchmark for public funding per student in urban and rural areas, and a unified basic equipment standard for urban and rural schools (Wang, 2018). In 2017 and 2018, 80 percent of the central government’s educational transfer payments were used in rural central and western regions as well as poverty-stricken areas. Between 2013 and 2020, 108,000 shoddy schools for compulsory education in poverty-stricken areas were renovated, and 99.48 percent of the construction plans for basic-level culture service centers in the central and western regions had been completed.

### **Rural social security.**

In addition to the persistent leadership on development-driven anti-poverty actions, the CPC also focuses on strengthening the security-based anti-poverty system. The rural social security system was formed based on the Five Guarantees System in the 1950s. The 1956 *Model Articles of Association for Advanced Agricultural Producers’ Cooperatives* stipulates that rural producers’ cooperatives should arrange to care for the production and livelihoods of the aged, weak, widowed, or disabled members who have no ability to work or have lost all abilities to work. In particular, the *Outline of National Agricultural Development from 1956 to 1967* requires the agricultural cooperatives to take care of the members with “no ability to work” and “have no one to rely on” by bearing their food, clothing, fuel, education, and burial expenses. The *Regulations on the Work of Providing Five Guarantees*, which was the first administrative regulation for Five Guarantees work issued by China, was implemented in 1994. In 1997, the *Interim Measures for the Management of Elderly People’s Homes in Rural Areas* was issued to regulate the elderly care

system in rural areas. The implementation of the above two regulations demonstrates that rural social security has started to follow the rule of law. In 2003, the pilot new-type rural cooperative medical system was launched to explore the establishment and improvement of the new rural cooperative medical system, the medical care system, rural cooperative medical care management institutions, the rural circuit medical system, and the deepening of the reform of the rural medical system (Zhu, 2003). The promulgation and implementation of the *Notice on Establishing the Rural Minimum Living Standard Security System across the Country* marks the establishment of the rural minimum living security, guaranteeing to cover the basic needs of rural residents in food, clothing, water, and electricity. The *Guiding Opinion on the Pilot Program of New Social Pension Insurance in Rural Areas*, issued in 2009, stipulates that the rural residents who have reached the age of 16 (non-students) are qualified for joining the new agricultural insurance program, so that their basic needs after retirement are covered. The relevant funds come from individual contribution, collective subsidies, and government subsidies (Bai, 2009). After three years of pilot operation, China's rural pension insurance had achieved full coverage as of July 2012. By the end of 2020, the goal of establishing hospitals above level B in all poverty-stricken counties has basically been achieved; 19.36 million poverty-stricken people are being taken care of by the relief systems, including the rural minimum security system; 60.98 million poverty-stricken people are being taken care of by the basic pension system for urban and rural residents; and the goal of covering all poverty-stricken people with basic medical insurance has basically been achieved.

#### **Agricultural tax reform.**

The *Regulation of the People's Republic of China on Agriculture Tax* was promulgated and implemented in 1958 and unified the agricultural tax system through legislation by the People's Congress. However, after 40 years of development, due to the long-term subsidy plans for the industrial sector, the proportion of the agriculture sector in the GDP gradually decreased. The CPC has thus taken a direction of reform towards common prosperity for everyone with poverty control policies that involve subsidizing the agriculture sector by the income of the industrial sector and reducing the burden on farmers. In 1998, the *Decision of the Central Committee of the Communist Party of China on Several Big Issues on Agriculture and Rural Work* proposed a "gradual reform of the agricultural tax system." This was the first time that such a proposal was made in the form of a decision at an important party meeting. The *Notice on the Pilot Project of Agricultural Tax Reform* in 2000 proposed to "regulate the agricultural tax system." In the same year, agricultural tax reform was piloted in Anhui. In 2003, the State Council published the *Opinions on Comprehensively Promoting the Pilot Project of Rural Tax Reform* and implemented the Pilot Project of Agricultural Tax Reform throughout the country. The 2004 *Report on the Work of the Government* proposed to "abolish rural tax within five years" (Han, 2004). Only two years after the pilot project was started, a total of twenty-eight provinces across the country had practically ceased to collect rural taxes as of the end of 2005 (Li, 2005). In the following year, the Standing Committee of the National People's Congress passed adopted the *Decision on*

*Abolishing the Regulation on Agriculture Tax (Draft)* which stated mentioned that the “state” had turned “from taking to giving” for the first time in its relationship with the “farmers” in terms of taxation. Compared with the pre-reform period, the total burden on all farmers in China was reduced by about RMB125 billion, and the per capita burden was reduced by about RMB140 (Qiu, 2021). In addition, the central government’s expenditures on “three rural issues” (issues relating to agriculture, rural areas, and rural residents) have continued to increase since 2006. The expenditures on direct subsidies for grain producers and the subsidies for purchasing agricultural machines have continued to increase, while the improved varieties of crops that are entitled to subsidies have also continued to expand (Li, 2011).

### **Infrastructure construction.**

Most of the poverty-stricken districts are in remote areas. Their harsh natural environments and poor infrastructures are the major factors that hinder the anti-poverty efforts. The previous prioritized poverty alleviation programs and the *Outline of Development-Driven Poverty Alleviation in Rural Areas* have one common goal in poverty alleviation, which is to improve the basic infrastructures in poverty-stricken areas and to focus on building public facilities, such as water conservancy facilities for farmland, drinking water facilities for humans and livestock, electricity facilities, roads, postal services, and telephone lines. The executive meeting of the State Council passed the *Emergency Safety Project of Portable Water in Rural Areas* in 2005. In addition to solving the drinking water problem previously faced by sixty million of rural people, the project covers the needs of another twenty million of rural people. In December of the same year, the Central Committee of the CPC and the State Council issued the *Several Opinions on Effectively Strengthening Agricultural Infrastructures and Further Promoting Agricultural Development and the Enhancement of Farmers’ Income*, which proposed to “consolidate and improve the existing circulation network” and push forward the “Ten Thousand Villages and One Thousand Townships Market Program.” Since then, the state’s investments that focus on rural infrastructures have continued to increase. For example, the investment in 2007 amounted to RMB180 billion, an increase of nearly 13 percent from the previous year; the total length of new and reconstructed rural roads exceeded 420,000 kilometers, an increase of more than 30 percent from the previous year (Lu, 2008). Later in 2008, a three-year campaign called the “Rural Highway Construction Quality Year” was launched (Lu, 2008); Afterwards, a series of regulatory documents, including the *Instructional Opinions on Engineering Construction and Administration of Government-supported Residential Houses*, *Administrative Rules on Improvement and Upgrading of the Rural Power Grid*, *Technical Principles for the Improvement and Upgrading of the Rural Power Grid*, *Notice on the Conscientious Implementation of the Administrative Rules on Rural Road Construction* and the *Guiding Opinions of the Ministry of Transport on the Construction of Rural Roads in the 12th Five-Year Plan*, have been implemented. A preliminary institutional standard for rural infrastructure has been established and has benefited the a number of rural residents.

### **A Poverty Reduction Model with Targeted Poverty Alleviation as an Important Element**

Targeted poverty alleviation is a means of poverty alleviation that applies scientific and effective procedures to implement precise identification, accurate help, and precise management for poverty-stricken areas with different situations and the poverty-stricken households with different conditions. The changes in the targets of the anti-poverty efforts in China have prompted the emergence of the concept of targeted poverty alleviation. It is necessary to apply a set of precise technologies and methods to poverty alleviation. Only with corresponding institutional control, adjustments, and accurate assessments can the accuracy of relief be embodied. At the same time, rigid institutional standards can control the subjective discretion of the administrative units and thus prevent the poverty alleviation relief process from overextending and becoming disorganized.

#### **Precise identification system.**

In November 2013, on his inspection tour to Hunan province, General Secretary Xi Jinping proposed the concept of “giving differentiated guidance for targeted poverty alleviation in line with local conditions by seeking truth from facts” (Yang, 2013). In December of the same year, the National Conference on Development-Driven Poverty Alleviation announced that “China will establish a targeted poverty alleviation mechanism,” “Dynamic management should be applied to the poverty-stricken people while a sound and strict management system for poverty alleviation funds should be established” (Gu, 2013). In 2004, the *Opinions on Innovating Mechanisms to Promote Rural Poverty Alleviation and Development* proposed to give top priority to “poverty registration” and formulated the *Registration Plan for Poverty Alleviation and Development*, the *Registration Index System for Poverty Alleviation and Development* and the *Implementation Plan for the Establishment of a Targeted Poverty Alleviation Work Mechanism*. A unified method for identifying targets of poverty alleviation was formulated by the state, thereby realizing the unification of the technical standards for poverty identification. Since 2014, 800,000 grassroots officials have started to devote their time to villages. Household applications for poverty registration were discussed and reviewed, disclosed for public supervision, and then evaluated by each level of administration. 128,000 poor villages, 29.48 million poor households and 89.62 million poverty-stricken people have been identified, and a unified national information system of poverty alleviation and development was established. In the following year, 8.07 million poverty-stricken people who were newly identified were added to the list. This is the first time in China’s poverty alleviation and development history that the identification is accurate to the household and headcount levels (Zhu, 2021).

#### **Supervision and assessment system.**

The supervision and assessment system for targeted poverty alleviation led by the CPC is an important mechanism for guaranteeing the implementation of the targeted poverty alleviation work. Generally speaking, a “top leader responsibility system” was adopted in the targeted

poverty alleviation work. In practice, the work is done through a working mechanism with the central government making overall arrangements, provincial governments assuming primary responsibilities, and city-level and county-level governments implementing specific tasks. The performance is measured by the annual supervision and inspection systems for the poverty alleviation work. To ensure a good result of poverty eradication, standards, procedures, and verification methods for the withdrawal from poverty registration have been formulated (Gu, 2016).

The design of supervision and evaluation mainly adheres to the Party's internal regulatory documents. For example, the *Measures for Evaluating the Effectiveness of Poverty Alleviation and Development Work Done by Provincial Party Committees and Governments* stipulates that the assessment work should be organized by the State Council Leading Group of Poverty Alleviation and Development once a year from 2016 to 2020 to assess reduction of poverty-stricken people registered for poverty situations, the accuracy of their identification, their satisfaction with the relief work done by the resident work teams in poor villages, and the use of the poverty alleviation funds. At the same time, the administrative responsibility system was introduced into the assessment. For the provinces with their assessment results below standard, the State Council Leading Group of Poverty Alleviation and Development will interview the main leaders of the provincial party committees and governments. If the circumstances are aggravated to cause problems or adverse impacts, such leaders will be held accountable. The Political Bureau of the Communist Party of China Central Committee held a meeting in March 2016 and required strict implementation of the poverty alleviation report system, responsibility system, assessment system, and supervision and inspection system in the process of targeted poverty alleviation. In April of the same year, the *Opinions on Establishing a Poverty Deregistering Mechanism* formulated the standards and procedures for deregistering from the poverty list and strengthened the supervision and accountability system. It stipulated that the State Council Leading Group of Poverty Alleviation and Development, as well as the party committees and the governments of all provinces (autonomous regions and municipalities), should organize and carry out inspections on poverty alleviation. Supervision and special inspections should be carried out annually and periodically on a phased basis or irregularly. In October of the same year, the *Implementation Measures of the Responsibility System for Poverty Alleviation* stipulated that "the CPC Central Commission for Discipline Inspection should be responsible for the supervision, discipline enforcement, and guarantee of the accountability in the battle against poverty alleviation," "the Supreme People's Procuratorate should focus on rectifying and preventing occupational crime in the field of poverty alleviation," and that "the National Audit Office should conduct a real-time audit of the funds used by the key projects in the implementation of poverty alleviation policies."

The assessment approach for targeted poverty alleviation shows a developing trend of being problem-oriented and result-oriented. In terms of specific assessment methods, "cross-reviews between provinces" and "media visits without prior notice" have been gradually adopted. In terms

of data collection for the assessments, “democratic supervision,” “supervision and inspections,” “special supervision and inspections by competent authorities,” and “discovery by supervision” have been gradually developed. In terms of the content of the assessments, assessment methods, such as “focusing on the identification accuracy of poverty-stricken people,” “focusing on the deregistration accuracy of poverty-stricken people and the satisfaction of the people,” “focusing on the implementation of accountability, policies, and specific work” have been developed (Zhu, 2021).

### **The system of dispatching resident work teams to poor villages.**

In 2014, the *Opinions on Innovating Mechanisms to Promote Rural Poverty Alleviation and Development* clearly stated that: Based on the ongoing work in various provinces, an extensive system of dispatching resident work teams to poor villages should be established. The Opinions required the implementation of security measures, establishment of incentive mechanisms and a long-term and institutionalized resident work team system in poor villages so that these teams can become the platforms and channels for the implementation of targeted poverty alleviation. The resident work teams (groups) are required to actively participate in various work for poverty alleviation and development, implement security measures, establish incentive mechanisms, and build a long-term and institutionalized resident work team system in poor villages. In 2015, the *Decision on Winning the Tough Battle Against Poverty* specified the selection, assessment, and promotion systems for the officials dispatched to villages. In that year, every poor village had its own resident work team while every poor household was taken care of by at least one responsible official. As of the end of 2020, a total of 255,000 resident work teams, as well as more than three million of resident first secretaries and officials had been dispatched to villages across the country.

### **The Development Path of the Rule of Law in the Poverty Reduction Efforts Under the Leadership of the Communist Party of China**

At present, China has eliminated extreme poverty, and the major task left for the anti-poverty efforts is to eliminate comparative poverty. To fulfil this task, it is necessary to have a stable and clear legal framework as the foundation, take the improvement of the development ability of the people in comparative poverty as the means, and aim at helping them to get rid of poverty ultimately. The construction of the rule of law lays the foundation for rights and institutional protection for the alleviation of comparative poverty. It promotes the systematization of the poverty reduction system, the protection of the rights of people in comparative poverty, and the proceduralization of the poverty reduction process, and ensures that the government’s poverty reduction functions must be provided for in laws and regulations to realize the establishment of a rule-of-law system in the transformation of the poverty reduction model. In the future, the focus of poverty reduction should shift from providing

materials to relief recipients to enabling them to gain development abilities, and from increasing income to expanding rights. It is also necessary to develop a law-based poverty reduction mechanism, establish modern and law-based governance thoughts for continuous advancement of poverty reduction, and strengthen the integrity and standardization of the poverty reduction efforts under the leadership of the CPC.

### **Realizing the Protection of the Rights of the People in Comparative Poverty**

Poverty reduction in the new era should not be limited to subsidizing the people in comparative poverty, but also to providing them with the right to development, opportunities for development, essential conditions for development, and the prospects for development. Amartya Sen believed that “poverty should not be simply defined as insufficient supply, as it is also a manifestation of insufficient rights... Rights poverty appears as a type of poverty, while it is also the underlying cause of many other poverty conditions” (Ma, 2008, pp. 69–74). Sen’s theory of rights poverty emphasizes the protection of the rights of the impoverished groups to be assisted, and also emphasizes that the impoverished groups should also be able to participate in the economic, political, social, and cultural development with rights equal to other groups, as well as to have the rights to enjoy the results (Sen, 2013, pp. 24–25).

Through legislation concerning poverty reduction, China has established a series of legal rights, including the right to an adequate standard of living, the right to social security, the right to education, and the right to receive financial assistance. *The Construction Plan of a Law-Based China (2020–2025)* states that “By 2035, the rule of law for the country, the government, and society will be basically completed... the people’s right to equal participation and equal development will be fully guaranteed...” The plan demands that the rule of law should be integrated with the public services provided to the people, and integrated with the right to development of the individuals. While developing and establishing the rule-of-law system in poverty reduction, the manifestation of these regulations provides a theoretical basis for determining the content of poverty reduction in the future. In the future development of poverty reduction, anti-poverty, sustainable development, and the protection of civil, social, and political rights should be closely integrated to provide stronger protections for poverty reduction by realizing the equalization of rights. Specifically, it should include the right to subsistence, medical assistance, education aid, and financial support. The corresponding security mechanisms can also be divided into the abovementioned categories:

#### **Protecting the right to life.**

Extreme poverty endangers human life and health, shortens the life of human beings, and reduces the quality of human life. It is necessary to ensure basic dignity and values of individuals through the right to life. The right to life is the right that protects the safety of human life and guarantees their living conditions and is also the foundation of other human rights. It mainly includes providing material security at a “minimum level” as the basic requirement and

guaranteeing the spiritual needs of the relief recipients. For the vast population in rural China, the core human right that needs to be guaranteed is the right to life for the rural poverty-stricken people. In the hundred-year long process of the party's leadership, the poverty reduction effort led by the CPC focuses on extreme poverty and the development of the poverty population's right to life. China has brought about a historic resolution to the problem of extreme poverty. To prevent the population in extreme poverty from rebounding, the construction of the rule of law concerning poverty reduction should protect the right to life through the raising of assistance funds, the setting of relief details, and the connection of the minimum-security system and the relief system.

#### **Protecting the right to medical assistance.**

From the perspective of constitutional norms, the right to medical assistance is based upon Article 45 of the *Constitution of the People's Republic of China*, which stipulates that the state shall develop "social relief" and "medical and health services" for citizens to enjoy the basic right to "material assistance." It is an idealistic right enjoyed by the poverty-stricken people which is compatible with the social and economic development level, a preventive right to protect the right to life, and is a compound form of rights that carries the attributes of legal rights and actual rights. The main point of medical assistance is to specifically subsidize the medical expenses of the poverty-stricken people and other low-income groups with a government-led safety-net system. A high proportion of the rural population of China falls into poverty because of illnesses. In view of this, medical assistance can play a role in holding the baseline, which is of great significance to the work of poverty reduction in rural areas. In the future, we should continue to strive to connect poverty reduction relief to the new basic medical insurance system for the rural areas.

#### **Protecting the right to education aid.**

The right to education is a basic right granted to Chinese citizens by the *Constitution of the People's Republic of China*. Education aid is mainly provided by the government or social organizations. It aims at protecting the right to education of the people of the right age through the means of education expense reduction and subsidies, to help the people of the right age to advance their educational levels. It is an important welfare method to solve poverty. The poverty control, led by the CPC, incorporates education aid into the poverty reduction work. Education aid is regarded as an important rights protection mechanism to reduce inequality of opportunity, which is a kind of rights poverty. It promotes education equity for the poverty-stricken people with education equity and prevents poverty from passing on from generation to generation. In the future, we should continue to protect the right to education of the people of the right age by projects, such as popularization of pre-school education, balanced development of compulsory education, training of skills by vocational education, promotion of the quality of higher education and training, financial assistance for poor students, care for children with special needs or difficulties, rural teacher development plans, and the assistance for education informatization as well as partner assistance for education.

#### **Protecting economic and cultural rights.**

The *Constitution of the People's Republic of China* stipulates that the state shall improve the material and cultural life of the people. In poverty reduction, it is necessary to continuously increase the supply of basic public services in rural areas, further enhance the government's duties in providing basic public services in rural areas and establish a resource allocation mechanism and performance evaluation system that gives priority to the supply of basic public services in rural areas. It is also necessary to provide a safety net for the people in comparative poverty with disabilities or serious illnesses to prevent them from falling back into poverty. A tight and sound anti-poverty system should gradually be built to protect and realize the economic and cultural rights of impoverished groups.

### **The Proceduralization of the Implementation of Administrative Actions for Poverty Reduction**

Procedural justice is “reflected in the actions related to procedures taken by a specific entity in accordance with legal provisions and legal authorizations” (Zhao, 2019, p. 137). Promoting the proceduralization and the rule of law in the exercise of power in anti-poverty work is procedural protection to safeguard the exercise of power in anti-poverty work and the rights of the poverty-stricken people. The level of administration by law should be promoted by adopting strict procedures of entry and exit, strict management of projects, strict regulations for the use of funds, and strict enforcement of accountability (Peng, 2019, pp. 135–138). Advancement of the information disclosure of the exercise of power in anti-poverty work is necessary to the realization of the rule of law and fairness of the procedures involved in the exercise of power in anti-poverty work. Information disclosure is a prerequisite for the poverty-stricken people to participate in the exercise of power in the anti-poverty work. It is also a prerequisite for the poverty-stricken people and all social stakeholders to supervise the exercise of power in the anti-poverty work. With reference to the practical experience of the *Regulation on the Disclosure of Government Information*, integrating with the actualities in the anti-poverty work, the legislation concerning anti-poverty should make special provisions on the issues relating to the disclosure of anti-poverty information. In addition, it is necessary to fully protect the procedural rights of poverty-stricken people, including the right to know, the right to supervise, the right to participate in decision-making and the right of relief, in all aspects including the identification of poor households, operational procedures regarding project funds, procedures for the use of funds, deregistration of poor households, and all accountability procedures, so that anti-poverty power can truly operate according to the rule of law.

#### **The legal protection mechanism of the procedures for the use of assistance funds.**

The utilization procedures of assistance funds should center on information disclosures and include the following main contents: for the information disclosure for the use of funds, the obligation subjects, specific scope, method of information disclosure and time of information disclosure should be regulated. Among all, the specific scope of information disclosure should include all information related to the current statuses regarding funds and any substantial

changes; the method of information disclosure should allow convenient inquiry and access to the information by the public. In addition to the information disclosure procedure, which is at the core of the utilization procedures of resources, it is also necessary to formulate detailed management procedures for funding projects, performance evaluation procedures for the use of funds, audit and inspection procedures of disbursements, and accountability procedures for illegal and criminal acts involving the use of funds according to the characteristics of the use of the funds. The existence of these procedures can maximize the effectiveness of the management, regulation, and supervision of the use of funds within the state organs, so that these efforts can be complemented by the public supervision involved in the information disclosure system and ensure the effectiveness of the use of assistance funds.

#### **A procedural rights protection mechanism based on legal aid.**

Concerning the poverty reduction projects, the procedural rights of the impoverished groups include the right to know, the right to supervise, the right to participate in decision-making and the right of relief when their basic rights are violated. Their rights to know and the rights to supervise should involve the planning and scope of the poverty reduction projects, the developmental progress of the poverty reduction projects, the gain of benefits in the poverty reduction projects, and the use of assistance funds. The right to participate in decision-making includes establishing a project initiation and hearing system for the poverty reduction projects. The representatives of the impoverished groups should be invited to the discussions and the decision-making processes, and their opinions and suggestions should be fully respected. When their opinions and suggestions are not adopted, clear explanations should be given.

The matching security mechanism should include improving the civil litigation rules. The current litigation mechanism only stipulates the channels and methods of relief when the private rights of the relief recipients are infringed, while the channels and methods of relief when the collective interests are infringed are still unclear. Considering that the relief recipients are in a weaker financial position, the possible assistance methods include appropriately reducing the litigation costs for the plaintiffs, setting up a sharing mechanism of litigation costs that is tilted in favor of the plaintiffs, and setting up an administrative public interest litigation fund with government funding or social donations. Improvement of the rules regarding legal aid related to poverty reduction is also needed. The law should provide for the procedures for the necessary publicity and education of law, and the publicity for the necessary procedures for obtaining support and assistance when their legal rights are infringed, to make up for their lack of legal capacity that objectively exists as they become the plaintiffs of civil litigations. It is necessary to improve the administrative mediation and adjudication rules for poverty reduction disputes. Realizing that civil litigations will occur in the process of continuous poverty reduction, the relief recipients, as the vulnerable groups, should be given full options when choosing the legal procedures. They should be encouraged to fight for their rights by administrative mediation and administrative adjudication, which are of lower costs and with higher flexibility. If they are still

dissatisfied with the results of administrative mediation and administrative adjudication, they can continue to conduct civil litigations. This can, to a certain extent, counter the disadvantages faced by the relief recipients, including the higher costs of civil litigations and other knowledge barriers.

### **The procedural protection mechanism for the assessment and enforcement of accountability for poverty reduction.**

Standardize the management, supervision, assessment, and accountability mechanisms through legislation, to divert the mechanisms onto the track of the rule of law. Clarify the supervision and assessment mechanisms for poverty reduction work. Departments responsible for finance, auditing, and rural revitalization should regularly audit, supervise, and inspect the use of funds and the implementation of the projects. Conduct audit and supervision in accordance with laws, regulations, and the plans for coordinated use of funds. The department in charge of poverty reduction should work with the responsible departments to establish annual ledgers for major projects, clarifying the deadlines of completion, and the persons in charge.

### **Formulating a Unified “Poverty Reduction Law” When the Time Is Ripe**

The *Decision of the CPC Central Committee on Major Issues Pertaining to Comprehensively Promoting the Rule of Law* asked to “strengthen and standardize public services in accordance with the law” and “improve the laws and regulations on poverty alleviation.” The *Several Opinions on Strengthening the Reform and Innovation to Accelerate the Modernization Process of Agriculture* required that all major rural reforms be administered as legally required, while the legislation shall actively adapt to the needs of rural reform and development. Measures that have been proven to be effective in practice shall be upgraded to a law under mature legislation conditions to “improve the legal system for supporting and protecting the ‘three rural issues’” (Li, 2015). The *Guiding Opinions on the Three-Year Actions Aiming at Winning the Tough Battle against Poverty* asked to “coordinate the integration of the battle against poverty and rural revitalization,” “race against time to study and formulate poverty reduction strategies after 2020,” and “research for the advancement of legislation concerning the development of poverty alleviation.” The poverty control, led by the CPC, has eliminated extreme poverty. The traditional legal experience of China has been reflected in the development of poverty alleviation policies that have proven to be effective, and has also provided a legal basis for further planning for the alleviation of comparative poverty. By summing up the experience in the poverty reduction effort in China led by the Party, based on effectively integrating the law resources gathered previously, the formulation of a unified “Poverty Reduction Law” could be considered. Through the mature system of legislation by the People’s Congress, the planning for poverty reduction can be integrated into the strategic planning of law-based governance.

### **The overall planning and coordination of existing legislative achievements.**

Poverty reduction is a systematic project, and the legislation concerning poverty reduction must involve the relationships with other laws and regulations. First, it is important to

coordinate the relationship between the “Poverty Reduction Law” and the Social Security Law. In the major countries in the world, development-driven poverty reduction and security-based poverty reduction coexist, and the functions of the two are not interchangeable. From the perspective of a legal nature, “Poverty Reduction Law” and the Social Security Law belong to social laws, but the legal functions and the objectives of the laws are not exactly the same. The legislation of the “Poverty Reduction Law” should focus on development rather than protection. Working on the coordination between “Poverty Reduction Law” and the Social Security Law is imperative so that the two can support each other and function together as a key component for implementing the rural revitalization strategies. Second, the relationship between the “Poverty Reduction Law” and the existing poverty reduction policies should be well coordinated. The “Poverty Reduction Law” should establish a formal poverty relief system, institutionalize the national poverty reduction policies, and use the system to ensure consistence governance for poverty reduction. It is necessary to improve its development on the institutional level, carry out a supply-side reform of the poverty reduction system, improve the effective connections between different systems, such as development, relief, and security, solve the fragmentation problem of poverty control, and improve the comprehensive governance structure and governance mechanisms to ensure the accuracy and effectiveness of the work and results of the poverty reduction policies. Third, in addition to improving the legal system of poverty reduction, it is also necessary to pay attention to the connections of relevant laws, such as finance and taxation laws, with the poverty reduction law.

#### **Codify the route and direction, principles, and policies of the Party.**

During the legislative process of the “Poverty Reduction Law,” it is necessary to implement the route and direction, and principles and policies of the Party, while concretizing and codifying the Party’s principles and policies, which have been proven correct in practice. The CPC is the leader and promoter of reform. As the reform enters different stages, it will prompt the Party to think continuously. According to the actual situation of social and economic development, the Party will promptly introduce and update appropriate policies, arrange planning for work, and provide directions for legislation. The Fourth Plenary Session of the 18th CPC Central Committee explicitly calls for adhering to the path of socialist rule of law with Chinese characteristics and building a socialist legal system with Chinese characteristics. Under the guidance of these principles and policies, the legislative activities of the legislature have also undergone corresponding changes and transformations. According to the summary of the State Council Leading Group Office of Poverty Alleviation and Development, since the 18th National Congress of the CPC, China has established six major systems to support the policies of poverty alleviation, namely the responsibility, policy, investment, mobilization, supervision, and assessment systems for the battle against poverty, all of which are aimed at implementing the decisions and deployment of the battle against poverty and follow the requirements of the central government to comprehensively deepen the reform. These provide institutional safeguards for winning

the battle against poverty. These policies have been tested in practice, and in the future, they should be promptly incorporated and transformed into national laws and regulations through the establishment of the “Poverty Reduction Law.”

**Draw on the local legislative experience in rural poverty alleviation and development.**

Due to the enormous size of the poverty control system, poverty reduction work is characterized by being long-running, systematic, flexible, and complex. The steps of building a poverty control system should be interlocking and be guided by law in both thinking and action. The construction of a standardized system will be smoother with the experience accumulated by local administrations as they implement advanced and pilot policies. From the perspective of historical development, the poverty reduction legislation of China has actually adopted the model of “piloting policies first in local regions before extending them to the entire country.” Up to now, there are 217 central-level laws and regulations and judicial interpretations in China, including thirty-one administrative regulations, twenty local regulations, and five judicial interpretations: 434 ministerial rules and 18 local government rules. Although the legislations first introduced by a local legislature have a high coverage rate, this does not mean that the legal relationships on poverty reduction are clear. Also, general consensuses on basic concepts and core procedures have not been reached. Certainly, from the other way round, the differences in the existing local legislation can help to accumulate positive and negative experience, to provide better technical support for the legislation of a unified law.

Taking into account the local legislations for poverty alleviation that have been widely implemented, coupled with the distribution of the limits of the legislative powers between the Central Government and the local administrations stipulated by the *Law on Legislation*, it is necessary for the poverty reduction law to appropriately distribute the powers and responsibilities of the Central Government and the local administrations in the legislative system of poverty reduction. Considering the successful results of the battle against poverty, the public has high expectations for future poverty reduction work. The poverty reduction law must deal with the relationships between the value expectations of the public for the poverty control system and the rule-of-law structure of the poverty control system. Therefore, it is not advisable for the drafting of the future “Poverty Reduction Law” to be based directly on the results of local legislations. Instead, we will need to strike a balance among the experimental nature, scientific nature, and appropriateness of legislations to guide and standardize future poverty control from the level of national legislation to secure rural reforms and build a poverty reduction plan with wide coverage that involves the overall development of urban and rural areas.

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(Editor: Zeng Yueying)

# *A Study of the Life of Monk Dalang of the Early Qing Dynasty and His Contribution to Water Conservancy in Sichuan (Shu)*

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**Abstract:** The Dalang Weir (irrigation system) has benefited local people in the Chengdu Plain since its completion in the early Qing Dynasty. After extensive research of historical background details, and channeling scenes of the Weir construction, and sifting through relevant literature in combination with chronicles, chorography, and tablet inscriptions from the Ming and Qing dynasties, assembled evidence indicates that the Weir was built during the autumn of the first reign to the spring of the second reign of Emperor Kangxi. The Weir is an important expansion of the famous Dujiangyan Irrigation System and after analyzing and assessing the value of the project under the principle of “making the past serve the present,” it is also proof of a Buddhist Monk’s active participation in a public welfare undertaking. In addition to inheriting the basic logic of Shu’s water culture cultivated by Yu the Great, King Bieling of Shu, and Li Bing during their water control activities, it implies the spirit of joint efforts of officials and the populace to society and posterity. Monk Dalang, the initiator of the project, therefore, deserves great respect from later generations for his outstanding merits and virtues as well as his significant contribution to society.

**Keywords:** Buddhism, studies of Shu, water conservancy, Dalang

**DOI:** <http://dx.doi.org/10.19873/j.cnki.2096-0212.2022.01.006>

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If one intends to study Bashu (Chongqing and Sichuan) water culture and check historical records about water conservancy in the Ming and Qing dynasties, he or she is bound to find something about a monk called Dalang. It is because the Dalang Weir (“the Weir”) was named after his Buddhist name. The intake of the Weir was set on the current Jinma River of Wenjiang, Chengdu. Since its completion over 300 years ago, it has played an important role in water conservancy and constitutes a key part of the Dujiangyan Irrigation System. It is the only existing ancient water conservancy project that draws water directly from the Minjiang River for the section from Baopingkou (mouth of treasure vase) on the left bank in the Chengdu Plain to the river estuary at Pengshan. As there are few articles studying Dalang and his contribution to water conservancy (Long, 2004), it is necessary to explore his accomplishment by academic standards. His contribution proves that Buddhism and Buddhists took an active part in public welfare undertakings during special historical periods and made outstanding contributions to society.

### **The Life of Monk Dalang and the Historical Background of His Contribution**

Although there is some information about the life of Ch’an Master Dalang recorded and distributed over the past 300 years, details are inadequate, so special studies were needed. Since this paper is mainly concerned with his contribution to water conservancy, a brief introduction is indispensable here. Dalang was born in 1616, with the secular name of Yang Jinxi, which was in the 44th year of Ming Emperor Wanli’s reign, in a place which is in present-day Chongqing. In the fifth year of Qing Emperor Shunzhi’s reign, he had his head shaved and became a monk at Tianfeng Mountain. In the 13th year of Emperor Shunzhi’s reign (1656), he started to observe Vassa. In February of 1689, which was the 28th year of Emperor Kangxi’s reign, he passed away at the age of 74, during meditation. It was Ch’an master Shuyunchan who tonsured him. In the end, Dalang became the only inheritor of the mantle of Ch’an master Shexiangne (Fu, 1981). The temples where he once resided include Sanseng Temple in Shuangliu, Yuantong Temple in Chengdu, and Longzang Temple in Xinfan. His contribution to water conservancy was made when he resided in Shuangliu. In the 17th year of Emperor Shunzhi’s reign (1660), he moved from Xinghua Temple at Wuzhong Mountain in Dayi to Sansheng Temple. When autumn began in the 18th year, he was invited to return to Wuzhong Mountain. In the first year of Emperor Kangxi’s reign (1661), he was invited by Yuan Jingxian, magistrate of Shuangliu County to reside in Sansheng Temple again. From the autumn of that year to the spring of the next year, he raised enough resources and completed the Weir project. Thereafter, “he lived in a thatched hut on the side of Jinhua Bridge,” and wove straw sandals and offered them, for free, to people “for totally three years” (Jia & Chen, 2010). In October of the fourth year of Emperor Kangxi’s reign (1665), “he was invited by Yuan Buchang, Prefect of Chengdu, to become the abbot of Yuantong Temple.” In

the fifth year (1666), he retreated at Longzang Temple of Xinfan (Long, 2004, p. 818). Local people were very grateful to him for his remarkable contribution to water conservancy, so they petitioned twice for granting him a certain title. In the 11th year of Emperor Yongzheng's reign, the Qing court conferred on him the title of "Most Benevolent and Boundless Ch'an Immortal Perfected Purple Yang." In the sixth year of Emperor Guangxu's reign, he was bestowed with an additional title of "Ch'an master Jinghui" (serenity and kindness).

His profile shows that he lived during the late Ming and early Qing dynasties. He made his contribution to water conservancy when he was in the prime of life—at the age of 47 or 48. The historical background for his initiation of the project, however, was complicated. The Bashu region was devastated at that time after suffering from four decades of chaos, wars, massacres, plagues, and other natural disasters. Historical records show that starting from the first year of Emperor Tianqi's reign of the Ming Dynasty, there had been a large-scale rebellion occurring in Gulin of Sichuan and Guizhou. Chengdu had been besieged for over 100 days and local people had been suffering. Then a riot took place in Shaanxi in the first year of Emperor Chongzhen's reign. The fighting extended swiftly to neighboring regions so that all of Sichuan became a battlefield that was occupied consecutively and looted recklessly by different rebel forces from the sixth year of Ming Emperor Chongzhen's reign to the 17th year of Qing Emperor Shunzhi's reign (1660). During this period, Sichuan was also subject to famine and plagues. According to *Wu Ma Xian Sheng Ji Nian* (Chronicle of Mr. Wuma), there was a large-scale famine in Sichuan in the fourth year of Qing Emperor Shunzhi's reign (1647) and "They started to know that the bitterness of hunger was more miserable to people than the cruelty of battles." It was recorded that in the fifth year, the famine became more severe (Fu, 1981, Vol. II, pp. 117–122).

It is hard for modern people to imagine the bleak and arid scene resulting from four decades of natural disasters and man-made calamities. When Yan Yunzhao, who was an imperial scholar, conferred in the Wuxu year of Qing Emperor Shunzhi (1658) accompanied his friend to Sichuan to take office, he wrote a poem to depict what he saw. "The recent uprising is going to its doom and the west of Sichuan sheds blood like water. People lead a hard and toilsome life here. The population is decreasing and invaders are so many." When Zhang Dedi went to Sichuan to take the post of governor in the first year of Qing Emperor Kangxi's reign, he entered the area from northern Sichuan through Guangyuan and described what he saw as, "When I look around on my way, I see only groves of the bush all the day. There is no sign of cooking for every tens of miles away." He arrived at Luzhou via Shunqing and Chongqing and then went upstream by boat. He wrote his observation as, "We heard no other voices of humans when we sailed for a whole day. We saw only empty mountains and dense bamboo forests far away" (Jia & Chen, 2010, p. 61). The scene in the Chengdu Plain was very bad as well. Take Wenjiang, one of its counties as an example. "The seat of the County was burned down and lay in ruins too" (CCCLG Book 6, 2017, Vol. 1 Establishment, p. 13). It was recorded that

“When a census was conducted in the 16th year of Emperor Shunzhi’s reign, there were only 32 households, including 31 men and 23 women. Wild plants grew everywhere as if heaven had just been separated from the earth” (ibid, Vol. 3, Civil Administration, p. 40).

Monk Dalang, as a survivor and witness of this miserable period, thus becoming more benevolent with his understanding of the pains. On the other hand, historical records show that in the 17th year of Qing Emperor Shunzhi’s reign (1660), the Dujiangyan Irrigation System was renovated, the Dacheng Hall of the Confucius Temple in Chengdu was restored, and the prefectural city was constructed. The completion of these structures evidenced that the political situation in Sichuan had become stable. The population in Chengdu and even in the entire Sichuan province started to soar under favorable policies for pacifying exiles and promoting migration. The rebound in agricultural production and social economy inevitably led to a sharp rise in the demand for water conservancy. Therefore, when Dalang was invited to stay in the Sansheng Temple again in the first year of Qing Emperor Kangxi’s reign, it is supposed that he did not have much hesitation to initiate the project as he went ahead with raising resources for construction of the Weir. Based on further study, it seems that at the beginning he still had some wavering moments, at least at the time he was still in Wuzhong Mountain after receiving the invitation from Yuan Jingxian, he must have inquired inwardly about this issue again and again, as shown in his poem below:

“With the pure land in Xinghua Temple, should I observe Vassa to remain stable?

When I meditate to reflect, a tempest may sometimes come over, causing swarms of fish with golden scales to suddenly jump out of water.”

At that time, people lived in destitution and society was in urgent need of a revival. Seeing this, Dalang could not detach himself from mundane sufferings. He thought that participating in social affairs and doing something required by the times were also a way to practice the worldly dharma of Buddhism. He questioned himself, “If the ultimate goal of Buddhists is to liberate sentient beings, can I achieve that simply by understanding Ch’an and meditating?” In this poem, the master convinced himself that his decision was right. After residing in Sansheng Temple of Shuangliu and reading the *Zun Su Xing Lu* (Practices of Venerable Old Monks), he compared his conduct with theirs and felt ashamed of himself because he had not yet made any contributions. The feeling of nihility was so strong that he made up his mind that he would not make his monastic life meaningless through inaction (Long, 2004, p. 818).

The poem on the true meaning of the pure land written by Dalang when he was in Wuzhong Mountain implied to a certain degree his determination to construct the Weir. It can be concluded that before he stepped out of the mountain, he had already been ready in his mind to do something beneficial to society and the people. The poem itself also shows an auspicious sign and the joy of Ch’an. It is exactly a reflection that his practice of Buddhism had already reached a certain high level.

## Dalang's Full Participation into the Weir Construction

The first time Dalang was conferred a title by the Qing court for his contribution to water conservancy was during the reign of Emperor Yongzheng, but the first record of the Weir project, discovered to date, was written by Liu Yuan (1768–1855) who was born in the reign of Emperor Qianlong. The title of the article is *Dalang Yan Ji* (Records of Dalang Weir), hereinafter referred to as “the Records” (CCCLG Book 4, 2017, Vol. 4, Art and Literature: Records, p. 372). Various documents in later ages about the Dalang Weir were all derived from this article. Although this article has some errors and deficiencies, it is very precious since it is the first record and was written by Liu Yuan, acclaimed as a “renowned Confucian scholar in western Sichuan.” Liu was born in a place within the irrigation area of the Dalang Weir and is also buried there. His home was near the Sansheng Temple. Therefore, since he was quite respectful to the venerable Ch’an Master Dalang for benefitting the local people, it was natural for him to pay much attention to and understand what Dalang had done. But his article also shows his inadequacy in obtaining necessary information: first, he did not mention the secular name of Dalang; second, he failed to mention the dates of birth and death, and place of origin of Dalang; third, he stated that Dalang had resided in Sansheng Temple in his later years but described nothing or was just utterly ignorant about his days in Longzang Temple of Xinfan. It is sure, however, that he had relatively specific observations and references. Otherwise, how could he know Dalang’s friendship with Yuan Jingxian and Yuan Buchang? He even quoted two poems made by Dalang and included in his article many details about how Dalang raised the resources for constructing the Weir. Let us take the timeline of the Records as the axis to explore the details of the Weir project in combination with derivative documents of later dynasties and the topography of the irrigation area.

### The Reason for Dalang’s Water Conservancy Project

The area irrigated through the Weir is located between the Jinma River and the Yangliu River which run north to south. The location stated in the Records—south of the Liujiang River (Yangliu River) and east of the Jinma River—is inaccurate. In the *Min Guo Shuangliu Xian Zhi* (Local Chronicles of Shuangliu County During the Republic of China Period), the location was corrected to be to the “west of the Yangliu River” (ibid, Vol. 3, Biographies of Skillful Craftsmen, p. 360). Topographically speaking, the irrigation area looked like the lower half of a narrow islet divided from the Chengdu Plain by the Yangliu River. From south to north, it was under the jurisdiction of Wenjiang, Shuangliu, and Xinjin counties respectively. The records show that “the river flowed low, and the bank was high so that the water could not be diverted for use.” In previous dynasties, this area once relied on the Shazi Weir which diverted a tributary (called the Shazi River) from the Yangliu River for irrigation, but only part of the area could benefit from that weir due to limited coverage. Once the Yangliu River rose

to flow over the weir and the Jinma River had inadequate flow, then the area irrigated through the Shazi Weir would be in shortage of water. In the 17th year of Emperor Shunzhi's reign, Dujiangyan, the irrigation system deserted for ages was successfully restored. At that time, the Jiang'an River (Weir) and the Yangliu River needed to be dredged and have new ditches dug (ibid). Therefore, when Dalang resided in Sansheng Temple again in the first year of Emperor Kangxi's reign, people in the entire irrigation area had a strong desire to get the issue of water shortage solved. This situation weighed heavily on Dalang's mind, so he decided to initiate a water conservancy project to satisfy local people's needs. The situation of the water shortage and the reason for launching this project are proven by documents of later dynasties which state that the Shazi Weir "could not provide enough water for irrigation" and "water there often dried up." The *Epigraph on the Dagoba of Ch'an Master Dalang* states that "For a-hundred-li <sup>①</sup> distance from Wenjiang to Xinjin, tens of thousands of *qing* <sup>②</sup> of farmland located high had no water to irrigate" (Long, 2004, p. 818), which described the scale in detail.

Alms-Begging for water conservancy: the Records states that: "Dalang aimed to dig ditches to benefit the local people, but he was concerned that they would not support the project. So, he went to the involved places as a mendicant. He called on houses door by door only to ask people to sign their names on a donation roster instead of receiving money or food directly. If he was rejected, he would sit or lie down on the household's doorstep for days and be determined not to leave until the owner of the house finally agreed to sign." These words show clearly that he did not beg for money or grain but only for people's commitment to donate available resources for construction. Therefore, he asked for signatures as the guarantee of their promises. "He went about to the involved places" means that he had in his mind the layout of the ditches. "He called on houses door by door" shows that he was begging for donations of land for construction. "He would sit or lie down on the household's doorstep for days and be determined not to leave" reflects his persistence and resilience and that he would never give up until his goal was achieved. Certainly, his perseverance and actions also played a role in convincing and mobilizing the local people. In a nutshell, he made the survey, land acquisition, and mobilization at the same time by means of his unique alms-begging and solved many difficult issues encountered during the project with this single approach. This method not only stands for a touching part of the Weir project, but also an exceptional approach in the ancient and modern histories of water conservancy at home and abroad.

During Emperor Guangxu's reign, people petitioned again to the Qing court for conferring on him a title. In the *Li Bu Jin Zhou Wei Zun Zhi Jie Fu Cou Shi* (Report by the Ministry of Rites on Reviewing the Case for Obeying), places and characters were elaborated more clearly on his contribution for land acquisition and construction. It also proved that during that time,

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① One *li* is equivalent to about 500 meters.

② One *qing* is equivalent to 6.6667 hectares.

the water channels of the Weir “went through the farmland of Du and Song families living in the Liujiahao Community of Wenjiang” (CCCLG, Book 6, 2017). *She Feng Jinghui Ch'an Shi Ci Tang Ji* (A Record of the Memorial Hall for Ch'an Master Jinghui) written by Gu Fuchu also goes into such detail and praises his “sincerity and devotion which had successfully influenced the two families to become willing and generous enough to provide their fertile farmland for public use” (ibid).

In the *Min Guo Shuangliu Xian Zhi*, it is stated that “When Dalang surveyed the topography for the water channels, he found that one section had to cross the farmland of the Song and Du families in the Liujiahao Community of Wenjiang. It seemed that the land could not be purchased so he begged the owners for many days. Once he obtained their consents, he requested the deadline for applying digging tools” (CCCLG Book 4, 2017, Vol. 3, Biographies of Skillful Craftsmen, p. 360). This description agrees with the original information written in relevant texts of the late Qing Dynasty but adds some details about raising labor resources and even tools.

### Joint Efforts of Officials and the Populace for Channeling

During the first year of Emperor Kangxi's reign, Yuan Jingxian, magistrate of Shuangliu County, invited Dalang to dwell in the Sansheng Temple. As the chief of the county, he did not even have an office, so he had to “lodge in the temple” (ibid, Vol. 1, Temples, p. 264). So, he actually lived with Dalang under the same roof. This was an extraordinary scene in which officials underwent hardships and shouldered the same missions with the populace. There were other similar scenes in Chengdu in those days, as stated in the *General History of Chengdu*: In the early Qing Dynasty, Pengxian County featured a small population and vast areas of barren lands; Li Zhiji, the county magistrate, having no office available so “he lived with local people and they opened up wasteland and grew grain along the Yeya River” (Chen & Li, 2011, p. 192). Another piece of evidence comes from the *Daoguang Xinjin Xian Zhi* (Local Chronicles of Xinjin County During Qing Emperor Daoguang's Reign), which mentions that “when [Chang Jiujing] served as the magistrate of Xinjin County in the third year of Emperor Kangxi's reign, the population was so scarce that when men and women went to farm, they had to send their children to the magistrate office so that the officials there could take care of them and they got their children back after finishing their work in the evening. When crops ripened, they shared rice with officials and praised the latter for their ‘parental’ behaviors” (CCCLG Book 11, 2017, Vol. 31, Administrative Achievements of Officials, p. 326). It is under such an historical background and atmosphere that many great works can often be made. In this sense, Dalang's project is an effort made and completed under dire circumstances, and important because water conservancy played a significant role in ancient agricultural societies. Dalang chose to initiate such a project to solve a crucial issue concerning people's livelihoods. That is why he was able to gain great support from the local people.

The Records state that “the plan of channeling was soon proposed to the magistrates of Wenjiang and Xinjin,” “the magistrates recruited craftsmen to offer support,” and “then ditches were dug from Wenjiang to Xinjin.” All the information documents official and public support for his proposal so that the project could be completed with joint efforts. The *Chronicles of Shuangliu* state that “the ditches covered a distance of over three *li* and the project was carried out day and night. When the weir was finally built, everyone thought its completion could be attributable to some divine power” (CCCLG Book 4, 2017, Vol. 3, Biographies of Skillful Craftsmen, p. 360). Though the description is somewhat overstated, it depicts the busy construction scene and acknowledges that the Weir cannot have been built so smoothly without joint efforts.

### Years of Construction

The Records state that “It was in the Gengzi year during the reign of Emperor Shunzi that Dalang initiated the project. At that time, Shuangliu County was merged into Xinjin County, and Yuan Jingxian, magistrate of Xinjin, was a friend of Dalang. That was why they could make their contributions to the project.” In fact, some information in the above description is not accurate: first, historical data shows that it was not in the Gengzi year that Shuangliu County was merged into Xinjin County. In the *Daoguang Xinjin Xian Zhi*, it is stated that “as Shuangliu County had a scarce population but vast land, it was merged into Xinjin County in the sixth year of Emperor Kangxi’s reign” (CCCLG Book 11, 2017, Vol. 2, Evolution, p. 215). In the *Min Guo Shuangliu Xian Zhi*, it is also mentioned that “Shuangliu County was cancelled in the sixth year of Emperor Kangxi’s reign” (CCCLG Book 4, 2017, Vol. 2, Officials, p. 305). Therefore, it is obvious that Shuangliu County was not merged into Xinjin County in the 17th year of Emperor Shunzi’s reign. Second, it was not in the Gengzi year that Dalang and Yuan Jingxian completed this project through their joint efforts. Historical facts show that Yuan “served as the magistrate of Shuangliu County starting from the first year of Emperor Kangxi’s reign” (ibid). Therefore, it is incorrect to mention him as the magistrate of Xinjin. The *Dalang Ch’an Shi Ta Ming* (Epigraph on the Dagoba of Ch’an Master Dalang) also states that “In October of the *yisi* year, Yuan Buchang, Prefect of Chengdu, invited Dalang to be the Abbot of Yuantong Temple.” Here, *yisi* refers to the fourth year of Emperor Kangxi’s reign. Before going to Yuantong Temple, Dalang had stayed at a hut near Jinhua Bridge for three years to weave and offer straw sandals to the local people, for free. Based on this information, we can infer that he had resided in Sansheng Temple until the second year of Emperor Kangxi’s reign. Could he start the project after he went to stay at a hut near Jinhua Bridge? This was highly impossible because Jinhua Bridge was located northwest to the southern provincial trunk road, ten *li* away from the east of the county” (Yang, 1967, III, Vol. 31, Geology—Ferries and Bridges 12, p. 1304). Sansheng Temple however “was located 15 *li* away from the west of the county seat” (CCCLG Book 4, 2017, Vol. 1, Temples, p. 263) while the intake of the Weir lay in the Wenjiang

County and to the northwest of Sansheng Temple. With scores of *li* between the places, how could he participate in the project every day? Therefore, we can conclude that it is true that Dalang and Yuan Jingxian collaborated to complete the project, but they did not achieve it in the Gengzi year but most likely from autumn of the first year to the spring of the second year of Emperor Kangxi's reign. Over thousands of years, the period from autumn to spring of the next year has always been a crucial time for water conservancy construction in the Chengdu Plain, and even in other parts of China.

### Significant Benefit of the Project

The Records state that, "Water was diverted from Wenjiang to Xinjin, covering a distance of over 100 *li* and irrigating tens of thousands of *qing* of farmland." In the *Imperial Order on the Journey of the Provincial Administrative Commissioner: Report of Investigation in Detail According to Official Reply*, it is stated that, "So far it has been used for nearly 200 seasons. Both officials and people have participated in the project and expanded it with branch ditches so that the scale of the weir is increasing," and "benefiting tens of thousands of *mu*<sup>①</sup> of farmland in the three counties" (CCCLG Book 6, 2017). In the *Foreword to the Inscription for Monk Dalang Conferred as Ch'an Master Jinghui on the Back of the Tablet*, written by Huang Yungu, it is stated that, "Ditches were dug and the weir was built to irrigate tens of thousands of *mu* of farmland, benefiting the three counties endlessly" (ibid). In the *Report by the Ministry of Rites on Reviewing the Case for Obeying Imperial Decree*, it is detailed that, "The river water was diverted for about three *li* to reach Xifeng Bridge, one of the places marking the boundary of Shuangliu County. After joining with the Shazi River, it diverged into many branches to irrigate 50 to 60 thousand *mu* of farmland in Shuangliu and Xinjin. Later it was reinforced and expanded to irrigate hundreds of thousands of *mu* of farmland" (ibid). In the above quotes, neither the project scale nor the irrigation area is clearly stated. But all the writers of the above texts shared the same understanding that the Weir was indeed a water supply project. Dalang's contribution was mainly reflected in his initiation and preliminary planning of the project, and actual water diversion for about three *li*. The expansion of the irrigation area was a significant result from joint efforts of officials and people of later generations who continued the project and built new branch ditches.

Behind the intention to credit the project solely to Dalang, despite later generations' efforts for several hundreds of years, and to emphasize the large scale of the project was most likely because people worried that if the scale was not large enough, then Dalang would not deserve the titles of "Most Benevolent and Boundless Ch'an Immortal Perfected Purple Yang" and "Jinghui" conferred by the Qing court. This is obviously over-scrupulous. Dalang's virtue lies in his initiation of the project. As to other merits, such as his good deeds to society, his courage

① One *mu* is equivalent to nearly 667 square meters.

to overcome obstacles, and his action on his own to beg alms for the construction, they are all just highlights of his contribution to the Weir project. Of course, it is fair to say that the project is of great significance. After all, it has benefited this area for hundreds of years and still useful today.

### **Evaluation of the Weir Project: Saving the Lives of People and Benefiting Generations**

All water conservancy projects in history deserve respect from later generations. Peng Renzhan, a scholar from Xinjin of Chengdu in the Qing Dynasty wrote his insightful opinions on water conservancy as: “Anyone who contributes to water conservancy in fact does something like saving the lives of ten thousand people and benefiting ten thousand generations. Anyone who protects the lives of ten thousand people will be regarded as a great man for his contributions. Any project that can benefit ten thousand generations will be acclaimed by people forever.” It is mentioned in the *Book of Changes* that, “To be able to long continue shows the virtue of the wise and able man; to be able to become great is the heritage he will acquire.” Had it not been for such wise and able men, such great works could not have been completed.” (CCCLG Book 11, 2017, Vol. 40, Art and Literature II, p. 458). It is true indeed. The Weir is undoubtedly a project “saving ten thousand lives and benefiting ten thousand generations.” With such a long history, it is a legacy of water conservancy culture and worthy of extensive study.

From the level of material culture, the Weir’s benefit is sustainable in that it is still useful to the local people in Wenjiang, Shuangliu, and Xinjin. Its main purpose, from initiation to completion, and through to modern times, is for agricultural irrigation. In the contemporary era, it is also used for diverting water for industrial consumption, urban landscaping, and ecosystem conservation. Therefore, it is of vital practical significance to Chengdu’s development as a park city. In 1970, water diversion of the Yangliu River was changed to be done at Qinglongzui of the Jiang’an River. From then on, the irrigation area of the Weir then naturally became a part of the irrigation system of Dujiangyan in modern times. Seen from this perspective, the Weir can be considered a key expansion conducted in the early Qing Dynasty for today’s Dujiangyan irrigation area. Then is the headwater of the Weir, which withdraws water from the Minjiang River, still valuable? The answer is Yes, for sure. It is because the segment of the Minjiang River from Baopingkou of Dujiangyan to the current intake of the Weir covers a distance of over 40 kilometers and features constant water flow even in non-flood seasons. How can we let such abundant water resources just flow away without our utilization? In recent years, because of riverbed entrenchment, the previous water intake of the Weir could not function properly, but the local water conservancy authority did not abandon the Weir, but relocated the intake upward along the existing levee to ensure that this age-old Weir can still play its role. Gu Fuchu

of the Qing Dynasty once boldly compared Dalang to Li Bing. He wrote “Water conservancy activities in Sichuan were first initiated by prefecture chief Li Bing. Though the significance of Dalang’s contribution cannot match his, considering Dalang’s work is beneficial to three counties and generations for hundreds of years, its significance is broad as well” (CCCLG Book 6, 2017). Now it seems that this comment is still within measure.

From the level of spiritual culture, the Weir project has rich connotations. First, from the perspective of water conservancy, Dalang carried on the basic logic of Shu’s water culture cultivated by Yu the Great, King Bieling of Shu, and Li Bing during their water control activities. The strategies that Dalang adopted were still the methods created by Yu the Great—“regulating the river at Minshan Mountain, channeling water to the east.” The fundamental principle was still to make the best use of topography to guide the water resources for human use. The concrete measures were still to divert water from the left bank of the Minjiang River for irrigating the Chengdu Plain (Xie, 2019, pp. 134–137). To put it in another way, the spirit implied by the Weir project was in line with that of Li Bing and the scientific features of Dujiangyan commonly referred to by us. Second, from the perspective of special historical background for its construction, the Weir project is a typical result of post-disaster reconstruction. During the dynasty change from Ming to Qing which was characterized by four decades of natural disasters and man-made calamities in this area, the Weir project was like flowers blossoming on a stretch of burned land. It was aimed at improving people’s livelihoods and it brought warmth and hope to them. Third, from the perspective of Dalang’s social status and actions, the Weir project is an historically unique and monumental work. Dalang shouldered the tough task, raised essential resources, and solved the difficulties of the project on his own, including land acquisitions, route surveys, populace mobilizations, and collection of tools and means of production. He made the project a great success and the project also fulfilled his commitment to himself. Fourth, from the perspective of the site of the project, the joint efforts of officials and the people were very important. Dalang’s activities included going to related communities to mobilize people. Since what he was going to accomplish was closely related to people’s livelihoods, and for their benefits, it stood to reason that the project won active support and positive responses from the local people.

After the completion of the Weir, Dalang did another benefaction. He personally wove and offered straw sandals for free at Jinhua Hut. This was an extension of his selfless contributions. He did this starting from the second year of Emperor Kangxi’s reign till he was invited to reside in Yuantong Temple by Yuan Buchang, Prefect of Chengdu in October of the fourth year of Emperor Kangxi’s reign. This conduct was highly acclaimed by people because it was done for three years in a row.

His endeavor to do good for society was reflected in his poem titled *Offer Straw Sandals for Free at Jinhua Hut* (CCCLG, Book 11, 2017, Manuscript Collection of Xinfan, Vol. 22, Poetry, p. 158):

“Don’t be afraid of the difficult roads in Sichuan as one is determined to climb thousands of mountains there without fear.

As a monk, I can help you with nothing else but straw sandals for free.”

It can be seen from the above evidence that Ch’an Master Dalang participated in social welfare undertakings with the benevolence, practiced the worldly dharma of Buddhism in his daily life, and achieved the lofty goal of benefiting the sentient beings with his actions.

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(Editor: Xiong Xianwei)

# *How Is Tech Criticism Possible? On the Significance of Digital Technology as a Paradigm of Literary Criticism*

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**Abstract:** Technology is one of the basic dimensions of literary criticism, but it is often ignored for multiple reasons. As digital technology intervenes in literary production, literary criticism is being approached through the technological dimension. Technology-Based literary criticism now transcends linguistic centrism, using digital technology as a means and method of literary criticism, and bringing technology to the center stage of literary criticism. Technology-Based literary criticism, which features an intersection of interpretive and empirical perspectives, triggers multiple transmutations of the subjects of literary criticism, and also enriches the connotations of literary texts. Tech criticism came from, and has evolved with the changes of literary criticism in the productive forces and the relations of production, which are driven by digital technology. What digital technology has opened up for literary criticism is a comprehensive field, where literary criticism is in a transboundary dynamic of “relational production.” Therefore, we need to develop a sense of relation and a sense of systems to better interpret present-day literary criticism.

**Keywords:** literary criticism, criticism of technology/tech criticism, transformation of criticism, technological turn

**DOI:** <http://dx.doi.org/10.19873/j.cnki.2096-0212.2022.01.007>

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Foundation item: This paper is a staged research result of “Digital Technology and the Paradigm Shift of Contemporary Chinese Literary and Art Criticism” (M21JC059), a program funded by Hangzhou Municipal Plan for Philosophy and Social Sciences.

Literary criticism is subject to the overall field of artistic production and features both synchrony and diachrony, notwithstanding its subjectivity and individuality. From the “linguistic turn” and the “cultural turn,” to the “image turn” and the “new media turn,” a variety of elements (language, culture, image, intermediary, etc.) have respectively constrained literary production in a given period, and subsequently triggered paradigm shifts in the field of literary criticism. In recent years, driven by a fresh wave of digital transformations, new literary forms, such as interactive fiction, artificial intelligence (AI) fiction, and virtual reality (VR) fiction have emerged one after another. There are intensive interactions with digital technology in all aspects of literature (form, style, narrative mode, social impact, aesthetic function, productive forces, relations of production, etc.). In such a context, the field of literary criticism also begins to draw on digital technology. While focusing on new changes in literature, the application has also included criticism of itself, and the “technological turn” in literary criticism has become a subject of heated debate in the theoretical realm. Will digital technology give rise to a new paradigm of technology-based literary criticism? If so, what problem domains will technology-based literary criticism have, and what operating law will it follow? This article attempts to find answers to these questions.

### **Technology as a Paradigm of Literary Criticism**

Can technology be directly related to literary criticism?<sup>①</sup> Most people do not think so. They hold that literary criticism has no direct relation to technology, because it is about theoretical discussions of the aesthetics, ideology, and values of literary works as verbal expressions, and also of writers, literary phenomena, literary trends, and schools. Those who hold such a view focus only on the metaphysical speculation of critical activity and see literary criticism as a text-based linguistic analysis for the purpose of searching for meaning, values, and ideas behind literary works as a representational system. To put it another way, their primary concern is what criticism is and what it is meant to do. M. H. Abrams, an American literary critic, defines literary criticism as “the overall term for studies concerned with defining, classifying, analyzing, interpreting, and evaluating works of literature” (Abrams, 2009, p. 100). Another American literary critic Fredric Jameson argues that literary criticism is “not so much an interpretation of content as it is a revealing of it, a laying bare, a restoration of the original message, the original experience, from beneath the distortions of the censor” (Jameson, 2004, pp. 80–82). Literary criticism, whether it is about analysis, evaluation, or mining of information and experience, is explicitly presented as a rational or perceptual intellectual activity that involves value judgments and draws support from language to search for meanings. This view has its rational grounds and should be a key topic of literary criticism. Yet, this does not mean that literary criticism can ignore its relation to technology.

The close relation of literature itself with technology gives technology a unique place in the field of

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① The technology discussed in this article is tangible technology as a “tool,” not intangible technology as a “skill/technique.”

literary criticism. Literature is a text system that is based on language and capable of creating aesthetic imagery, conveying emotions, and expressing specific subjective perceptions and values.<sup>①</sup> In contrast to art forms, such as painting, sculpture, and dance, literature is more about intellectual dimensions, and remains associated with tangible technology (tools, processes, equipment, intermediaries, etc.). As pointed out by Walter Benjamin (2014, p. 20) in *Der Autor als Produzent* [*The Author as Producer*], technology is a major determinant of artistic creation, and the advancement of technology determines the advancement of artistic creation. It is fair to say that technological developments are crucial to the historical evolution of literature. In terms of carrier, the emergence of oral literature, written literature, and Internet literature are dependent on the development of mediating technologies. In terms of content, science fiction, military fiction, and game fiction have come into being thanks to mankind's space exploration and progress in weapons and computer technology. In terms of creative ideas, there is also an underlying technologically rational motive behind the emergence of new literary genres, such as futurism, surrealism, existentialism, and magical realism. The same is also true of creative and expressive techniques. For example, the Chinese written poetry of the Tang and Song dynasties outperformed the Chinese oral poetry of the pre-Qin period in organizational form, linguistic expression, imagery creation, and affective communication. Moreover, language as the basis of literature is actually related to technology. Technological progress helps to change the meaning of language, generate new vocabulary, and diversify its usage.

Historical development shows that almost every important conceptual or methodological transformation of literary criticism was driven by technology. Take the imitation theory, the cornerstone of Western literary criticism, as an example. The imitation theory would not have come into being without tools of artistic production and dissemination, such as pens and parchment. The “mirror” and “representation” paradigms of literary criticism that spawned from the imitation theory during the Renaissance were actually directly related to the invention of the mirror as a visual tool and the perspective as a method. Since the beginning of the 20th century, critical paradigms, such as form criticism, “new criticism,” narratology, and structuralism, were successively developed. They were a continuation of scientism from the 17th and 18th centuries, with a distinct technological logic behind them. Since the second half of the 20th century, emerging electronic communication technologies, such as radio, television, film, and the Internet, have been introduced to the field of literary production and dissemination. Subsequently, cultural studies, media criticism, image criticism, and Internet literary criticism came into being one after another, exerting a far-reaching influence. All such transformations were essentially related to either change in the mode of production of material things or technological revolution and were therefore inevitable outcomes of new technology-driven progress in productive forces and improvement of human mindset.

Although the coupling of technology and literary criticism is inevitable, there is an implicit role for technology in literary criticism. After all, the evolution of technological intervention in literature

① As the concept and evolution of literature are quite complex, only a simplified definition is given here.

is a slow process. For example, it was nearly two thousand years after the formation of (paper-based) written literature that Internet literature and photographic literature were developed. This slow process makes it easy for criticism itself to ignore the impact of technology. The result of technological intervention in the subject of literary criticism is an indirect impact. In most cases, the subject (i.e., the critic) conducts a literary analysis to interpret the meaning,<sup>①</sup> or answer the author-related questions, thereby exploring the political, economic, social, and aesthetic factors hidden between the lines. Lionello Venturi (2005, p. 11), an Italian art critic, asks, “What is criticism if not a relationship between a principle of judgment and the intuition of a work of art or of an artistic personality?” The emphasis on author/artist and work often reduces technology to a mere intermediary, preventing it from approaching the center stage of literary criticism. In addition, literature as a social ideology created by man is inherently convergent with socially conscious activities concerning politics, culture, and economy, and is therefore influential enough to sway the subject’s choice. That is why technology is unlikely to be a focus of literary criticism.

Technology’s role in literary criticism becomes explicit as it intervenes directly in the practice of literary production, generating a number of new literary genres, phenomena, and trends based on or named after technology. The era of mechanical reproduction, represented by camera and cinematograph, marked the beginning of technology as a real paradigm of literary criticism. Walter Benjamin argues in the *Work of Art in the Age of Mechanical Reproduction* (2008) that mechanical reproduction allows art’s exhibition value [ausstel-lungswert] to displace worship value [kultwert] all along the line, and that the “aura” of the work of art gradually fades away, shifting its reception from attentive concentration to diversion. Benjamin was the first critic in the history of literature and art who systematically addressed a series of technological effects on art. Literature as a form of art naturally cannot skip this process. The most prominent manifestation is the change of imagery creation in literature. The generation of literary imagery is directly related to abstract and discursive language. “It (literary imagery) does not refer to a visual image full of emotion, but rather to an abstract image reflective of insight acquired by the reader through text decoding” (Chai, 2013, p. 78). Mechanical reproduction, through mass production of images, amplifies sensory presence and intuitive experience in artistic production, making the visible “image” increasingly important and the virtual, abstract “image” on the wane. This can be exemplified by a large number of TV series scripts adapted from web fiction over the past years. In the era of virtual “image” creation, which is dominated by digital technology, the change of imagery is even more dramatic. There are numerous scenes featuring “concise depiction but with endless message” in literary works, which require readers’ fertile imagination. Scenes such as the “Havoc in Heaven” (in *Journey to the West*) and the “Jia Baoyu Visits the Land of Illusion” (in *The Dream of the Red Chamber*) can be vividly represented through digital simulations.

In the 21st century, there have been extensive discussions on photographic literature, literary

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① This is determined by the system of aesthetic ideology, which sees literature as implications of discourse.

visualization, Internet literature, and new media literature in the community of Chinese literary criticism. These discussions also cover topics on film culture, television culture, and Internet culture, which were already under debate in the 20th century in the West. Literary criticism is shifting from the “print paradigm” to the “electronic paradigm” and the “online paradigm,” with critical discourses emerging successively in the dimensions of images, new media, materiality, Internet, post-human, and AI. In particular, driven by new digital technologies, literary criticism has been driven to go online, has become digital and smart, and has entered a stage of holistic examination of “technology.” Clearly, a distinct “technological turn” in literary criticism is taking place. At this stage, technology has a significant influence on literary and artistic production and even more extensive fields of social life, thus moving from the backstage to the center stage of literary criticism and is attempting to integrate the political, aesthetic, economic, and cultural factors into an organic whole.

### **Theoretical Guidance of Technology-Based Literary Criticism**

The initiation of the “technological turn” means that the paradigms of the previous field of literary criticism are no longer applicable to the interpretation of new phenomena of literary production, dissemination, and consumption. However, it is noteworthy that although the technologies of printing, mechanical reproduction, and electronic communication have influenced literature in various degrees, their influence is not comprehensive. They can only pave the way for the “technological turn” rather than initiate it in the true sense. The technological carriers of the “technological turn” are binary numbers system-enabled digital technologies, such as computers, the mobile Internet, the Internet of Things (IoT), big data, and AI. Alongside this “technological turn” is a major social transformation:

Unlike traditional technology (e.g., television) which only has an impact on people’s cultural activities, new technologies (IoT, blockchain, big data, AI, etc.) begin to increase their presence in the production of material things or physical manufacturing. New technologies help the world go digital, online, and smart, which aligns with the mode of material production, as well as the mode of cultural and intellectual production in today’s global context (Liu, 2018, pp. 5–12).

At this stage, therefore, digital technology has brought about unprecedented changes in literary production and conception. More importantly, it has deeply integrated with current activities of social production in the areas of economy, culture, education, tourism, medical care, travel, and dining to improve the forms of social interactions and cultural and artistic experiences, and even trigger a drastic reform of the “way of being.” This is a new paradigm in literary criticism which is based on digital technology.

As an approach to the disclosure and judgment of what literary texts imply, tech criticism is no longer confined to linguistic centrism followed by traditional literary criticism, but makes technological elements (imaging, Internet, algorithms, AI, etc.) a focus of the activities of literary criticism. Technology ceases to be attached to language in literary criticism but begins to exist as

an independent intermediary. Tech criticism uses digital technology as a perspective and method of literary interpretation, attaching importance to the meaning generated through the intervention of digital technology in the production of literary texts (content, theme, narrative, genre) and to the function, value, and impact of technological elements in the process of literary dissemination, consumption, reception, derivation, and regeneration. Moreover, as digital technology's interventions in various fields of social production have brought about a "technology plus" trend, its intervention in literature shows a distinct dynamic of "big literature" or "big art" accordingly. Thanks to such a dynamic, the aesthetic, cultural, and social functions of literature on which traditional literary criticism focuses, are restarted by technology in a new dimension and thus gain new meaning, instead of being weakened.

Digital technology-based criticism features an intersection of interpretive and empirical perspectives. The purpose of literary criticism is to discover the aesthetic value of a text and the deeper meaning behind it. The subject of literary criticism must go deep into the reading of a literary work and take the initiative to grasp it before interpreting it with the help of specific tools. According to Wilhelm Dilthey:

That is indeed the immeasurable significance of literature for our understanding of spiritual life and of history, for only in language does inner human life find its complete, exhaustive, and objectively understandable expression. That is why the art of understanding centers on the exegesis or interpretation of those remains of human reality preserved in written form (Dilthey, 2001, p. 77).

Gadamer asserts that "the only condition to which literature is subject is being handed down in language and taken up in reading" and that "reading with understanding is always a kind of reproduction, performance, and interpretation" (Gadamer, 2010, p. 235). Literary criticism is characterized by highly subjective experience, which is expository and constructive. "It is universally true of texts that only in the process of understanding them is the dead trace of meaning transformed back into living meaning" (Gadamer, 2010, p. 240). Digital technology-based criticism as a special form of literary criticism certainly has this interpretive characteristic. But beyond that, digital technology-based criticism can rely on technological convenience to free itself from paper literature. By analyzing the data of literary texts through computation, researchers can add empirical evidence to traditionally subjective, interpretive, and constructive literary criticism. On the one hand, the digitization of mass texts of art helps create a large database. Using web technology, corresponding retrieval and analysis tools, and intelligent algorithms, researchers can get clues and extract relevant information accurately, and make digital media do certain parts of the work previously done by humans to increase research efficiency. On the other hand, digital tools and corresponding apps make it possible to introduce methods of empirical research from the areas of mathematics, statistics, and science to literary criticism, enabling the subject (critic) to rely on relevant models or analysis techniques to conduct more in-depth and comprehensive text mining and to balance qualitative research. As AI has been integrated into art documentation, database creation, audience surveys, and

text analysis, a new style of literary criticism, namely, AI-made criticism (e.g., Read Laixi) has come into being. Compared with man-made criticism, such AI/machine-made criticism is more empirical and objective.

Digital technology-based criticism has triggered multiple transmutations of the subjects of literary criticism. Traditional literary criticism is an individual interpretation, which is based on personal experience, learning, established understanding, and worldview, and is usually one person's work. The subject of criticism is supposed to restore the meaning of the text itself from the perspective of "otherness" with an objective and dispassionate attitude. According to scholars, such as E.D. Hirsch and Schleiermacher, the subject should reconstruct the author's original meaning with an objective and dispassionate attitude. Even those theorists who advocate the subject's dialogue with the text to generate new meaning (Gadamer, Jauss, etc.) still believe that the activity of literary criticism requires personal reading. Such a personal act of criticism remains to be the business restricted to scholars and researchers in the academic world. There is a lack of effective interactions between different subjects of literary criticism, between the subject and the author, and between the subject and the reader. With the intervention of digital technology, literature is disseminated via the Internet, making literary consumption and criticism an everyday activity. Online literary criticism allows for timely social exchange. There are a large number of literary criticism-themed accounts on platforms, such as Douban, Toutiao, and the WeChat Official Accounts Platform. Literary criticism is now opened to various subjects, such as readers, authors, and media professionals, instead of being exclusively controlled by professional critics.

Digital media are supposed to eliminate concentration, blocking, stagnation, segmentation, boundary, hierarchy, and differentiation, and to bring about real and practical communication, interaction, linkage, integration, and cooperation between/among subjects, making their activities smooth, coherent, productive, and harmonious, and endowing subjects of culture with "digital modernity" (Shan, 2017, pp. 149–155).

This will undoubtedly dissolve the scholarly, definitive or authoritative criticism advocated by academics. The field of literary criticism will transform from an individualized field to an interactive scenario where there are multiple subjects communicating with each other.

Digital technology-based criticism also enriches the connotations of literary texts. With the change of subjects and the fusion of empirical, interpretive, and constructive characteristics, the traditional mode of meaning construction in literary texts, which relies on personal association, perception, experience, and reflection, will lose its absolute dominance due to technological intervention. For example, some apps for literary criticism lack a certain reflective and aesthetic interpretation of literature. The relative certainty of textual meaning will be dissolved by diversified subjects of criticism. The meaning construction in literature will incorporate more ideologies with the support of technology to develop in a more open and diversified way. This is the case with short, concise, prompt, and interactive online criticisms from numerous netizens (from all walks of life). In addition, the interpretive objects of digital technology-based criticism are more than aesthetic symbols in a

language, and may also include images, data, and apps. Given that, the subject of criticism will have to take these elements into consideration, and the established criticism, which requires aesthetic contemplation, may give way to a variety of visual, auditory, and tactile engagements or experiences. Subsequently, the meaning of literature may not be so elegant, critical, aesthetic, individualistic, and pioneering as constructed by traditional academic criticism; instead, it will be considerably entertaining, secular, superficial, and homogeneous. After all, driven by digital technology, literature itself has inevitably fallen into the narrative mechanisms of commerce, fleeting pleasures, consumption, and desire, and so has literary criticism. This is a more complicated construction of textual meaning, and its coverage will be far beyond that of the literary criticism.

### **Logic Behind the Production of Technology-Based Literary Criticism**

The paradigm of tech criticism echoes the intervention of digital technology in all aspects of literary production, dissemination, and consumption. Does the paradigm have an evolutionary logic or operating law of its own? It is understood that literature is a special activity of artistic production. Karl Marx was the first person to assert that literature/art is also a form of production. Since then, the productive properties and characteristics of literature/art have been thoroughly discussed by many theorists, among whom were Bertolt Brecht, Walter Benjamin, Pierre Macherey, and Terry Eagleton. Literary criticism, as an art subordinate to critics, remains to be part of the literary field and a necessary component of literary activity, although it has relative independence. Based on this premise, we can also conclude that literary criticism is also a productive activity (Yao, 2019). This conclusion contains two meanings. First, literary criticism is certainly productive, playing an important role in interpreting the significance and value of literature and in promoting knowledge production, economic growth, and social development of humanity as a whole. Second, literary criticism has generated various discourses, methods, tools, styles, objects, and subjects in the process of continuous inheritance and innovation over the past thousands of years. In other words, literary criticism is productive because of its construction of literary practice and critical theory. Following this logic, it is clear that the emergence of the paradigm of tech criticism is an inevitable outcome of literary criticism as a productive activity. Now that it is a productive activity, there must be potential changes in the productive forces and the relations of production (from which, an analogy can be drawn with criticism as production) behind it, and such changes form a driving force of criticism.

In terms of the productive forces, from the perspective of Marxist literary criticism, the productive forces of literature and art first and foremost concern intellectual productivity (i.e., the intelligence and ability to engage in the production of intellectual products), yet they cannot go without specific tangible media (i.e., the subject, the object, and the intermediary in practice). The productive forces of literature and art are a combination of “mind” (intelligence) and “matter” (tangible things), although “matter” remained obscure for a considerable period of time in the past. The production of literary criticism, as part of literary production, certainly covers the two basic dimensions. It

is just that the intervention of digital technology makes the previously implicit “matter” explicit. Digital technology converts image, text, and sound into binary numbers for the purposes of storing, computing, processing, and transmitting. As digital technology is a distinct matter, literary criticism, whether targeted or intermediated by digital technology, is primarily characterized by materiality. This is the case, for example, with AI-based and app-based literary criticism. As the object and the intermediary are digitized, the subject of literary criticism is also endowed with materiality. Moreover, the object’s ability to search for the meaning of a literary text, and to reflect on and improve a critical discourse is inevitably shaped by digital technology. Currently, digital technology has intervened in literature in an all-around way, opening a comprehensive field of digital culture. The subject of literary criticism therein relies on digital technology to enable criticism, and also to maintain his or her way of life. Consequently, the subject’s cultural habit, literary experience, aesthetic consciousness, artistic cultivation, and even values are all without exception unconsciously subject to technological construction. Mike Featherstone and Marshall McLuhan respectively used the terms “new cultural intermediaries” and “visual man” to refer to the subject of cultural production under the influence of electronic technology. The “new humans” have one thing in common: having an unconscious identification with media technology, with their experience of media technology being a basic part of their physical existence. Such a judgment is still wearing well today when people cannot live without digital technology in daily life or even in social production.

The prominence of materiality represents the control of digital technology over the subject, the object, and the intermediary of literary criticism with the productive forces of digital technology-based criticism arising therefrom. Yet, this does not mean that intellectual productivity is weakened, but that the intellectual and material dimensions are combined into one at this stage, as opposed to the fragmentation prior to the era of tech criticism. The combination results from the reliance of contemporary literary production on digital technology, and is also related to the subject’s current dependence on technology in daily life. On the whole, the productive forces of tech criticism in the digital context are presented as comprehensive kinetic energy released in the following process: “technology’s intervention in literature—literature’s response to technology—literature’s initiation of criticism—criticism’s response to literature—literature’s promotion of technology.” This process is dynamically reciprocal, allowing tech criticism to turn from implicit to explicit while moving towards the center stage of literary criticism. This special existence, which is generated through the intervention of technology in literary criticism and production, is permanently interpretive, constructive, and empirical to literary activities, while at the same time distinctly rhetorical. In other words, by virtue of its inherent aesthetic potential, humanistic touch, media properties, and value rationality, digital technology has given rise to a unique ideology, and artfully produced and disseminated it, thus covertly promoting continuous intervention in literary criticism. In the whole process, however, relevant subjects of criticism do not put themselves under any coercive force, but unconsciously accept the ideology conveyed by digital technology.

In terms of the relations of production, literary criticism is a relational field, which, according to

Abrams (2009), consists of four elements: “the universe (subject), the work (object), the artist (author) and the audience (recipient).” The combination and pairing of these elements are crucial to the style of literary criticism. In the Marxist view, the relations of production are directly determined by the productive forces, and by the structure of the main social forces. According to Friedrich Engels, such main social forces are shaped by a “parallelogram of forces.” Engels argued:

History is made in such a way that the final result always arises from conflicts between many individual wills, of which each in turn has been made what it is by a host of particular conditions of life. Thus, there are innumerable intersecting forces, an infinite series of parallelograms of forces which give rise to one resultant—the historical event. This may be viewed as the product of a power which works as a whole unconsciously and without volition (Marx & Engels, 1995, p. 697).

Apply this logic to the field of tech criticism, and we can see that the four elements of criticism are inevitably linked to digital technology due to their circumstances. Digital technology keeps shaping their activities of production and life and facilitates their interconnections. Take Internet literary criticism, a form of tech criticism, as an example. During the production, Internet literary criticism relies on the Internet, smartphones, computers, and other intermediaries to connect the subject of criticism to the object of criticism (the work), the reader, and the author. Digital technology is both a historical context and a historical force. To some extent, digital technology has enabled the formation of a new “parallelogram of forces,” which in turn promotes the technological turn in literary criticism and the technicalization of the relations of production.

The technicalized relations of production are composite relations concerning political economics and ideology. By ideology, this paper mainly refers to aesthetic ideology. And the aesthetic relation is formed when the subject of criticism transforms everyday aesthetic ideology. From the perspective of political economics, digital technology allows the materials of literary criticism to be possessed by multiple subjects in multiple dimensions through multiple approaches. All critics, from scholars to online amateurs, can criticize a text from their own perspectives in a preferred method, mode, and style with the help of digital technology. Different subjects of criticism relate to each other and construct themselves through digital technology, bringing about changes in the relations concerning the possession, distribution, and exchange of materials of literary criticism. From the perspective of ideology, digital technology has shaken the traditional system, which requires a certain distance (e.g., worship from a distance) and a specific attitude (e.g., quiet observation) between the subject of literary criticism and the text in order to underline the significance of criticism itself (rationality of science, reflexivity, etc.); subsequently, literary criticism can be casual, improvisational, occasional, and even irrelevant and vulgar. These characteristics can be found in the style, language, and form of *Fan Ren Fan Yu* (*Mundane Words*), a model of Internet literary criticism. In essence, this dynamic has resulted from the practice of a new digital technology-based relationship between the cultural subject and the cultural object, and it makes possible the interactions and communications among multiple persons and the timely

reception, conversion, and retransmission of cultural objects (Poster, 2010, p. 17). Mark Poster calls the subject in this new context the postmodern subject, which is de-subjectified and features “intersubjectivity” in Edmund Husserl’s words. It is precisely the changes in the entire relational field that empower digital technology-based criticism with enduring subject-level momentum.

In terms of practice, digital technology features a strong coupling effect and is a comprehensive phenomenon of social production and consumption. The emerging technology-based literary criticism and its new features concerning the productive forces and the relations of production are inseparable from a series of contemporary trends, such as the consumption of digital technology as an everyday cultural product, the integration of culture and technology, the industrialization of culture, the popularization of aesthetics in daily life, and the pan-entertainment in cultural realms. This inseparability shows that the current field of literary criticism is not independent or autonomous, but is in a transboundary dynamic of “relational production.” Internally, the field of literary criticism is characterized by mutual construction of the following pairs: one subject and another, the subject and the object, digital technology and the subject, digital technology and the object, as well as one digital technology and another, while externally, the field is characterized by mutual construction of the following pairs: tech criticism and literary criticism, literary criticism and cultural/artistic criticism, as well as cultural/artistic criticism and cultural economy/politics/aesthetics/society. Thus, it can be seen that digital technology has opened an even bigger field for literary criticism, whose examination requires a sense of the system.

Although digital technology contributes positively to the reform of literary criticism, it is not without limitations. On the one hand, literary criticism is an activity that features distinct value judgments of the critic, and which plays a positive role in the development of art. If technology becomes the leading factor, or if a machine becomes the subject of criticism, how to maintain the positive and effective role of literary criticism will be a question. On the other hand, although technology has greatly facilitated the development of literary criticism and the changes in its form, how to free literary criticism from undesirable factors (abuse, slander, ridicule, nihilism, deconstruction, flattering, etc.) for sustainable development remains to be a topic for further thinking. In short, given that literary criticism in the digital era cannot avoid the technological dimension, proper application of digital technology to literary criticism is now at the core of the reform of literary criticism.

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(Editor: Yan Yuting)

# *The Book of Poetry as the World's First Research Report*

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**Abstract:** The collection of folk songs and odes for the *Book of Poetry* (*Shih-ching/Shijing*) was in nature a social research project in ancient China. This paper studies the *Book of Poetry* as a research report, probing into the background of the assignment of poetry functionaries as researchers, relevant geographic information and time span, relevant social production and life, the logic of the research, and the social value of the research. As a social research report, the *Book of Poetry* is of documentary significance to various academic fields.

**Keywords:** the *Book of Poetry*, research report, social research

**DOI:** <http://dx.doi.org/10.19873/j.cnki.2096-0212.2022.01.008>

## **Social Background to the Emergence of Poetry Functionaries as Researchers for the *Book of Poetry***

The collection of folk songs and odes for the *Book of Poetry* (*Shih-ching/Shijing*) was in nature a social research project. There is a mention of specially assigned poetry functionaries responsible for this mission in “Treatise on Literature,” the *Book of Han* (*Hanshu*). It reads:

So in ancient times, there were poetry functionaries (*caishi*

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*zhiguan*). They were commissioned by the ruler to collect songs and odes from the civilian society and were at the same time also responsible for gathering folkways and public opinions for the imperial court so that the ruler could know the merits and demerits of his governance and practice self-reflection and correction accordingly.

Such a social research project was conducted for the “submission of songs and odes to report the folkways.” Through a collection of folk songs and odes, the imperial government (the ruling class) could accumulate folk songs and odes. More importantly, it could gather information for their reference, so that they could adjust their governance. Art comes from life, and folk songs and odes echo the aspirations of the people. From folk songs and odes, the ruler could grasp the needs of the people, and improve his governance accordingly. There is a well-known verse by Cao Cao, a Chinese poet and statesman of the late Eastern Han Dynasty (25–220). It goes like this, “Duke Zhou no leisure found by day or night; stern toil is his who would the Empire gain.” The verse is in praise of Duke Zhou (also known as Duke Wen of Zhou), who was willing to take advice, listen to public opinions, and uphold meritocracy. Duke Zhou also took ode collections as a major channel for gathering information.

The *Book of Poetry* is the first anthology of realistic poetry. After its ascension into a Confucian classic during the Western Han Dynasty (202 BC–AD 8), it became known as the *Shih-ching* (*Shijing*, lit. canonical poetry) (Zhou, 2002). Eager to grasp the needs and aspirations of the grassroots, the rulers of Western Zhou launched rounds of extensive collections of folk songs and odes, consuming huge amounts of manpower and material resources. There is a clear depiction of how folk songs and odes were collected in “Treatise on Foodstuffs” of the *Book of Han* (*Hanshu*). According to the depiction:

When spring came, people went to work in the fields. So, poetry functionaries (*xingren*) traveled around with a wooden clapper to collect what people sang while working in the fields...Then the poetry functionaries gave the collected songs and odes to the grandmasters (*taishi*) of music, who wrote music for each piece before they were performed for the “Son of Heaven” (sovereign).

It should be pointed out that the description about poetry functionaries (*xingren*) in the above quote is not accurate. In fact, poetry functionaries (*xingren*) were persons in charge of this social research instead of frontline collectors who were always on the move. Both poetry functionaries and grandmasters (*taishi*) in Western Zhou belonged to the official category (i.e., persons in charge). As recorded in Volume 16 of the *Gongyang Commentary on the Spring and Autumn Annals*, “Childless men over 60 and childless women over 50 were provided with food and clothing by the government. In return, they were sent by the government to collect folk songs and odes among the people.” These frontline collectors spent years traveling across the countryside to collect folk songs and odes. In this way, they also managed to gather information on grassroots conditions for the imperial court. Their information was submitted level by level, “from township to town, from town to county, from county to vassal state, and

from vassal state to the ‘Son of Heaven’ (sovereign).”

The assignment of poetry functionaries for this social research was recorded in the *Book of Poetry*, specifically, in an ode entitled “Huang Huang Zhe Hua” in “Decade of Luming” of “Minor Odes of the Kingdom.” It reads:

Brilliant are the flowers,  
On those level heights and the low grounds.  
Complete and alert is the messenger, with his suite,  
Ever anxious lest he should not succeed.

My horses are young;  
The six reins look as if they were moistened.  
I gallop them, and urge them on,  
Everywhere pushing my inquiries.

My horses are piebald;  
The six reins are like silk.  
I gallop them, and urge them on,  
Everywhere seeking information and counsel.

My horses are white and black-maned;  
The six reins look glossy.  
I gallop them, and urge them on,  
Everywhere seeking information and advice.

My horses are grey;  
The six reins are well in hand.  
I gallop them, and urge them on,  
Everywhere seeking information and suggestions.

The “messenger” in the third line—“Complete and alert is the messenger, with his suite”—indicates the protagonist was a traveler (Tian, 2013). The so-called “seeking information and counsel” was the mission of a designated poetry functionary on an inspection tour. “Everywhere pushing my inquiries...Everywhere seeking information and counsel...Everywhere seeking information and advice...Everywhere seeking information and suggestions.” The recurring verses accentuate the protagonist’s assiduous pursuit of good advice. The depiction also shows how folk songs and odes were collected for the compilation of the *Book of Poetry* in an era with poor road conditions. Through such an inspection tour or field research, poetry functionaries could deliver the clearest voice of the people and gather the widest range of information as much as possible.

## Geographic Information and Time Span Covered by the *Book of Poetry* as a Research Report

The odes in the *Book of Poetry* span a period of 500–600 years, and were collected from across the Yellow River basin and beyond, including present-day Shaanxi, Gansu, Shanxi, Shandong, Hebei, Henan, Anhui, and Hubei provinces. It is generally accepted that all the pieces in the *Book of Poetry* were created after the conquest of Shang (1066 BC) by King Wu of Zhou, so they date from the early Western Zhou (c. 11th century BC) to the middle of the Spring and Autumn Period (c. 7th century BC).

The *Book of Poetry* contains abundant geographic information, ranging from landscapes, phenological knowledge, weather phenomena, to settlements and ancient city sites, which present the geographical conditions and people's understanding of the world during that period. It consists of three parts, namely, "Lessons from the States," "Odes of the Kingdom," and "Odes of the Temple and the Altar," each of which has its own emphasis. "Lessons from the States" covers much more geographic information than the other two parts, and odes in this part fall into 15 state-specific groups indicative of their origins (Qi, Wei, Qin, etc.) roughly in present-day Shanxi, Shaanxi, Henan, Hebei, and Shandong provinces. Most of the odes in "Lessons from the States" were adapted from folk songs in the Yellow River basin. By contrast, the odes in "Odes of the Kingdom" and "Odes of the Temple and the Altar" mainly originated in present-day Shaanxi and Henan, where collectors once traveled around to have local landscapes and voices recorded.

For example, there is a depiction of the geographic environment in "Han Yi, Decade of Dang, Greater Odes of the Kingdom," which is:

Very grand is the mountain of Liang,  
Which was made cultivable by Yu.

...

Very pleasant is the territory of Han,  
With its large streams and meres,  
Full of big bream and tench;  
With its multitudes of deer,  
With its bears and grisly bears;  
With its wild-cats and tigers.

...

Presenting his skins of the white fox,  
With those of the red panther and the yellow grisly bear.

The exact location of Mount Liang depicted in the ode remains in dispute. Some scholars believe Mount Liang is in present-day Hancheng, Shaanxi province, while others identify

it as present-day Mount Shijingshan in Beijing. Nevertheless, the local environment in the ode featured “large streams and meres full of big breams and tenches” a vast expanse of wilderness inhabited by “multitudes of deers” and “bears and grisly bears.” Such a vivid picture is sufficient for a basic understanding of the geographical conditions in the era of the *Book of Poetry*.

As for the influence of geography on the *Book of Poetry*, there is a view that all odes collected in the *Book of Poetry* are songs, and that the classification of odes in the “Lessons from the States” into 15 state-specific groups is, in fact, a classification of tunes, which is based on geographical conditions. Different regional cultures naturally give rise to different tunes. During the Pre-Qin Period (before 221 B.C.), exchanges between regions and states were infrequent due to poor road conditions and geographical barriers. In such a context, poetry functionaries designated by the imperial government had the rare chance to expose themselves to a diversity of regional cultures, accents, and dialects while they were directing the collection of folk songs and odes across the empire. As the territory expanded, local tunes and folkways of ethnic minorities, far and near, came into the sight of those poetry functionaries, who thus included them in their collection.

It is noteworthy that geography also affects the arrangement of odes in the *Book of Poetry*. Back then, geographic location was an indicator of a vassal state’s political influence. Of all the odes in “Lessons from the States,” a significant proportion came from states ruled by the Ji clan (kinsfolk of the royal family of the Zhou Dynasty), for which reason these states were placed high on the list. These Ji-descent vassal states were followed by states ruled by some clans who aided in forming the dynasty or moving the capital eastward (to Luoyi). The arrangement of odes in the *Book of Poetry* followed a geographical logic, which was determined by the economic and political strengths of related regions and states.

### **Social Production Covered by the *Book of Poetry* as a Research Report**

The *Book of Poetry* is a research report on the nature and agricultural society of the time, and a true reflection of the natural environment, agricultural production (crop growing), use of farm tools, and other factors concerning productive forces.

The beauty of the *Book of Poetry* comes from nature, specifically from the flowers, plants, insects, fish, as well as lucid waters and lush mountains. A wide variety of plants can be found in the odes. For example, in “Jian Jia, Odes of Qin, Lessons from the States,” one line reads, “The reeds and rushes are deeply green, and the white dew is turned into hoarfrost.” The reeds (*jian*) here refer to *Miscanthus sacchariflorus* (not yet fully-developed) found in hillside grasslands and fringe wetlands. Their tender shoots are edible. The rushes (*jia*) here refer to *Phragmites australis* (not yet fully-developed) found in shallow waters and low-lying and humid areas. In “Qi Yue, Odes of Bin, Lessons from the States,” there are

verses as follows:

In the seventh month, the Fire Star passes the meridian;  
In the ninth month, clothes are given out.  
With the spring days the warmth begins,  
And the oriole utters its song.  
The young women take their deep baskets,  
And go along the small paths,  
Looking for the tender [leaves of the] mulberry trees.  
As the spring days lengthen out,  
They gather in crowds the white southernwood,  
That young lady's heart is wounded with sadness,  
For she will [soon] be going with one of our princes as his wife.

The white southernwood (*fan*) mentioned here is a type of sweetgrass known as “*baihao*” (*Herba Artimisiae Sieversianae*) in modern Chinese. Also, in “Cai Ge, Odes of Wang, Lessons from the States,” there are mentions of dolichos (*ge*), oxtail-southern-wood (*xiao*), and mugwort (*ai*):

There he is gathering the dolichos!  
A day without seeing him,  
Is like three months!

There he is gathering the oxtail-southern-wood!  
A day without seeing him,  
Is like three seasons!

There he is gathering the mugwort!  
A day without seeing him,  
Is like three years!

Such plants mentioned in the *Book of Poetry* are beyond count. Most of these plants seem to be crops or plants to be gathered as raw materials, with few ornamental plants. The fact that these plants are mostly associated with agricultural production triggers a shift of focus to the ways and means of agricultural production, and poses a series of questions about farm tools, working modes, and crops.

Judging from the descriptions in the *Book of Poetry*, agricultural cultivation was practiced in large groups during that era. This can be exemplified by one verse in “Zai Shan, Decade of Min Yu Xiao Zi, Sacrificial Odes of Zhou,” which reads, “In thousands of pairs they remove the roots, some in the low wetland, some along the dykes...” It can also be exemplified by another two verses in “Yi Xi, Decade of Chen Gong, Sacrificial Odes of Zhou,” which read, “Going vigorously to work on your private fields, all over the thirty *li*. Attend to your

plowing, with your ten thousand men all in pairs.” Both are spectacular scenes of collective cultivation. The “pair” (*ou*) mentioned above, meaning “plowing side by side,” was a tillage method usually adopted in large-scale agricultural production.

There are also a diversity of farm tools mentioned in the *Book of Poetry*, including new inventions, as well as common ones, such as spuds (*jian*), spades (*cha*), sickles (*lian*), knives (*dao*), and small sickles (*zhi*). The tool “plow” (*si*) appears in two verses. One is “[Then] with their sharp plow-shares” in “Zai Shan, Decade of Min Yu Xiao Zi, Sacrificial Odes of Zhou,” and the other is “In the days of [our] third month, they take their plows in hand” in “Qi Yue, Odes of Bin, Lessons from the States.” Two tools, namely, spuds (*jian*) and hoes (*bo*), appear in the verse “to be provided with their spuds and hoes” in “Chen Gong, Decade of Chen Gong, Sacrificial Odes of Zhou.” Both of the “plow” (*si*) and “hoes” (*bo*) were novel tools back then. The “plow” (*si*) was similar to present-day spade, while the “hoe” (*bo*) was for weeding. Crops frequently mentioned are millet (*shu*), wheat (*mai*), and paddy (*li*), with millet topping the list. Below are three verses containing millet (*shu*):

Large rats! Large rats! Do not eat our millet. (“Shuo Shu, Odes of Wei, Lessons from the States”)

There was the millet with its drooping heads;

There was the sacrificial millet coming into the blade. (“Shu Li, Odes of Wang, Lessons from the States”)

Tall and strong grows the young millet,

Fattened by the genial rains. (“Shu Miao, Decade of Du Ren Shi, Minor Odes of the Kingdom”)

Moreover, millet (*shu*) can also be found in other odes, such as “Xiao Wan, Decade of Xiao Min, Minor Odes of the Kingdom,” “Huang Niao, Odes of Qin, Lessons from the States,” and “Qi Yue, Odes of Bin, Lessons from the States.” Another grain, wheat (*mai*) appears in odes such as “Sang Zhong, Odes of Yong, Lessons from the States” and “Qiu Zhong You Ma, Odes, of Wang, Lessons from the States.” Principal grains aside, many other crops were also covered, such as sunflowers (*kui*), malt sugar (*yi*), and even spices. Sunflowers (*kui*) appear in “Qi Yue, Odes of Bin, Lessons from the States,” which reads, “In the seventh, they cook the Kui and pulse.” Malt sugar (*yi*) appears in “Mian, Decade of Wen Wang, Greater Odes of the Kingdom,” which reads, “The plain of Zhou looked beautiful and rich, with its violets and sowthistles [sweet] as [malt sugar] dumplings.” The use of pepper as a spice in the Zhou Dynasty is proved by one verse in “Jiao Liao, Odes of Tang, Lessons from the States,” that is, “The clusters of the pepper plant, large and luxuriant, would fill a pint.”

Plants were prone to be given new meanings in the *Book of Poetry*. Plants appear as symbols of people’s inner feelings and emotional changes, evoking a sense of fatality (Li &

Li, 2019). Consequently, plants in the *Book of Poetry* are above being merely crops.

The content of the *Book of Poetry* has significant social value. Its text offers a glimpse of agricultural production at that time. The extensive coverage also enables contemporary readers to better understand the social production and life back then. The *Book of Poetry* provides much material for the compilation of the *History of Chinese Agriculture* (Vol. 1, draft) published by the Science Press in 1959. The book covers several aspects, including the acquisition of means of livelihoods, the collectiveness of production processes, the performance of tools of production, as well as agricultural techniques and achievements. The chapter on agricultural techniques and achievements touches upon crop varieties, harvesting systems and methods, field techniques, skills in nursery operations, fishing and hunting know-how, and animal husbandry techniques. The agricultural knowledge in the *Book of Poetry* was also summarized and included in *A History of Chinese Agronomy* (Revised Edition), published by Fujian People's Publishing House. Specifically, the book covers the following aspects mentioned in the *Book of Poetry*; agricultural economy, farm tools, tillage methods, agricultural calendars, land use, soil cultivation, crop growing, field management, horticulture, animal husbandry, and sericulture. The introduction of agricultural knowledge from the *Book of Poetry* and the two works on agricultural development in China show that the *Book of Poetry* was already used as a social research report to lay the theoretical grounds for the study of the history of agricultural development, and to contribute to the study of Chinese agronomy.

The social production described in the *Book of Poetry* is mainly restricted to agricultural production, for the simple reason that many working scenes are about agricultural production. Odes containing such scenes belong to “poetry on farm work” (*nongshi shi*) or “pastoral poetry” (*tianyuan shi*). Because of its agricultural coverage, the *Book of Poetry* became an important source of inspiration for later generations of pastoral poets. Tao Yuanming might be the one who revived pastoral poetry, but not the one who initiated it, as the history of pastoral poetry can be traced back to the *Book of Poetry*. And the earliest depiction of farmland in four seasons also comes from the *Book of Poetry*. In “Odes of Bin, Lessons from the States,” there is a detailed introduction to agricultural conditions in different seasons. The idyllic harmony reflected in the *Book of Poetry* gave rise to later pastoral poetry. For Tao Yuanming, the *Book of Poetry* must have played an important role in shaping the style of his poems on an idyllic life. One example is “Shi Mu Zhi Jian, Odes of Wei, Lessons from the States,” which reads:

Among their ten acres,  
The mulberry-planters stand idly about.  
“Come,” [says one to another], “I will return with you.”

Beyond those ten acres,

The mulberry-planters move idly about.

“Come,” [says one to another], “I will go away with you.”

This ode reproduces a scene in which women were at work, feeling happy, contented, and carefree. A similar leisurely and comfortable vibe can also be traced in one famous verse in “Drinking V” by Tao Yuanming. It reads, “While picking asters beneath the Eastern fence, my gaze upon the Southern Mountain rests.” The “Shi Mu Zhi Jian, Odes of Wei, Lessons from the States” had already been a well-known pastoral poem long before Tao Yuanming created works on an idyllic life.

### **Social Life Covered by the *Book of Poetry* as a Research Report**

The *Book of Poetry* is an encyclopedia of the social conditions of Western Zhou, with themes ranging from politics, military service, love, folkways, and worship to music and rites. Its social life-related odes mainly concern political satire, military service, and love.

In terms of satire, the best-known ode is “Shuo Shu, Odes of Wei, Lessons from the States.” The ode comprises three passages, which respectively begin with verses as follows, “Large rats! Large rats! Do not eat our millet...” “Large rats! Large rats! Do not eat our wheat...” and “Large rats! Large rats! Do not eat our springing grain!” Large rats here are a metaphor for the exploiting class, signifying the working people’s resentment towards the exploiting class.

In terms of military service, there is a touching depiction in “Jun Zi Yu Yi, Odes of Wang, Lessons from the States:”

My husband is away on service,  
And I know not when he will return.  
Where is he now?  
The fowls roost in their holes in the walls;  
And in the evening of the day,  
The goats and cows come down [from the hill];  
But my husband is away on service.  
How can I but keep thinking of him?

My husband is away on service,  
Not for days [merely] or for months.  
When will he come back to me?  
The fowls roost on their perches;  
And in the evening of the day,  
The goats and cows come down and home;  
But my husband is away on service.

Oh, if he be but kept from hunger and thirst!

Each of the two passages begins with “My husband is away on service,” bringing out the gist of this ode (Zhao, 2011). The depiction of a wife’s longing for her husband in service far away obliquely conveys the sorrow and suffering of the people brought about by military service. According to emotional experiences, military service-themed odes in the *Book of Poetry* fall into three categories; the emotional experience of righteousness, the emotional experience of grief and sorrow, and the emotional experience of resentment and sarcasm.

### **The Emotional Experience of Righteousness**

The emotional experience of righteousness can be found in a number of odes belonging to parts such as “Minor Odes of the Kingdom” (“Liu Yue,” “Chu Che,” “Cai Qi,” etc.), “Greater Odes of the Kingdom” (“Jiang Han,” “Chang Wu,” etc.), and “Odes of Qin, Lessons from the States” (“Xiao Rong,” “Wu Yi,” etc.). In particular, “Wu Yi,” through repetitions of one rhetorical question, expressively highlights Qin soldiers’ heroic ambition and shared bitter hatred against the enemy. The ode reads:

How shall it be said that you have no clothes?  
I will share my long robes with you.  
The king is raising his forces;  
I will prepare my lance and spear,  
And will be your comrade.

How shall it be said that you have no clothes?  
I will share my under clothes with you.  
The king is raising his forces;  
I will prepare my spear and lance,  
And will take the field with you.

How shall it be said that you have no clothes?  
I will share my lower garments with you.  
The king is raising his forces;  
I will prepare my buff-coat and sharp weapons,  
And will march along with you.

### **The Emotional Experience of Grief and Sorrow**

Military service-triggered grief can be found in odes belonging to the part “Lessons from the States,” such as “Ji Gu, Odes of Bei,” “Jun Zi Yu Yi, Odes of Wang,” and “Boxi, Odes of Wei.” Also, there is a large dose of war-weariness pervading in “Dong Shan, Odes of Bin,” which is about how soldiers pictured their hometown and family reunion with mixed

emotions on their way home from military service.

### The Emotional Experience of Resentment and Sarcasm

The emotional experience of resentment and sarcasm is echoed in “Bao Yu, Odes of Tang, Lessons from the States,” particularly such verses as “What will our parents have to rely on?” “How shall our parents be supplied with food,” and “How shall our parents get food?” The ode is about farmers’ resentment against corvée, a form of unpaid and forced labor which prevented them from doing farm work and supporting their parents. Another ode, “Huang Niao, Decade of Qi Fu, Minor Odes of the Kingdom,” highlights farmers’ resentments towards the exploiting class and criticism of society through figurative analogies.

In terms of love, there is no lack of enchanting love odes in the *Book of Poetry*. Below are some well-turned verses that have survived through the ages:

The reeds and rushes are deeply green,  
And the white dew is turned into hoarfrost.  
The man of whom I think,  
Is somewhere about the water. (“Jian Jia, Odes of Qin, Lessons from the States”)

For life or for death, however separated,  
To our wives we pledged our word.  
We held their hands—  
We were to grow old together with them. (“Ji Gu, Odes of Bei, Lessons from the States”)

Guan-guan go the ospreys,  
On the islet in the river.  
The modest, retiring, virtuous, young lady:  
For our prince a good mate she. (“Guan Ju, Odes of Zhou and the South, Lessons from the States”)

O you, with the blue collar,  
Prolonged is the anxiety of my heart. (“Zi Jin, Odes of Zheng, Lessons from the States”)

How lovely is the retiring girl!  
She was to await me at a corner of the wall.  
Loving and not seeing her,

I scratch my head, and am in perplexity. (“Jing Nü, Odes of Bei, Lessons from the States”)  
Love odes in the *Book of Poetry* generally fall into four topics, which respectively are tokens of love, romantic meetings, love at first sight, as well as courtships and yearnings for love. On the analysis of these love odes, the traditional literary perspective only focuses on the

words and sentences or the emotions behind them, but we approached the odes by taking them as part of a social research report as we attempt to shape a brand-new perspective which focuses on the aesthetic orientations and values of the people. Below is an elaboration of the four topics, including tokens of love, romantic meetings, love at first sight, and courtships and yearnings for love.

### Tokens of Love

Tokens of love were mentioned occasionally in the *Book of Poetry*, particularly in the part “Lessons from the States.” Examples include papaya (*mugua*) and beautiful Ju-gem (*qiongju*) in “Mugua, Odes of Wei;” red tubes (*tongguan*) and white grass (*ti*) in “Jing Nü, Odes of Bei;” small peonies (*shaoyao*) and flowers of valerian (*jian*) in “Zhen Wei, Odes of Zheng;” plum-trees (*mei*) in “Piao You Mei, Odes of Shao and the South;” and scrubby oaks (*pusu*) and deers (*lu*) in “Ye You Si Jun, Odes of Shao and the South.” These tokens of love roughly fall into three categories: plants, animals, and jade. It is apprehensible to use jade as a token of love, as jade has remained a symbol of prosperity and good luck from the earliest times to the present day. Being subtle, pure, and translucent, jade has all that is required for delivery of sincerity between lovers or friends. Moreover, in ancient China, jade ornaments were symbols of social status, and therefore could be used as tokens of unwavering love and friendship. In “Nü Yue Ji Ming, Odes of Zheng,” there is a passage about how a man would give the jade ornaments he wore to whoever pleased his cherished one. It reads:

When I know those whose acquaintance you wish,  
I will give them of the ornaments of my girdle.  
When I know those with whom you are cordial,  
I will send to them of the ornaments of my girdle.  
When I know those whom you love,  
I will repay their friendship from the ornaments of my girdle.

Except for jade, the other two categories of tokens of love, including animals and plants, signify the people’s aesthetic pursuit of simplicity during the Western Zhou Dynasty (c. 11th century–771 B.C.). Again, examples include, plum-trees (*mei*) in “Piao You Mei, Odes of Shao and the South;” red tubes (*tongguan*) and white grass (*ti*) in “Jing Nü, Odes of Bei;” small peony (*shaoyao/xinyi*) and flowers of valerian (*jian*) in “Zhen Wei, Odes of Zheng;” and scrubby oaks (*pusu*) and deers (*lu*) in “Ye You Si Jun, Odes of Shao and the South.” These tokens of love reflect the spiritual aesthetics and views of love among the people of Western Zhou. In the view of the people back then, animals and plants were simple and unpretentious because they came from mother nature. They were used as tokens of love to correspond to the people’s understanding of beauty, that is, being pure, real, and simple.

Through the above odes, we can see what symbolized love in the Western Zhou Dynasty. By analyzing their characteristics, we can catch a glimpse of the aesthetic orientations and

values of the people back then. In this sense, the *Book of Poetry* is indeed a social research report.

### Romantic Meetings

Romantic meetings between young lovers were depicted in multiple odes belonging to the part “Lessons from the States,” including “You Nü Tong Che, Odes of Zheng,” “Shan You Fu Su, Odes of Zheng,” “Chu Qi Dong Men, Odes of Zheng,” “Dong Men Zhi Chi, Odes of Chen,” and “Jing Nü, Odes of Bei.” Through the depictions of these romantic meetings, a primitive and simple view of love is conveyed.

### Love at First Sight

Love at first sight was unabashedly eulogized in many odes belonging to the part “Lessons from the States.” One example is, “Guan Ju, Odes of Zhou and the South,” which is characterized by popular verses, such as “The modest, retiring, virtuous, young lady: For our prince a good mate she.” Another example is “Ye You Man Cao, Odes of Zheng,” which reads:

On the moor is the creeping grass,  
And how heavily is it loaded with dew!  
There was a beautiful man,  
Lovely, with clear eyes and fine forehead!  
We met together accidentally,  
And so my desire was satisfied.

On the moor is the creeping grass,  
Heavily covered with dew!  
There was a beautiful man,  
Lovely, with clear eyes and fine forehead!  
We met together accidentally,  
And he and I were happy together.

### Courtship and Yearning for Love

Courtship and yearning for love were expressed in some odes belonging to the part “Lessons from the States.” Take “Fen Ju Ru, Odes of Wei” as an example. It reads:

There in the oozy grounds of the Fen,  
They gather the sorrel.  
That officer,  
Is elegant beyond measure.  
He is elegant beyond measure.

But, perhaps, he is not what the superintendent of the ruler's carriages ought to be.

There along the side of the Fen,  
They gather the mulberry leaves.  
That officer,  
Is elegant as a flower.  
He is elegant as a flower;  
But, perhaps, he is not what the marshaller of the carriages ought to be.

There along the bend of the Fen,  
They gather the ox-lips.  
That officer,  
Is elegant as a gem.  
He is elegant as a gem;  
But, perhaps, he is not what the superintendent of the ruler's relations should be.

In a repetitive and gradual approach, the growing friendship and affection are appreciated by readers, and the elegance of "that officer" is presented. The same repetitive and gradual approach was adopted in "Jian Jia, Odes of Qin," where the recurring verses of "I go up the stream in quest of him" and "I go down the stream in quest of him" help emphasize the protagonist's yearning for and courtship of her beloved one.

### On Folkways

In terms of folkways, "Qi Yue, Odes of Bin, Lessons from the States" is familiar to Chinese people. The ode ends with the following two verses:

The two bottles of spirits are enjoyed,  
And they say, "Let us kill our lambs and sheep,  
And go to the hall of our prince,  
There raise the cup of rhinoceros horn,  
And wish him long life—that he may live forever."

The verses are about an ancient folkway to thank the gods with wine and lambs and to pray for blessings when the New Year approached. This folkway also involved a sacrificial rite. Odes specifically on offering sacrifices to the gods or ancestors belong to the part "Odes of the Temple and the Altar." One example is "Qing Miao, Decade of Qing Miao, Sacrificial Odes of Zhou," which was composed and recited in honor of King Wen of Zhou. It reads:

Ah! solemn is the ancestral temple in its pure stillness.  
Reverent and harmonious were the distinguished assistants;  
Great was the number of the officers:  
[All] assiduous followers of the virtue of [King] Wen.

In response to him in heaven,  
Grandly they hurried about in the temple.  
Distinguished is he and honored,  
And will never be wearied of among men.

### On Rites and Music

In terms of rites and music, banquet odes are the best representation of this culture in the *Book of Poetry*. There are lively scenes in banquet odes belonging to the sub-part “Decade of Lu Ming, Minor Odes of the Kingdom.” Such odes include “Lu Ming,” “Si Mu,” “Huang Huang Zhe Hua,” “Chang Di,” “Fa Mu,” and “Tian Bao.” “With three cups you lose your memories—How dare you go on to more?” This verse, which ends “Bin Zhi Chu Yan, Decade of Sang Hu, Minor Odes of the Kingdom,” is about the “rite of three cups” (*sanjue zhili*) in the *Rites of Zhou*. It is thus clear that the culture of rites and music is also covered in the *Book of Poetry*.

The *Book of Poetry* is arguably a record of social history. Based on his study of the *Book of Poetry*, Hu Shih considered the odes in the *Book of Poetry* popular lyrics or folk songs, rather than pieces of a Confucian classic, adding that they were true reflections of the times. Hu made it clear that “the *Book of Poetry* is not a literary canon” (Hu, 1998). Its sociological significance explains why numerous images and elements from the *Book of Poetry* can be traced in later Chinese poetry. One example is the verse “The water in Jinghu is as clear as the moon, and the girl from Yexi is as white as snow” in “Yue Women III” by Li Bai. This verse is partly a tribute to “The moon comes forth in her brightness; how lovely is that beautiful lady”—the first verse of “Yue Chu, Odes of Chen, Lessons from the States.” Another example is a scene depicted in “The Bride of Jiao Zhongqing: Southeast the Love-lorn Peacock Flies,” which easily reminds readers of a similar scene in “Mang, Odes of Wei, Lessons from the States.” Below are the two quotes in contrast:

She started weaving at the dawn of day,  
Worked at the loom until the midnight hour.  
The tapestries beneath her fingers grew,  
Yet Zhongqing’s mother sore berated her— (“The Bride of Jiao Zhongqing: Southeast the Love—lorn Peacock Flies”)

For three years I was your wife,  
And thought nothing of my toil in your house.  
I rose early and went to sleep late,

Not intermitting my labors for a morning. (“Mang, Odes of Wei, Lessons from the States”)

In addition, one verse in “Untitled Poem II” by Li Shangyin also corresponds to the first passage of “Dong Fang Zhi Ri, Odes of Qi, Lessons from the States.” Below are the two

quotes in contrast:

The golden moon-toad gnaws a lock open: incense drifts in.  
Jade tiger circles back, pulling silk rope to draw well-water. (“Untitled Poem II”)

The sun is in the east,  
And that lovely girl,  
Is in my chamber.  
She is in my chamber;  
She treads in my footsteps, and comes to me. (“Dong Fang Zhi Ri, Odes of Qi, Lessons from the States”)

In short, the vast panorama depicting the ancient social life that was unfolded in the *Book of Poetry* has been an important source of information for later generations of poets and writers.

### **Development of the Logic of the *Book of Poetry* as a Research Report**

The *Book of Poetry* consists of three parts, namely, “Lessons from the States,” “Odes of the Kingdom,” and “Odes of the Temple and the Altar,” each of which has its own emphasis. The part “Lessons from the States” mainly records the voice of the common people, speaking of love and courtship, farming and housework, homesickness, as well as political satire and protest. The part “Odes of the Kingdom” features political satire, with many odes composed by nobles dissatisfied with the political reality and the remaining odes for the use at banquets or in sacrificial ceremonies. The part “Odes of the Temple and the Altar” tends to praise the founders of the Zhou Dynasty and includes ritual or sacrificial odes.

The whole anthology shows an overall literary polish together with some general stylistic consistency and calmness. There is no harsh criticism or intense hatred. Even the satirical odes still sound harmonious and evoke no association of uprising or regime change. Thus, moderation is a defining feature of the language, which is manifested in two aspects.

#### **Moderation of Content**

Satirical odes, such as “Shuo Shu, Odes of Wei, Lessons from the States” and “Jun Zi Yu Yi, Odes of Wang, Lessons from the States” only reveal true intentions in a roundabout way. On the surface, “Shuo Shu” seems to be a complaint about how grains were stolen by large rats. But between the lines, large rats are a metaphor for the exploiting class. Such a metaphor adds fun and wit to this small piece while avoiding openly displaying people’s deep resentment. “Jun Zi Yu Yi” is a touching depiction of a wife who longed for her husband who was in military service far away. Yet, there is no trace of “a resentful wife marooned in the deep courtyard.” On the contrary, the overall tone is still full of hope and expectation. “My husband is away on service...My husband is away on service...” The recurring verse,

like a soulful call for the beloved far away, weakens the sorrow and suffering brought about by military service, and creates a romantic melody. In this way, the ode achieves the effect of being harmonious, elegant, and refined. The charm of moderation lies in the fact that it softens all the odes in the *Book of Poetry*, including morale-boosting war odes like “Wu Yi, Odes of Qin, Lessons from the States,” making them gentle, refined, and touching, and bringing an air of easy assurance and calm to heavily armed warriors.

### Moderation of Poetry Functionaries and Original Works

As aforementioned, there were specially assigned poetry functionaries responsible for directing the collection of folk songs and odes for the *Book of Poetry*. Did these poetry functionaries add in any of their own views while they were collecting and documenting odes? The answer is yes. Some subjective views were inevitably incorporated into the collected odes for modification or refinement. But such incorporations of personal views did not undermine the harmonious and soothing tone of the *Book of Poetry* as a whole. The *Book of Poetry*, as the outcome of their efforts, reflects folkways while incorporating certain personal views. Overall, it is a harmonious and moderate work with no obvious bias.

Moderation and harmony, two defining features of the *Book of Poetry*, have a shared origin, that is, Confucianism. The intellectual bond of Confucius with the *Book of Poetry* began with his engagement in its compilation. That explains why Confucian ideas, such as “loving all humans” and “benevolence” can also be found in the *Book of Poetry*. By examining the culture of rites and music in the *Book of Poetry*, we discover that Confucianism is similar to the *Book of Poetry* in the sense that rites are highly valued. Confucianism is intertwined with the *Book of Poetry*. It is fair to say that the *Book of Poetry* echoes Confucianism, while Confucianism shares certain characteristics with the *Book of Poetry*.

Confucius himself was influenced by the *Book of Poetry*, which can be proved by many quotes from the *Analects (Lunyu)*. Below is one example from the “Xue Er” of the *Analects*:

Zi Gong replied, “It is said in the *Book of Poetry*, ‘As you cut and then file, as you carve and then polish—The meaning is the same, I apprehend, as that which you have just expressed.’ ” The Master said, “With one like Ci, I can begin to talk about the odes. I told him one point, and he knew its proper sequence.”

The saying that “As you cut and then file, as you carve and then polish” in the above quote originally came from the first two verses of “Qi Yu, Odes of Wei, Lessons from the States” (of the *Book of Poetry*) as below:

Look at those recesses in the banks of the Qi,  
With their green bamboos, so fresh and luxuriant!  
There is our elegant and accomplished prince—  
As from the knife and the file,  
As from the chisel and the polisher!

Another example is from the “Ba Yi” of the *Analects*. It reads:

Zi Xia asked, saying, “What is the meaning of the passage—‘The pretty dimples of her artful smile! The well-defined black and white of her eye! The plain ground for the colors?’ ”  
The Master said, “The business of laying on the colors follows (the preparation of) the plain ground.”

The saying—“The pretty dimples of her artful smile! The well-defined black and white of her eye!”—in the above example originally came from the second passage of “Shuo Ren, Odes of Wei, Lessons from the States” (of the *Book of Poetry*) as below:

Her fingers were like the blades of the young white-grass;  
Her skin was like congealed ointment;  
Her neck was like the tree-grub;  
Her teeth were like melon seeds;  
Her forehead cicada-like; her eyebrows like [the antennae of] the silkworm moth;  
What dimples, as she artfully smiled!  
How lovely her eyes, with the black and white, so well defined!

Regarding the art of dealing with people, the *Analects* absorbed the essence of the *Book of Poetry*, as manifested in the following two sayings: “Four horses cannot overtake the tongue.” “For one word, a man is often deemed to be wise, and for one word, he is often deemed to be foolish. We ought to be careful indeed in what we say.” Both of these sayings highlight the importance of being cautious with one’s words. Prior to the *Analects*, a similar idea had already been expressed in “Qiao Yan, Decade of Xiao Min, Minor Odes of the Kingdom” (of the *Book of Poetry*), which goes like this:

Very grand is the ancestral temple—  
A true sovereign made it.  
Wisely arranged are the great plans—  
Sages determined them.  
What other men have in their minds,  
I can measure by reflection.  
Swiftly runs the crafty hare,  
But it is caught by the hound.

Trees of soft wood, easily wrought,  
Are planted by wise men.  
The words of way-farers that come and go,  
Can be discriminated by the mind.  
Their easy and grand words,  
[Only] issue from their mouths.  
Their artful words, like organ-tongues,

Show how unblushing are their faces.

The ode tells how to screen and use speech-craft, which helped shape the understanding of Confucius concerning proper speeches, and lay the basis of his idea of “speaking cautiously.” The interpretation of the *Book of Poetry* opens a door to the world of Confucianism (Wang, 2016). A good command of the *Book of Poetry* makes it easier to comprehend Confucian theories.

The compilation of Confucius concerning the *Book of Poetry* has been traditionally seen as a positive deed. Yet, the real purpose of his engagement in the compilation was to make use of the *Book of Poetry* to better support his own theory. Given that, the compilation was bound to reflect his wish somehow. Accordingly, both the selection and arrangement of odes were to some extent under the influence of Confucius. Yet, it is precisely because of the involvement of Confucius in the compilation and promotion that has made the *Book of Poetry* so popular through the ages.

We should take a dialectic view of the relationship between Confucius and the *Book of Poetry*. On the one hand, the subject acts upon the object. The *Book of Poetry* contains Confucian ideas because Confucius engaged in the compilation, revision, and refinement of this work. The fact that Confucius used the *Book of Poetry* as a textbook also facilitated its popularization. On the other hand, the object reacts upon the subject. During the process of compilation, Confucius himself was influenced and nurtured by the *Book of Poetry*. To put it another way, the *Book of Poetry* helped nourish his mind, deepened his philosophical realm, and eventually shaped his thinking. The *Book of Poetry* and Confucius complemented each other and helped each other forward.

### **Social Value of the *Book of Poetry* as A Research Report**

The *Book of Poetry* as a research report contains an enormous amount of information. Its 305 odes cover comprehensive knowledge of Western Zhou, ranging from politics, economics, folkways, to military affairs. It is of great social significance. Politically, the *Book of Poetry* reflected the will of the rulers back then, and has become an important historical record for later generations to study the social production and life of Western Zhou. Economically, its coverage of agricultural development (crops, farm tools, etc.) is quite referential to relevant studies today. Its significance to folklore studies speaks for itself, and the views on love, marriage, and sacrificial rites are particularly worth reading and studying. Militarily, there are a number of odes on corvée, military service, and successful campaigns, which provide a different insight into how military affairs concerned the people.

The *Book of Poetry* has remained a focus of academic studies in Chinese history. Numerous sages and scholars, from Confucius, through Zhu Bin, to Hu Shih, have given their own interpretations of the work. Judging from their comments on the functional or documentary value of the *Book of Poetry*, it was recognized as a social research report.

In the Pre-Qin Period, Confucius became the first literary critic of the *Book of Poetry*. He attached great importance to the social and political functions of the *Book of Poetry*, and particularly valued “poetry-enabled education,” that is, giving full play to poetry in social development and education (Yan, 1985). According to “Zi Lu” of the *Analects*, Confucius once said:

Though a man may be able to recite the three hundred odes, yet if, when entrusted with a governmental charge, he knows not how to act, or if, when sent to any quarter on a mission, he cannot give his replies unassisted, notwithstanding the extent of his learning, of what practical use is it?

As stressed by Confucius, to grasp the essence of the *Book of Poetry*, one is supposed to read between the lines, probe into the social context, understand the worldly wisdom therein, and adapt such wisdom to one’s own needs. This idea was later echoed by Mencius. In “Wan Zhang I” of the *Mengzi*, he argued,

“Those who explain the odes, may not insist on one term so as to do violence to a sentence, nor on a sentence so as to do violence to the general scope. They must try with their thoughts to meet that scope, and then we shall apprehend it.”

The word “term” (*wen*) here can refer to form and the word “sentence” (*ci*) to content (Han, 1988). That “they must try with their thoughts to meet that scope” is all about seeing through the appearance to perceive the essence. More specifically, we should read between the lines of the odes in the *Book of Poetry* to perceive the deep feelings which the authors had and the hidden reality which they wanted to reveal.

In the Qing Dynasty (1636–1912), Zhu Bin studied the *Book of Poetry* to explore its social significance. He focused on the exploration of profound meaning, instead of sticking to traditional examinations of words and expressions. There are social and humanistic concerns in his argument. Zhu treated the *Book of Poetry* as a social research report, commenting on phenomena mentioned therein with empathy. Take one passage of “Zheng Yue, Decade of Qi Fu, Minor Odes of the Kingdom” as an example. It reads:

Look into the middle of the forest;  
There are [only] large faggots and small branches in it.  
The people now amidst their perils,  
Look to Heaven, all dark.  
But let its determination be fixed,  
And there is none whom it will not overcome.  
There is the great God—  
Does He hate any one?

The passage argues that it is useless for anyone to resist the God’s will. However, Zhu Bin sensed an exhortation from this phenomenon, or voice of the people. He said, “This remark means that man by his efforts can conquer nature, not the other way around.” He believed

that the God, whose will is unpredictable, always loves people, that God sends calamities to the Earth to make the ruler reflect on himself, and that a ruler in awe at natural phenomena should take the lead to behave properly and improve his moral character in order to turn calamities into blessings (Liu, 2017). To put his argument in a modern context, as nature offers all that is needed for human survival, man should hold nature in awe; in the face of a natural disaster, man should exercise caution and self-reflection to turn the tide.

In modern times, Hu Shih appealed to break with tradition by appreciating the *Book of Poetry* as a literary work and studying it from new perspectives of sociology, folklore, and history. He opposed the study of the *Book of Poetry* purely from the Confucian perspective. Hu Shih has published a number of essays on the *Book of Poetry*, including “Commentary on the Campaign of Reading Confucian Classics” (“*Dujing Pingyi*”), “An Interpretation of the Word ‘Yan’ in Three Hundred Odes” (“*Shi Sanbaipian Yanzi Jie*”), and “Talking about the *Book of Poetry*” (“*Tantan Shijing*”). His sociological interpretation of phenomena depicted in the *Book of Poetry* can be easily found in many of his writings. Take “Guan Ju, Odes of Zhou and the South, Lessons from the States” as an example. Its first two passages read:

Guan-guan go the ospreys,  
On the islet in the river.  
The modest, retiring, virtuous, young lady:  
For our prince a good mate she.

Here long, there short, is the duckweed,  
To the left, to the right, borne about by the current.  
The modest, retiring, virtuous, young lady:  
Waking and sleeping, he sought her.  
He sought her and found her not,  
And waking and sleeping he thought about her.  
Long he thought; oh! long and anxiously;  
On his side, on his back, he turned, and back again.

In Hu Shih’s view, the above quote is essentially about a social custom, including a man’s courtship of a young lady in primitive times, and it expresses the unknown author’s inner feelings. Hu denied this love ode to be shallow.

The sociological perspective was taken in the study of the *Book of Poetry* by overseas Sinologists, as well as Chinese scholars of past and modern times. Among those overseas Sinologists was Marcel Granet, who studied the *Book of Poetry* through a sociological approach in the 20th century. In the “Introduction” part of *Festivals and Songs of Ancient China* (*Fêtes et chansons anciennes de la Chine*), there is a mention of how Granet borrowed the method of sociological analysis from the study of ancient Chinese culture to facilitate his study (Zhu, 2002). Granet pioneered a “field research” in the *Book of Poetry*. He took the

*Book of Poetry* as a “folk field,” where he made a sociological analysis to interpret the social customs and folk beliefs of ancient China. In his work, Granet placed the themes of odes in the *Book of Poetry* into three categories: idyllic life, rural love, and landscape (mountains and rivers), from which he discovered more about the politics, rites and music, folkways, religious beliefs, and other cultural elements of Western Zhou. In this way, he expanded the horizon of the study of the *Book of Poetry*, which had previously been restricted to the literary dimension, and started a comprehensive approach to it. Also, Klas Karlgren, a Swedish Sinologist, studied the *Book of Poetry* from the perspective of dialectology and published “A Study of the *Book of Poetry* and Its Rhymes,” thus setting a precedent for future studies in this regard. The perspective of dialectology or phonology has led to a new sphere of folk speech in the *Book of Poetry*, which is conducive to a more comprehensive understanding of the society of Western Zhou.

As a major ancient civilization, China has a long history of investigation and research dating back to remote antiquity. According to the *Book of Changes (I Ching/Yijing)*, “In the highest antiquity, the government was carried on successfully by the use of knotted cords (to preserve the memory of things). In subsequent ages, the sages substituted for these written characters and bonds.” The quote is about data collections by primitive men and the initial form of investigations and research in China. According to the *Rites of Zhou*, there were officials and clerks designated for demographics by governments at all levels (from central to local governments) and by patriarchal clans. A population census by region (urban/rural area) and gender was conducted on a yearly basis to register annual births and deaths. Every three years, an official research report on demographics was prepared in duplicate, with one copy sent to the government for the record. According to the *Book of the Later Han*, in the era of Yu the Great, tamer of the floods, the population of China was 13,553,923, and the land area was over 24.38 million *mu*. This record is proof that as early as 4,000 years ago, population census and land surveys were already introduced across China. According to the *Art of War (Sunzi Bingfa)*, research is the “magic weapon” for victory in war, because “if you know the enemy and know yourself, you need not fear the result of a hundred battles.” As Shang Yang argued in “Elimination of Strength” of *Shang Jun Shu*:

A strong country knows thirteen figures...If he who wishes to make his country strong, does not know these thirteen figures, though his geographical position may be favorable and the population numerous, his state will become weaker and weaker, until it is dismembered.

Shang Yang considered investigation and research to be a prerequisite for national prosperity. For another major ancient civilization, Egypt, its earliest investigations and research can be traced back to the period of pyramid construction, which involved the collection and calculation of statistics regarding the labor force, availability of building stones, and many other considerations. Ancient research activities were at a simple, primary stage, and lagged far behind those in modern sociology and management. Nevertheless, they all have come down in one continuous line. As an

ancient poetry anthology still popular today, the *Book of Poetry* was compiled after a long process of collections, which was also a process of social investigations and research. Its completion marked a milestone for social investigations and research in ancient China. Its poetic quality does not overshadow its informational quality, but helps retain it through singing, making the *Book of Poetry* the world's earliest research report.

## Conclusion

Confucius said, “The Odes (*Book of Poetry*) serve to stimulate the mind. They may be used for purposes of self-contemplation. They teach the art of sociability. They show how to regulate feelings of resentment.” The *Book of Poetry* is not simply a poetry anthology in the traditional sense. Instead, it is an encyclopedia that incorporates sociology, which is full of valuable lessons gained by the superstructure of Western Zhou for more scientific and broader prospects. It is also a plotless epic, gathering the collective wisdom of the working people and illuminating their roads to inner peace. From the sociological perspective, the *Book of Poetry* is a “secret recipe” that enabled the ruling class to access the conditions and wills of the people, as well as the folkways. More importantly, this treasurable literature, which came from the work and life of the working people, is the world's first research report jointly completed by the objects of creation and the subjects of research.

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(Editor: Yan Yuting)

# *The Characteristics of Sports Culture in the Zhuang Myth Bubo*

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**Abstract:** This paper mainly adopts the method of the literature analysis and combines knowledge of mythology, sports history, and ethnology to study *Bubo*, a Zhuang myth about a hero named Bubo, who fought heroically against the Thunder King and the Dragon King. By analyzing Bubo's struggle with nature and the ruthless rulers, this paper reveals the sublime heroism that consists of bravery, strength, wisdom, and fearlessness, and a cultural tradition that emphasizes virtue, reason, life, and unity. Moreover, this paper offers a glimpse of the characteristics of the Zhuang sports culture behind the myth, including the humanistic trait of being people-oriented, the code of conduct of observing morals and manners, the knight-errantry of rising above self, the need-based incentive of guiding people to their merits, and the educational significance of promoting collectivism.

**Keywords:** myth, *Bubo*, sports culture, the Zhuang people

**DOI:** <http://dx.doi.org/10.19873/j.cnki.2096-0212.2022.01.009>

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Myths emerged in the late matrilineal society and developed in the patrilineal society of the primitive period before coming to an end in the early slave society. Myths resulted from early humans' attempts to understand mighty nature in order to survive and were reflections of their strong desire to conquer nature for their own use. Chinese myths, which developed in ancient China, feature complete descriptions of early human activities in simple narration and concise phrases. The Zhuang people had lived in the Pearl River basin since the primitive period when the unique natural environment gave birth to numerous myths. The wild imaginations that gave birth to the myths indicate the early Zhuang people's ambition to make use of supernatural power to accomplish their own goals. While forming a special phenomenon in Chinese culture, Zhuang myths are an important part of the Chinese cultural system. The cultural significance and characteristics of their myths have influenced many aspects of the Zhuang people's lives. In this sense, by interpreting the significance and characteristics of the sports culture contained in the Zhuang myth *Bubo*, we can find some traces of early humans' sports culture and practice.

### Overview of the Zhuang Myth *Bubo*

*Bubo* is a myth that consists of multiple stories. Popular among the Zhuang people, the myth has been passed down by Zhuang folk artists from generation to generation in the form of narrative poetry. Legend has it that in ancient times there was a Zhuang hero named Bubo, who fought heroically against the Thunder King and the Dragon King. With the help of an immortal, Bubo flew up to the heavenly palace on a stone dragon. There, he seized the Thunder King and ordered him to generate rain on the earth. The Thunder King pretended to agree. Immediately after Bubo returned to the earth, the Thunder King led his troops in a surprise attack against Bubo, but was instead captured alive by the brave and resourceful Bubo. However, Bubo forgot to exhort his children Fuyi and Qiemi to watch out and prevent the Thunder King from escaping. The Thunder King somehow obtained some "magic water" (niter-rich water) by trickery. After drinking it, he escaped from the barn where he had been detained. The Thunder King went back to the heavenly palace and created a severe flood. To save all of the creatures on the earth, Bubo had a sword duel with the Thunder King on the flooded land and was eventually killed by the Thunder King due to physical exhaustion. But his children, Fuyi and Qiemi, were lucky enough to survive the flood. Later, for the continuation of mankind, the brother and sister tied the knot and gave birth to many children. Bubo's duel with the Thunder King shows man's sublime heroism (i.e., being brave, firm, and fearless) during the process of conquering nature and fighting against ruthless rulers and highlights the rich sports culture of the Zhuang people.

The "Antiphonal Singings" (*Pan Ge*) of *Bubo* reads:

The most poisonous snake was "flat-headed wind," while the most hateful persons were three brothers—Fengbo, Yushi, and Sanlang...

The eyes of Fengbo looked like a cat's eyes...The head of Yushi looked like a snake's head...The face of Sanlang looked like a rooster's face...

The three brothers had immeasurable power in their hands, controlling mountains and rivers on the earth. Once people failed to satisfy them, they would bring disasters to the earth.

Fengbo, Yushi, and Sanlang respectively represent three volatile natural phenomena directly concerning human activities. The story reveals that early humans were so vulnerable to mighty nature as to be at its disposal. For their own purposes, they served Fengbo, Yushi, and Sanlang in humble reverence, not daring to spit, hold their noses, or stamp their feet at all in the three's presence.

The "Bubo" of *Bubo* reads:

Mountains were densely packed with trees. The strongest in the woods were old pine trees. Bubo was like a pine tree, green and lush all year round.

There was a stout chestnut tree that could not be circled with both arms. It stood upright like a copper pillar towering into the sky. Others could not chop it down in three days, but Bubo made it just at the third attempt.

There was a one-*zhang*-wide river. Others crossed the bridge over it empty-handed, but Bubo just strode over it with a heavy burden on his shoulders.

The "Pray for Rain" (*Qiu Yu*) of *Bubo* reads:

Forty-nine sorcerers came to perform the "god dance." They smashed forty-nine "gang-pi" (drums) and brass gongs...

The forty-nine sorcerers danced till their legs were swollen.

Also, the "Up to the Sky" (*Shang Tian*) of *Bubo* reads:

Bubo took up the sword...

He strode over dry rivers, crossed fiery plains and rugged canyons, and climbed a tall tree towering into the sky. (Sha, 1959)

In the above narrative, Bubo was compared to a tall and upright pine tree. It can thus be presumed that he was a tall and muscular man of great strength, agility, and athletic potential. Also, the "gang-pi" (drums) and brass gongs which were smashed by the (forty-nine) sorcerers at the praying-for-rain ceremony can still be found in the "sorcerers' dance" (*shigong wu*) performed by the Zhuang people today. During the performance, all sorcerers in masks and black and red dresses hold a variety of magic tools and props, ranging from knives, swords, wooden cylinders, flags, and horsewhips. They sing and dance to the beat of percussion instruments, such as bee-shaped drums, flat drums, gongs, and cymbals. Among them, the bee-shaped drums are the most frequently used (Zhang, 1997, p. 336).

## **Cultural Significance of the Zhuang Myth *Bubo***

### **Emphasis on Virtue**

Moral supremacy is a long-honored tradition in China. According to the "Meaning of Sacrifices" (*Ji Yi*) of the *Book of Rites* (*Liji*):

There were five things by means of which the ancient kings secured the good government

of the whole kingdom: the honor which they paid to the virtuous; to the noble; to the old; the reverence which they showed to the aged; and their kindness to the young. It was by these five things that they maintained the stability of the kingdom...Anciently, the sovereigns of the line of Yu honored virtue, and highly esteemed age.

The quote shows that virtue was highly valued in ancient China and that an emphasis on virtue was accepted as a basic principle by “all under heaven,” from kings to commoners. There is no shortage of moral exemplars in Chinese myths. As is known, goddess Nüwa worked tirelessly to create mankind with yellow clay, and later patched the holes in Heaven with stones for the betterment of mankind. Yu of Xia (better known as Yu the Great) passed by his own family’s doorstep three times during the years of fighting the flood, but each time he did not enter his own home. The Yellow Emperor defeated his mythical rival Chiyao, and had numerous inventions and innovations in agricultural production and other areas. Tang of Shang (also known as Cheng Tang) overthrew the brutal rule of Jie of Xia. All the above figures demonstrated the emphasis on virtue, contribution, wisdom, and ability in ancient China. In the Zhuang myth *Bubo*, the protagonist Bubo was a superhero who went forward courageously in the face of a catastrophe to restore peace for the people. While living up to high moral expectations, Bubo also showed extraordinary wisdom and talent in his fight with the Thunder King. Nowadays, emphasis on virtue is part of the highest standards in favor of the public, and a basic prerequisite for good people to settle down and get on with their lives. The idea has also pervaded the realm of sports culture, forming an important approach to the cultivation of sports ethics.

### Emphasis on Reason

Georg Hegel, a renowned German philosopher, once argued, “Early do we see China advancing to the condition in which it is found at this day” (Hegel, 1956, p. 132). As China is “precocious,” its ideology and way of thinking are mature and prudent. Accordingly, Chinese people since ancient times have advocated a simple natural philosophy and attached importance to reason. From the legendary period of the Three Sovereigns and Five Emperors, through the Xia and Shang dynasties, to the Zhou Dynasty, this simple natural philosophy remained the norm. The Eight Trigrams (*Bagua*), which is believed a creation by Fuxi, is the best embodiment of natural philosophy. From the Eight Trigrams, it can be deduced that Heaven and Earth are the prerequisites for the existence of all things (meaning they lay the foundation of the universe), that the alternation of seasons enables the growth and reproduction of animals and plants, and that the knot tied by man and woman ensures human reproduction, which makes a family, a society, and even a nation possible. Such deductions are all typical ideas of natural philosophy. The Chinese philosophy’s emphasis on reason is also reflected in Zhuang myths. According to the “Antiphonal Singings” (*Pan Ge*) of *Bubo*, three detestable brothers, namely, Fengbo, Yushi, and Sanlang had immeasurable power in their hands, controlling mountains and rivers on the earth. The fact that they were hated bitterly by people did not form a substantial threat to their firm control of the

mountains and rivers. Fengbo, Yushi, and Sanlang respectively represented three volatile natural phenomena directly concerning human activities. Mountains and rivers are indispensable to human existence. Only with lucid water and lush mountains can humans survive and thrive. The emphasis on reason in sports culture belongs to a view of life that closely associates physical health with the mind (inner world), sports, and the natural environment.

### Emphasis on Life

According to the “Scope and Meaning of the Treatise” of the *Classic of Filial Piety (Xiao Jing)*, “Our bodies—to every hair and bits of skin—are received by us from our parents, and we must not presume to injure or wound them. This is the beginning of filial piety.” The emphasis on life is a manifestation of filial piety and love of our human bodies and lives. According to the “Nourishing the Lord of Life” of the *Zhuangzi*:

There should not be the practice of what is good with any thought of the fame (which it will bring), nor of what is evil with any approximation to the punishment (which it will incur): Accordance with the Central Element (of our nature) is the regular way to preserve the body, to maintain the life, to nourish our parents, and to complete our term of years.

In other words, when we do a good deed, we should not expect fame or fortune out of it; when we do a bad deed, we should not make any attempt to escape punishment. By following the way of nature, one can better preserve the body and maintain life. In the myth, to save all creatures on the earth, Bubo had a sword duel with the Thunder King on the flooded land and was eventually killed due to physical exhaustion. But his children, Fuyi and Qiemi, were lucky enough to survive the flood. Later, for the continuation of mankind, the brother and sister tied the knot and gave birth to many children. This emphasis on life is uniquely placed in sports culture by promoting refreshment through physical movements. More specifically, physical movements (i.e., exercises) help improve human health and physique, and lay a solid foundation for human reproduction and continuation.

### Emphasis on Unity

The myth *Bubo* contains a simple idea advocated by the ancient sages, that is, “correspondence between man and the universe.” According to this idea, man is an organic whole and is closely related to nature. In a modern interpretation, the idea means that nature (the “big universe”/macroscopic whole) and man (the “small universe”/microscopic individual) are feeling, reflecting, and interacting with each other. This interpretation indicates that “correspondence between man and the universe” is based on the concept of “unity of man and nature.” Also, according to many philosophers in ancient China, the “Way of Heaven” and the “Way of Man” are one. As recorded in the “Tree on the Mountain” of the *Zhuangzi*, “The Human and the Heavenly may be one and the same.” The “Heavenly” here refers to nature and the universe in which man lives. According to *Zhuangzi*, man and nature are closely connected; man (including all their physical and mental

strengths) comes from nature; man is the product of nature. Under the influence of such an ideology, there is an emphasis on unity in the interpretation of the human body, function, mind, and spirit in sports activities. The purpose is to achieve the “unity of man and nature.” For example, when practicing martial arts, one is supposed to let one’s mind (*yi’nian*) play the leading part so that one can “regulate the internal energy (*qi*) through the mind, build the body through internal energy, and boost the spirit through the body.” The interplay of spirit, mind, and body highlights a pursuit of holistic thinking in Chinese sports culture, and “harmonious coexistence between man and nature,” an ideal highly valued in Chinese philosophy.

## **Characteristics of Sports Culture in the Zhuang Myth *Bubo***

### **Humanistic Thought: Being People-Oriented**

The myth *Bubo* consists of multiple stories, which are “Antiphonal Singings,” “Bubo,” “Great Drought” (*Dan Han*), “Pray for Rain,” “Up to the Sky,” “Duel with the Thunder King” (*Dou Lei*), “Capture of the Thunder King” (*Qin Lei*), “Fight by All Means” (*Dou Fa*), “Escape from the Barn” (*Tuo Cang*), and “Tie the Knot” (*Cheng Qin*). The stories in the myth are essentially about man’s relationship with nature, the relationship of humans in society, and the survival and development of man. The three issues form the underpinnings of the myth. Bubo fought bravely against the rule of the Thunder King and the Dragon King. His struggle shows early humans’ sublime heroism (i.e., being brave, firm, and fearless) during the process of conquering nature. With the help of an immortal, Bubo flew up to the heavenly palace on a stone dragon. There, he seized the Thunder King and ordered him to generate rain on the earth. Later, due to an oversight on Bubo’s part, the Thunder King obtained some “magic water” (niter-rich water) by trickery. After drinking it, he escaped to the heavenly palace, and created a severe flood. To save all the creatures on earth, Bubo had a sword duel with the Thunder King in the flood and was eventually killed due to physical exhaustion. But his children, Fuyi and Qiemi, were lucky enough to survive the flood. For the continuation of mankind, the brother and sister tied the knot and gave birth to many children. These stories embody the humanistic thought of being people-oriented—that is, giving priority to human survival, continuation, and development. This humanistic thought, which has always been followed throughout the history of the development of sports, helps improve health and physique, and increase energy and vitality.

### **Code of Conduct: Observing Morals and Manners**

As early as the Warring States period, the principle of “observing morals and manners” was extensively accepted in China, thanks to the profound cultural development of the times. Confucius, the leading figure of Confucianism, advocated rule by virtue. Later, many more Confucian philosophers, including Zisi, Mencius, and Xunzi, took the principle of “observing morals and manners” as the top priority. In the “Gongsun Chou I” of the *Mencius* (*Mengzi*), Mencius said:

When one by force subdues men, they do not submit to him in heart. They submit because their strength is not adequate to resist. When one subdues men by virtue, in their hearts' core they are pleased, and sincerely submit... (Mencius, 2008, p. 45)

The above examples are only a small part of traditional Chinese culture, which has a long history and profound significance. The “Antiphonal Singings” (*Pan Ge*) of *Bubo* reads:

Loaches in ponds were dying of thirst. Monkeys in high mountains were wailing. Geese stopped crowing at dawn. Dogs no longer barked at night.

People were too hungry to walk because they only had grassroots to eat. Oh, for Heaven's sake! for Heaven's sake! Where could people go?

How they wished the Thunder King could save them all...

The “Up to the Sky” (*Shang Tian*) of *Bubo* reads:

Eager to alleviate the drought, Bubo risked his life to give the Thunder King a good scolding...He would fly up to the sky to catch the Thunder King.

Bubo took up his sword and said goodbye to his loved ones and hometown...He was about to leave, when his daughter and son grabbed him and began to sob.

Bubo looked at his daughter, feeling heartbroken...

The above narrative shows two characteristics of Chinese myths: a strong family/homeland ethic and an inward-looking cultural pattern. The protagonist was a man of knight-errantry and virtue, as he dared to rise above himself and safeguard the collective interests. Another example was Yu the Great, who controlled the flood as legend has it. As recorded in the “Teng Wen Gong I” of the *Mencius* (*Mengzi*):

In the time of Yao...the vast waters, flowing out of their channels, made a universal inundation...The various kinds of grain could not be grown. The birds and beasts pressed upon men...During that time, Yu was eight years away from his home, and though he thrice passed the door of it, he did not enter. Although he had wished to cultivate the ground, could he have done so? (Mencius, 2008, p. 45)

The above quote shows how Yu the Great regulated the courses of the Huai and the Si rivers, and led them to the Jiang (Yangtze River) to enable cultivation in the Central Plains (central China). Yet, Yu himself had no time to cultivate crops even if he had wanted to. He gave up his family time for the sake of all. By doing so, Yu the Great put the values of “benefiting the public” and “moral supremacy” into practice. Such values have become the norm, shaping how people think and act in social activities.

### **Knight-Errantry: Rising Above Self**

Knight-errantry (*xia yi*) is a component of traditional Chinese culture (sports culture in particular) and is one of the major traits of Chinese culture. Knight-errantry was first expressed by wandering swordsmen in the late Spring and Autumn period and was later standardized and improved with the formation of Mohism (Qin, 2005, p. 3). The Chinese term “*xia yi*” for knight-errantry is a compound

word. Based on his study of “knight-errantry” (*xia yi*) in Mohism, Wang Jinglong divides the term “*xia yi*” into two parts for better understanding, namely, *xia*, meaning “wandering swordsmen/knight-errants,” and *yi*, meaning “righteousness.” For *xia*, Wang agrees with Sima Qian’s summary of “wandering swordsmen” in the early Han Dynasty as follows: “Their words are trustworthy, and their conduct is reliable. They keep their promises. They sacrifice their own lives to save gentlemen in danger.” They were not attached to any power. For *yi*, Wang regards it as “standing up to injustice” without any intent for a reward.

Thus, knight-errantry in Mohism involves righteousness, trustworthiness, and timely benevolence. First, righteousness is the root of knight-errantry. Second, trustworthiness means always abiding by one’s word, and never breaking one’s promise under any circumstances. It was a defining feature of knight-errant in ancient China. Third, timely benevolence refers to help offered in times of emergency. The exercise of timely benevolence was out of morality and humanitarianism and was part of knight-errantry in ancient society. The sudden change of the political landscape in Imperial China made it possible for knight-errant to play their part. Advocated and practiced by martial artists, knight-errantry has become a highlight of traditional Chinese culture.

In the “Up to the Sky” (*Shang Tian*) of *Bubo*, to save all creatures on the earth, Bubo overcame one difficulty after another. It reads:

He strode over dry rivers, crossed fiery plains, and rugged canyons, and climbed up a tall tree towering into the sky...

He went over countless mountains, with pairs of shoes wearing out. The skin on his feet was rubbed raw, causing numerous blisters.

The “Duel with the Thunder King” (*Dou Lei*) of *Bubo* reads:

Bubo entered the gate of the heavenly palace. He saw glittering pavilions and terraces. The stink of dead bodies befouled the earth, whereas the scent of meal and wine—filled the heavenly palace. The thought of people’s suffering on the earth made the scent of meal and wine even more disgusting. Bubo was more than eager to seize the Thunder King...

Bubo entered the grand hall of the heavenly palace. He heard the sound of music and saw a red lantern brightly lit. The Thunder King was holding a banquet in the hall. Square jade tables were laid with good wine and dainty meat. Fairy maidens were dancing in the center, with guards standing on both sides. What he saw was outrageous. Bubo burst into anger. His angry shout shook the hall.

Bubo grabbed the wings of the Thunder King. He drew out his flashy sword, with the sharp tip at the nose of the Thunder King (Sha, 1959).

In the above narrative, Bubo rushed to save all the creatures on earth, crossing fiery plains, with pairs of shoes wearing out. The scent of meal and wine inside the gate of the heavenly palace was against morality and humanitarianism in the context of severe drought and rampant famine on the earth. Later, this stark contrast also laid the groundwork for Bubo’s righteous deeds. Bubo was a “knight-errant” who dared to fight against immoral acts and evil deeds. What he did was in

conformity with the principle of righteousness, trustworthiness, and timely benevolence and the knight-errantry of rising above self. His righteous deeds were also manifestations of the spirit of sports culture. In fact, the Zhuang sports activities, such as “sky-lantern chasing,” “jumping onto the table,” “golden mountain climbing,” contain a profound message, which echoes Bubo’s journey across mountains to save people from suffering.

### **Needs-Based Incentive: Guiding People to Their Advantage**

As recorded in the “Teng Wen Gong I” of the *Mencius* (*Mengzi*):

The Minister of Agriculture taught the people to sow and reap, cultivating the five kinds of grain. When the five kinds of grain were brought to maturity, the people all obtained a subsistence. But men possess a moral nature, and if they are well fed, warmly clad, and comfortably lodged, without being taught at the same time, they become almost like the beasts.

The quote shows that the importance of material benefits was recognized by Mencius. As recorded in the “Will of Heaven I,” Book 7 of the *Mohism* (*Mozi*):

Therefore, in leading the people in the world to engage in doing righteousness, I should be doing what Heaven desires. When I do what Heaven desires, Heaven will also do what I desire. Now, what do I desire, and what do I abominate? I desire blessings and emoluments, and I abominate calamities and misfortunes. When I do not do what Heaven desires, neither will Heaven do what I desire. Then I should be leading the people into calamities and misfortunes.

In short, it is human nature to go after gain and avoid harm. Also, as Confucius said in the “Li Ren” of the *Analects* (*Lunyu*), “The mind of the superior man is conversant with righteousness; the mind of the mean man is conversant with gain.” Righteousness and profit are respectively in the interests of the superior man (*junzi*) and the mean man (*xiaoren*). They have adopted different approaches to what benefits them.

As mankind advanced from the primitive period into the age of civilization, their needs, which had been primarily physiological, became increasingly diversified. There was a shift from a single physiological need to a variety of needs. In *A Theory of Human Motivation*, American psychologist Abraham Maslow (2013) argues that humans are motivated by needs which are organized into a five-level hierarchy. Judging from values, human needs can be divided into two categories, the explicit utilitarian value, and the implicit life value. In Zhuang myth *Bubo*, Bubo, a hero who had compassion for people suffering from natural disasters, fought with Fengbo and other evil figures for the benefit of most people. By contrast, the three brothers, Fengbo, Yushi, and Sanlang had immeasurable power in their hands, but refused to bring any benefits to the people because they would compromise themselves by doing so. Although their benefits were against ethics, their self-protection was to their advantage. The needs-based incentive, which guided people to their advantage, made sports activity an important approach to the acquisition of benefits for early

humans in life and production. All sports activities, whether about sacrifice or production, were actions driven by a need to benefit themselves.

### **Educational Significance: Promoting Collectivism**

In ancient times, the Chinese people lived a rural life, “getting up at sunrise and working until sunset.” From primitive tribes to feudal society, the Chinese nation was based on families and clans, or rather, on kindred. According to “The Fourth Year of Duke Ding” of the *Commentary of Zuo* (*Zuo Zhuan*)

When King Wu had subdued Shang, King Cheng completed the establishment of the new dynasty, and chose and appointed [the princes of] intelligent virtue, to act as bulwarks and screens to Zhou. Hence it was that the Duke of Zhou gave his aid to the Royal House for the adjustment of all the kingdom, he being most dear and closely related to Zhou. To the Duke of Lu (Boqin, the Duke of Zhou’s son), there were given—a grand chariot, a grand flag with dragons on it, the huang-stone of the sovereigns of Xia, and the [great bow], Fanruo of Fengfu. [The Heads of] six clans of the people of Yin—the Tiao, the Xu, the Xiao, the Suo, the Changshao, and the Weishao, were ordered to lead the chiefs of their kindred, to collect their branches, the remote as well as the near, to conduct the multitude of their connections, and to repair with them to Zhou, to receive the instructions and laws of the Duke of Zhou.

The very presence of “clans,” “kindred,” and “branches” in the above quote indicates the importance of lineage in ancient China. The lineage system (*zongfa zhi*), concerning agnatic primogeniture, enfeoffment, and ancestral temple of a ruling house, was a well-developed system with a long history. The social structure under the lineage system highlighted the formation of hereditary monarchies, the continuity of enfeoffment, and the longevity of families and clans as basic units. An autocratic system in the tradition of the “oneness of China” was taking shape. In Imperial China, the combination of hereditary autocracy and the lineage system gave rise to a sociopolitical structure characterized by family-nation integration.

Accordingly, ancient Chinese philosophers tended to see things from a holistic or collective perspective, shaping a holistic or collective way of thinking. They opposed the separation of or antagonism between the parts (individual) and the whole, holding that the two are both different from and related to each other, that the whole is in domination, and that the parts also restrict the whole and even determine the whole under certain circumstances. According to this holistic or collective way of thinking, individuals are supposed to give full play to their potentials in a holistic context to grasp the essence of things. More specifically, we should have a holistic vision and look for the optimal target in a bigger picture so that we can maximize the overall functions while properly dealing with local affairs. Take the dragon-boat race as an example. This sports activity came out of the worship of the River God by ancient Yue people. According to historical records, from the first day to the fifth day (of the fifth lunar month), just before the Dragon Boat Festival, there were dragon-boat races. Each race had the participation of over ten boats. Each boat carried 50–60 persons. Also, in this period,

there was a team race for firecrackers, which required good teamwork and proper division of labor. The dialectical view of collective-individual relationships has been reflected in these traditional ethnic sports and has exerted a far-reaching impact on sports culture.

## Conclusion

Myths are important windows from which we can catch a glimpse of how early humans survived and engaged in production. In this the Zhuang myth, Bubo's struggle with nature and ruthless rulers involved a variety of physical movements, including walking, running, jumping, climbing, and even fighting with "weapons," such as sticks and stones. These physical movements belong to conscious and purposeful actions adopted by early humans in order to survive and live, produce offspring, engage in agricultural production, and defeat powerful opponents. Basic as they were, these physical movements gradually developed into the earliest forms of sports to express or unleash emotions and feelings arising from mankind's survival instinct. As human societies progress, such physical movements continue to increase, develop and improve, empowering humans with stronger bodies, improving humans' ability to survive, and enabling the progress of human civilizations. In this process, movements of the human body closely associate, interact, and integrate with the human mindset, value judgments, aesthetic preferences, folk customs, and ethics which have been shaped through social development. In this way, the profound significance and distinct characteristics of traditional Chinese culture are fully displayed.

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(Editor: Yan Yuting)

# *A Study of the Rain Classroom-Based Teaching Mode of College English for Art or Physical Education Majors*

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**Abstract:** The study delves into the online teaching practice that uses “Rain Classroom” for the school-based curriculum of college English and explored whether such a teaching mode can arouse students’ interests in learning, and enhance their learning effect and satisfaction by means of a questionnaire survey and semi-structured interviews to collect feedback from students of art or physical education majors on the effectiveness of Rain Classroom-based teaching for quantitative and qualitative analysis. The collected data indicates that this teaching mode was greatly accepted by these students, who showed strong interests in learning, but as they were not disciplined much in their studies, their learning effect was not significant. Therefore, this paper concluded therefore that we should integrate such smart teaching modes as Rain Classroom with traditional classroom teaching styles to tap the benefits of blended learning which features the combination of information technology (IT) with foreign language teaching.

**Keywords:** Rain Classroom, art or physical education majors, college English teaching, blended teaching

**DOI:** <http://dx.doi.org/10.19873/j.cnki.2096-0212.2022.01.010>

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Foundation items: “A Study on Culturally Responsive Teaching for Sichuan Minority Students Enrolled in Teacher Training Institutions and Majoring in English” (TER2020-012), a project of the Center for Teacher Education Research at Sichuan province, Sichuan Provincial Key Research Base of Philosophy and Social Sciences; “An Empirical Study on the Translation Process” (16SB0054), a humanities and social sciences project of the Education Department of Sichuan province.

## Introduction

In recent years, great importance has been attributed to the position and role of college English teaching (CET) in national development strategies, talent training plans, and educational reform programs. At the same time, CET reform has faced continuing challenges regarding the design, contents, and curricula in an effort to adapt courses to social, economic, and cultural development to realize the national strategic goal of cultivating a substantial number of international-oriented talents that not only have an international vision and understand international rules, but also have the competence to participate in international competitions.

In our teaching practice over the years, we have found that art or physical education (APE) majors generally have problems in learning English, such as poor English proficiency and poor capability to acquire the second language, as well as lack of correct methods, clear objectives, good habits, adequate time, and a strong interest in language learning, and insufficient confidence. For most APE majors, there is a huge gap between their listening, speaking, reading, writing, and translating abilities and the levels required in “Fundamental Objectives” as specified in the *College English Teaching Guidelines* (2020) (the *Guidelines*) (National College Foreign Language Teaching Advisory Board, Ministry of Education, 2020). Therefore, we should integrate general teaching methods and strategies with specific teaching targets to map out a talent training program suitable for APE majors.

In the Internet plus era, the education sector has leaped to a new level, ushering in a new direction for the development of curriculum reform. The era is exerting its influence across the world and restructuring the educational ecology to make educational forms more diversified and systematic. The mode of Internet plus education is by no means a simple superimposition of the two factors, but constant and in-depth integration of IT and education, so that both sectors will be improved. We should promote education informatization to evolve from blended applications to a higher level—innovative development and deep integration of IT and smart technology into the whole process of education (Education Informatization 2.0 Action Plan). The whole process of integrating IT and education has greatly accelerated teaching and curriculum reforms, and provided fertile soil for the generation of a variety of teaching modes based on smart technologies. These new teaching modes have infused new vigor into traditional approaches, and created a broader space for teaching and learning.

Among numerous smart toolboxes for teaching, Rain Classroom is highly favored by teachers and students for its powerful and handy functions, as well as accurate and adequate backstage records of behavioral data. It is a new type of smart solution for teaching, jointly developed by Tsinghua University and XuetangX in 2016, and is one of the latest research achievements of the Research Center for Online Education of the Ministry of Education (Chen, 2017). The name of “Rain Classroom” implies “transforming clouds into raindrops to nourish everything in silence.”

Various kinds of online teaching resources are pooled together and applied respectively for classroom teaching, just like the accumulation of water droplets into clouds and the conversion of cloud droplets to precipitation. Classroom data is collected and stored in the cloud for behavioral analysis of the entire process, so that a complete closed-loop can be formed between teaching and learning.

As a smart teaching application targeting to higher education (Wang, 2017), Rain Classroom serves as a bridge for information exchanges between teachers and students by means of PowerPoint and WeChat documents. Teachers can give lecture slides, exercises, Massive Open Online Courses (MOOC), video/audio files, and other resources to students through a Rain Classroom menu imbedded in PowerPoint documents while students can receive the materials in WeChat and interact with teachers through real-time comments, contributions, and ballots in or out of class. Rain Classroom is committed to providing data-based, smart, instant, and free information support for all teaching processes. In the February of 2016, open beta tests for Rain Classroom were held in 15 classes spreading across eight universities in China. On April 1, 2016, the application was released to the public for free use. By the end of February 2018, it had three million users from 170,000 classes in 114 countries across globally (PR Newswire, 2018). The application of Rain Classroom expands the depth and broadness of learning and provides a better technology platform for the realization of an interactive classroom. In the meantime, substantial behavioral data recorded in the backstage of Rain Classroom can provide a scientific rationale for personalized and adaptive learning based on diagnosis, decision-making, targeted messages, and multi-level evaluations (Jiang, Yang & Fan, 2017). Teachers can get an objective and true understanding of how students have learned by reviewing such data analyses so that they can adjust their teaching strategies in a timely way. Students can also adjust their learning methods and enhance their awareness of effective learning strategies according to the feedback from their teachers.

In the spring semester of 2020, students across China could not return to their campuses due to the COVID-19 pandemic. In response to the call of the Ministry of Education, Sichuan Normal University launched online teaching based on Rain Classroom for all the students. On the one hand, this brand-new teaching mode has presented with huge challenges; on the other hand, it has provided new ideas and research resources for CET reforms.

## **Research Questions, Subjects, and Methods**

### **Research Questions**

CET for APE majors has long been a complex issue for curriculum reform. How to improve the interactions between the teachers and students has been an urgent issue. After this complete online teaching attempt, we collected student feedbacks on Rain Classroom-based CET immediately. We hoped to gain some insights on teaching modes more suitable for APE majors by comparing the data

collected by them to that of students with general majors. The study focused on the following two questions:

Question 1: Did Rain Classroom-based online teaching enhance students' satisfaction with class teaching, and effectively arouse their interests in learning?

Question 2: Can such a real-time, online teaching mode largely improve students' learning?

### Research Subjects

We selected two classes of general majors and two classes of APE majors and taught *College English* using the Rain Classroom platform throughout the semester. For the two classes of general majors, the number of students was 46 and 48, respectively, and the average age was 19.8. For the two classes of APE majors, the numbers were 54 and 55, respectively, and the average age was 19.6.

### Research Methods

Both quantitative and qualitative research methods were applied in the study. A *Questionnaire on Online Learning of College English* was prepared and distributed to the students. Two hundred and three copies were handed out, and 201 were returned with valid responses. Among them, 94 copies were completed by undergraduates of general majors, and 109 copies were filled out by undergraduates of APE majors, including two invalid questionnaires. For single choice questions, we used a five-point Likert-like scale with categories of "Strongly agree," "Agree," "Neither agree nor disagree," "Disagree," "Strongly disagree," with corresponding values ranging from five points to one point, respectively. In view of the number and features of the samples, we used an independent samples *t* test to analyze if there was a significant difference between the two groups of students in their attitudes toward the same questions. For multiple answer questions, a multiple response analysis was conducted to evaluate the data. All data analyses were completed with the SPSS22.0 software. Semi-structured interviews were carried out after the online course was over, and students had returned to the campus. For each class, 10 students were chosen to answer the following two questions: Do you like this teaching mode of using the Rain Classroom platform? Do you think such a combination of online and offline teaching is useful to your study? Conversations throughout the interviews were fully recorded and converted to texts for data analysis.

## Data Analysis

### Can the Rain Classroom-Based Teaching Mode Arouse Students' Interests in Learning?

The questionnaire showed that 77.17 percent of APE majors expressed strong interests in this novel teaching mode, and 64.22 percent of those of the general majors also stated such interests. So in this aspect, the proportion of APE majors was nearly 13 percentage points higher than that of the general majors (as shown in Table 1).

Table 1: Students' Acceptance of Rain Classroom-Based Teaching Mode

Item	General Majors			APE Majors			Between Group Variance
	Ratio of Acceptance	Mean Value	Standard Deviation	Ratio of Acceptance	Mean Value	Standard Deviation	
I'm satisfied with the Rain Classroom-based teaching mode	64.22%	3.73	0.939	77.17%	3.95	0.894	Not significant F=2.649, p (=0.104) ≥0.05

The data for significant difference analysis revealed that both groups expressed satisfaction about the teaching mode, and there was no statistically significant difference [ $p (=0.210) \geq 0.05$ ] (as shown in Table 2).

Table 2: Students' Satisfaction about the Way of Teaching

Item	General Majors			APE Majors			Between Group Variance
	Ratio of Acceptance	Mean Value	Standard Deviation	Ratio of Acceptance	Mean Value	Standard Deviation	
I'm satisfied with the way of teaching	93.48%	4.35	0.601	88.99%	4.23	0.715	Not significant t=1.257, p(=0.210) ≥0.05

Concerning the question of “active interactions in the online class,” 69.57 percent of students from the general majors thought that they could participate more actively in an online class than in an in-person classroom. For APE majors, the ratio was 65.14 percent, 4.43 percentage points lower than that of the general majors (as shown in Table 3).

Table 3: Students' Acceptance of Active Interactions in Online Class

Item	General Majors			APE Majors			Between Group Variance
	Ratio of Acceptance	Mean Value	Standard Deviation	Ratio of Acceptance	Mean Value	Standard Deviation	
I can participate more actively in an online class than in offline class	69.57%	3.84	0.802	65.14%	3.72	1.070	Not significant t=0.848 p(=0.398) >0.05

During the semi-structured interviews, the teachers proceeded to have in-depth conversations with the selected students on the above descriptive data part. According to the data and the interviews, we found that the two groups of students mainly differed in the following two aspects:

(1) Students of general majors expressed that they could complete preview and review tasks more effectively before the deadlines assigned by the teacher using Rain Classroom.

(2) Students from APE majors stated that they liked the Rain Classroom teaching because they could get access to more network resources through the Rain Classroom platform, so that language learning could be achieved through diversified means rather than merely through texts.

During the interviews, both groups of students expressed that, in terms of contents, the

teachers designed several modules, including warm-up activities for listening and oral practice, cultural backgrounds, text explanations, language fundamentals, and daily English, to break curricular and extracurricular knowledge into different sections, in addition to tasks for previews and reviews. Therefore, compared with traditional classroom teaching, there was more content, and the pace was faster in the online class. APE majors showed great interest in the new sections, such as warm-up activities for listening and oral practice, as well as daily English, which dramatically enhanced their acceptance of the Rain Classroom-based teaching mode. Students of general majors paid relatively equal attention to each section and assignment. The difference was highly related to the interests and personalities of APE majors, who generally have an active character and strong creativity, and are more inclined to accept new things. However, for their downsides in contents, such as text structures and fundamentals, they showed an obvious lack of interest and a subconscious avoidance response.

In terms of participation in classes, with the use of Rain Classroom, the teachers tended to ask questions more frequently, which may have created additional pressure on students, and thus increased their participation. Although the descriptive data indicated that APE majors' participation in classes was slightly lower than the students in the general majors, 65.14 percent of the former students stated that they were more active in online classes than in traditional classroom settings. The virtual space created by the Rain Classroom made students feel more relaxed and confident. Even though their language ability was not good, they were able to express their ideas boldly.

### Can an Online Teaching Mode for College English Effectively Enhance the Learning Effect?

The descriptive data also indicated that the ratio of acceptance for the online teaching effect was 42.39 percent for general majors, and 46.79 percent for APE majors, neither of which was high enough, and the between-group variance was not significantly different (as shown in Table 4).

Table 4: Students' Acceptance of Online Classes

Item	General Majors			APE Majors			Between Group Variance
	Ratio of Acceptance	Mean Value	Standard Deviation	Ratio of Acceptance	Mean Value	Standard Deviation	
I think the teaching effect of an online class is better than that of traditional classroom	42.39%	3.24	1.093	46.79%	3.31	1.245	Not significant F=0.191, p(=0.663)≥0.05

For satisfaction about mindfulness in learning, most of the students in the two groups did not speak highly of themselves in this regard. For general majors, 53.26 percent were satisfied with their mindfulness, while for APE majors, the ratio (66.97 percent) was higher. There is a significant difference in their satisfaction with their mindfulness in learning (as shown in Table 5).

Table 5 Students' Satisfaction about Their Motivation in Learning

Item	General Majors			APE Majors			Between Group Variance
	Ratio of Acceptance	Mean Value	Standard Deviation	Ratio of Acceptance	Mean Value	Standard Deviation	
I'm satisfied with my motivation in learning	53.26%	3.43	0.998	66.97%	3.82	0.925	Significant difference $t=-2.812$ , $p(=0.005) \leq 0.05$

For the way to learn English in in-person classes, both groups favored blended learning. It is worth noting that in addition to blended learning, most of the students preferred to be lectured. The data also showed that compared with general majors, more APE majors chose "lectured in the classroom," with the ratio being 17.3 percent higher (as shown in Table 6).

Table 6:

Category of Students	My Favorite Way of Learning English				
	Lectured in classroom	Self-directed Learning	Cooperative Learning	Online Learning	Blended Learning
Percentage					
General majors	35.9%	32.6%	17.4%	19.6%	63.0%
APE majors	53.2%	33.0%	26.6%	22.0%	58.7%
Response Ratio					
General majors	21.3%	19.4%	10.3%	11.6%	37.4%
APE majors	27.5%	17.1%	13.7%	11.4%	30.3%

It can be seen from the descriptive data and the interviews that:

(1) In terms of the acceptance of online classes, the percentages of the two groups were not high. That is because most of the students participated in the course via their mobile phones, so that they could be easily distracted by other apps on their phones and their surroundings, which thus influenced their learning outcomes. Although the Rain Classroom enables the teacher to call the roll for interactions, students' answers may not be heard clearly due to poor network connections, which partially affected the actual efficiency of the class and interactions between the teachers and students. Especially for APE majors, they need time to absorb and understand what they have learned. Therefore, a solely online mode cannot achieve inspirational and enlightening teaching, and APE majors must comprehend what they have learned by themselves. This would cause students with poor English abilities difficulties in following the pace of teaching, so that they may pay less attention to, and have less interest in learning.

(2) In terms of satisfaction about motivation in learning, 66.97 percent of students from APE majors were satisfied in online learning. The ratio highly matches the behavioral data that we collected through the Rain Classroom platform about their previews, homework, and assignments. This indicates that with effective monitoring through big data, for most of the APE majors, their motivation in learning was aroused. They were also quite motivated by the real-time data about

finished assignments released by the teachers before each class. As for the significant difference between the two groups on this issue, we can see from the data analysis on the completion of assignments through Rain Classroom that 96.23 percent of the general majors completed their assignments, with the ratio nearly 20 percentage points higher than that of the APE majors. This shows that it had an insignificant impact on general majors' motivation in learning, whether the class was taken online or in a classroom.

(3) In terms of the students' favorite way of learning, 53.2 percent of APE majors were inclined to be lectured, with the ratio 17.3 percentage points higher than that of the general majors. It can be seen from this data that although APE majors expressed strong interests in learning the new sections taught through the Rain Classroom, the discrepancy between their learning interests and the effect began to appear after a certain period of online learning. One issue that emerged was that students with poor English abilities were unable to communicate online with the teacher in a timely way to have their questions answered, and some failing to complete the previews and homework before the deadlines due to poor self-control in learning. Therefore, they preferred to be lectured in a traditional classroom setting.

## Conclusions

It can be seen from data comparisons of the above groups that the use of smart teaching platforms, such as the Rain Classroom, has infused new vigor into CET activities for APE majors. For future classes and teaching reforms, we will focus on the following issues:

(1) Curriculum nature and settings as well as teaching objectives and evaluations: Effective language teaching should not depart from the natural way of learning, but must be adapted to it, and should not impede learning but facilitate it. It should not require students to adapt themselves to the teaching and relevant materials but the other way around (Liu, 2009). According to the descriptions in the *Guidelines* about the nature and the setting of college English curricula and teaching objectives, *College English* for APE majors is an English course for the general purpose which features practical use and humanistic qualities. Students of this course should at least meet the requirements for the basic level as specified in the *Guidelines*. Students from APE majors differ to a certain extent from those of the general majors in their learning interests, behaviors, gains, self-evaluations, and individual self-efficacy. Therefore, we should design a training program more targeted to APE majors based on their personalities, features of their specialty, and their demands for learning. We should identify their goals of learning and achievable objectives by different levels and define ways to evaluate success during the process. College English teachers of APE majors can refer to *China's Standards of English Language Ability* (2018) (CSE) issued by the State Language Commission for the classification of three stages with nine levels. CSE also defines clearly and in detail the features of language ability at each level (Chai, 2018). They can thus develop local training plans for APE majors based on individual student levels and their stage of learning. The nature of the curriculum should be further clarified, and

its setting should be optimized to reach the teaching objectives. The evaluation methods should also be improved.

(2) Teaching methods, approaches, and resources: The development and application of multimedia and Internet technologies have exerted significant influence on teaching methods, approaches, and resources. The *Guidelines* call on “leveraging information technology and creating a diversified teaching and learning environment...developing or using open online courses and implementing blended teaching that integrates online and offline class.” Blended teaching is by no means a simple combination. Instead, it embodies effective integration of different learning theories, resources, spaces, and methods. It is a process that makes theories understandable, resources plentiful, environments unrestricted, and methods diversified. In other words, it is a type of learning that enables students to select a variety of suitable ways (face-to-face instruction or online learning), make use of different learning resources (online or offline) to acquire knowledge to achieve the best learning effects in various environments (in or after class) (Huang, 2006). Most of the traditional college English classes for APE majors feature face-to-face instruction, because such students generally have poor English proficiency and weak self-directed learning initiatives and abilities. With the advent of the Internet plus era, such a single way and monotonous teaching mode have been transcended to encourage teachers to change their role from an instructor to a facilitator. Teachers can break the teaching contents into different modules and help students master the fundamentals for language acquisition through offline instruction. Through such face-to-face interactions, teachers can know precisely how students have learned and supervise their learning effect, and can thus help them solve any problems and difficulties encountered in the learning process in a timely way. In addition, students can use the Rain Classroom to complete previews, homework, unit quizzes, and learning of cultural background information. They can also have extended classes, like practical training for language learning, to form a perfectly closed loop of online and offline, in-class, and extracurricular activities. In the meantime, the teachers can use the Rain Classroom functions, such as real-time comments, random checks of attendance, ballots, and contributions, to assess students’ learning and to achieve the blending of diversified learning methods and effects during face-to-face instruction.

(3) Teachers’ development: This is the prerequisite of education advancement. The new era not only sets a high requirement on talent training, but also an even higher requirement on the development of teachers in institutions of higher learning. College English teachers should not only enhance their abilities in training talents, disciplinary methods, research, and teaching, but also their capabilities of using IT technologies. Such teachers for APE majors should also closely follow the development of new technologies, so that they can quickly adapt to, and apply modern information technologies to their teaching and learning. They should leverage abundant information resources and data from smart teaching platforms, such as the Rain Classroom, and become familiar with online teaching approaches, on which they can make their innovations in teaching to implement an online-offline blended teaching mode to arouse APE majors’ interests in learning English. In the meantime, they should take the initiative to integrate CET for APE majors into ideological and political curricula

of their universities to increase students' knowledge in the social sciences, cultures, and scientific fields to broaden their international vision, enhance their cultural literacy, and help them establish correct values and outlooks on life and the world (National College Foreign Language Teaching Advisory Board, 2020).

We should strive to achieve the integration of practical use and humanistic qualities in the process of training APE majors to meet their demands for growth and success, as well as the national requirements for strategic development (He, 2020), and make due contributions to promoting the development and improvement of higher education in China.

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(Editor: Yan Yuting)

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*Contemporary Social Sciences* is a bimonthly English language periodical published by Sichuan Academy of Social Sciences. *Contemporary Social Sciences* publishes outstanding research in the field of social sciences in China, promotes academic achievements supporting China's going global and enhances China's international discourse in the field of social sciences. Our primary audience are the scholars and students whose primary research interests include humanities and social sciences in contemporary China, both at home and abroad.

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## A Brief Introduction to Sichuan Academy of Social Sciences

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