Rethinking Scholarly Communication in China

A Political Economy Approach

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Chapter 1

Introduction

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1 Introduction

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With respect to Chinese scholarly communication, one issue that has long concerned the Western academic community is censorship and restrictions on academic research by the Chinese political system. For example, in August 2017, Cambridge University Press removed 300 papers from its Chinese website, and in October of the same year, Springer Nature (a division of the publisher Springer) also removed thousands of papers from its Chinese website. Such incidents have triggered discussions in the Western media and academic circles. As Tim Pringle, editor-in-chief of China Quarterly, said in an exclusive interview with the BBC, 'The biggest challenge facing the Chinese research field in the future is academic freedom. Academic freedom guarantees unlimited academic space. This is very difficult in China' (Chang, 2022). In other words, under the Chinese system, it has become increasingly difficult to conduct academic research on China's political, economic, and social issues. Although censorship does exist, why and how do research institutions that espouse academic freedom submit to academic regulation? Let's put this another way: Chinese universities have performed well in various world university rankings in recent years, and the number of papers published is also among the top in the world. If academic freedom is insufficient, what accounts for their outstanding performance?

According to the list compiled by QS, Times, and Shanghai Jiao Tong, the results for these three institutions show that the number of Chinese universities ranked among the top 400 universities in the world between 2012 and 2022 increased. Table 1.1 shows these data in detail.

In addition, China has recorded the fastest growth in the number of papers and citations in the past two decades. According to Elsevier's statistics, the annual growth rate of papers in China was 11.6% from 2006 to 2010, surpassing Australia (6.5%) and the United States (5.6%) and ranking first in the world. Statistics from Science Citation Index (SCI) also show that the number of papers published in China from 2012 to 2016 has reached 1.245 million, closely following the United States at the top of the list. In addition to the increase in publications, the number of citations has also increased. The 2021 Statistical Report on Chinese Science and Technology Papers noted that China ranks first in the world in the number of citations of international papers in four fields: Materials science, chemistry, computer science, and engineering technology. Further, the number of highly cited papers in

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Table 1.1 World University Rankings (Top 400)

	QS	*Times*	*Shanghai Jiao Tong*
2012	9	10	14
2022	19	17	58

Source: Compiled by this study.

China is 42,920, accounting for 24.8% of the global share (an increase of 15.5% over 2020) and ranking second in the world (The Institute of Scientific and Technical Information of China, 2021). Xue et al. (2014) compared studies in China and the United States by the average citation rate of publications and found that in 1990, the ratio of China to the United States was 26:100, and this figure increased to 55:100 in 2010. Thus, China's scientific research strength has already attracted global attention.

The issue of academic knowledge production and dissemination in China should not be understood solely from the perspective of political censorship. Academic dissemination in China is embedded in a complex political-economic system, where the academic governance system handles censorship but the economic sector carries out the distribution of knowledge resources. Recently, these two systems have been gradually combined, and the communication system has even assumed part of the academic governance function. However, previous studies have often neglected the issue of how China's knowledge resources are allocated – that is, the role of the communication system in academic knowledge distribution.

In this regard, in the digital transformation of China's academic communication system, the landscape has gradually become dominated by commercial database companies. In particular, although it claims to be a commercial database, the China National Knowledge Infrastructure Corporation (CNKI) manages the internal and external dissemination of Chinese academic knowledge. Now it is also involved in the work of academic governance and has assumed an important role in reviewing academic knowledge. In short, to understand scholarly communication in China, we must explore it through the process of combining political and economic systems. This book starts from the perspective of political economy to examine how this academic governance complex combining communication, politics, and economics was formed in China and the impact of this system on the production of academic knowledge in China.

A Political Economy Approach to Scholarly Communication

There are currently several explanations in the academic community regarding the production capacity of academic knowledge in China over the past two decades. The first explanation involves the government's science and technology policy (cf. Meng, 2007; Shelton & Leydesdorff, 2012); that is, the government has invested heavily in research and development (R&D) and used various incentive strategies to motivate scholars to engage in scientific research.

As indicated by data from the website of the National Bureau of Statistics of China, China's R&D investment in 2021 was estimated to be 2,786.4 billion (RMB), an increase of 14.2% over the previous year, accounting for 2.44% of gross domestic product (GDP), approximating the average level among OECD countries before the outbreak of coronavirus disease-2019 (COVID-19) in late 2019 (2.47%)[1]. In addition, in terms of actual publishing policies, the Ministry of Education of China released the Twelfth Five-Year Science and Technology Development Plan (十二五科技发展规划) in July 2011, linking the development of universities with the publication of SCI papers. The publication and citation rates of international papers are also included in the national science and technology development strategy in the policy document, defined as follows:

> The number of citations of international scientific papers refers to the sum of the number of citations of academic papers included in the Science Citation Index (SCI) within a period after publication. This indicator is important for evaluating the quality of international scientific papers, and also reflects the influence of a country or region's international scientific papers.
> (Ministry of Science and Technology of the People's Republic of China, n.d.)

This is the first time that the Chinese government has explicitly included the citation index of a Western commercial database in this policy document on university development, which in this document also clearly refers to the emphasis on the global ranking of Chinese universities. To connect with the world, Chinese universities rely on the rankings released by QS and Shanghai Jiaotong University World-Class University Research Centre. The former is based on Scopus, a database product owned by Elsevier, while the latter is based on the SCI and SSCI Database, a product of Thomson Reuters. Therefore, when university rankings are linked to paper publications, Chinese universities will reward scholars for such publications.

The second explanation is the prevailing utilitarianism in China (Fu et al., 2013), which means that scientific and technological activities have practical goals, and the formulation of these goals comes from economic and political judgments. The country's utilitarianism is manifested in the application of science to the economy's rapid development rather than the specialisation of basic knowledge. Institutional utilitarianism manifests itself in adapting to changes in governance methods to obtain greater financial support. Personal utilitarianism is manifested in adjusting one's research direction to meet institutional or national needs and striving for more research projects and academic honours. As international paper publication has become an important metric for university rankings and evaluation of scholarly output, scholars will work diligently to produce these papers.

However, while both of these perspectives explain the growth of the number of papers in China over the past two decades, they focus more on international paper publication and less on the internal dissemination of scholarship within the Chinese academy. Moreover, China's academic publication policies have recently changed, shifting from emphasising international publication to prioritising local

paper publication. For example, Chinese President Xi Jinping (2016) emphasised that 'scientists should dedicate their papers to their motherland and apply scientific and technological achievements to the great cause of modernization.' What impact does this shift have on scholarly communication in China? We need research to explore this transition.

Furthermore, these two views ignore the role played by commercial databases in China. Just as it relies on Western databases to publish papers to improve the global ranking of Chinese universities, the Chinese government has fostered its commercial database, CNKI, to coordinate the domestic dissemination of scholarship, including electronic distribution of journal articles, doctoral dissertations, conference papers, and so on. More importantly, CNKI has also taken over the role of checking the repetition rate of doctoral dissertation content, evaluating domestic journals, and finding partners to publish English versions of Chinese journal articles to propagate Chinese scholarship overseas, making it not only a channel for dissemination but also a platform for evaluating knowledge.

The relationship between commercial databases and the Chinese government is complex. The Chinese government has tied university development to databases of Western publishers, and domestic scholarly dissemination relies on CNKI, although CNKI is not a purely private company, as is the case with commercial databases in other countries. By ignoring the interaction between commercial database companies and the Chinese government, it is impossible to understand how scholarly communication in China is shaped by a combination of political and economic factors.

Why Adopt a Political Economy Approach?

Scholars have suggested that scholarly communication is based on the premise that knowledge is communicated, and it encompasses both formal and informal forms of interaction (Borgman, 2000). The former uses formal printed publications as the medium of communication, such as journal articles and books, whereas the latter uses oral communication, such as lectures and academic seminars. Whether through formal or informal interactions, the ultimate goal is to ensure that knowledge can be produced. Xia (2017, p. xiv) defines scholarly communication as 'a process that focuses on the training of scholars and the study and evaluation of scholarly knowledge,' whereas the Association of College & Research Libraries (ACRL) defines it as 'a system through which research and other scholarly writing are created, the quality of its content is assessed, and its results are disseminated to scholarly communities and retained for future use.'[2] These definitions show that the production and dissemination of scholarly knowledge are closely intertwined.

Communication and interaction among scholars ensure the quality of knowledge production, further contributing to knowledge accumulation, and allowing subsequent researchers to 'stand on the shoulders of giants' and continuously refine their knowledge. Merton argues that this open communication is the cultural spirit of science: Communalism (Merton, 1973). In other words, communalism, as the basic norm of scholarly communication, is established from the standpoint of the

academic community. For Merton, no matter to whom a scholar wants to communicate knowledge, communication itself is almost a norm that does not need to be emphasised as the scholar will practice it anyway. Conversely, if asked why scholarly knowledge needs to be disseminated, a scholar would not know how to answer such a fundamental question.

If one uses the concept of communalism to explain the changes in scholarly communication in China, it is difficult to fully understand why China has made such dramatic progress in the past two decades. This is because, from the perspective of scholars, Chinese scholars understand that they produce and disseminate knowledge to comply with the requirements of the administrative system, such as promotion, applying for research projects, and striving for academic honours; from the perspective of higher education institutions, the goal is to obtain financial subsidies and improve the global ranking of universities (McGrail et al., 2006; Miller et al., 2011; Stack, 2016). From the perspective of the state, the Chinese government's science policy (i.e., its investment in scientific labour) resembles Habermas's discussion of the role of the state in the process of capital realisation:

> For the first time, reflexive labor, i.e., labor that is imposed on labor to increase its productivity, can be considered as a collective natural commodity. Today, it is integrated into the economic cycle, as the state (or private enterprises) now invests in the indirect productive labor of scientists, engineers, teachers, etc., transforming the outcome of their labor into a cost-saving commodity in the above-mentioned category.
>
> (Habermas, 1973/Liu trans, 1994, p. 77)

For Habermas, scientists engage in a kind of reflexive labour, the purpose of which is to identify the most efficient method of production through the study of labour in general. The state invests in reflexive labour with the aim of increasing the efficiency of economic production. As China's Ministry of Science and Technology has pointed out, the role of science and technology lies in 'a new science and technology system based on the principle that economic development must rely on science and technology, and science and technology work must be oriented toward economic construction, with a clear division of labour and positive interaction between governmental science and technology institutions, industrial research departments, and institutions of higher learning gradually taking shape. Private science and technology enterprises are developing rapidly.'[3]

In short, the dynamics of academic knowledge production and dissemination in China are not what Merton would call 'communism.' That is, the government values the research output of universities and its cost-effectiveness, and universities' performance becomes the basis of evaluation by policymakers. In turn, universities must stimulate academics to produce more papers to compete for resources (Himanen et al., 2009), which are beyond the control of the academic community itself.

In China, however, the relationship among the administrative system (Ministry of Science and Technology, Ministry of Education), higher education institutions

(universities), and individual scholars is more complex, and this top-down vertical management system essentially determines the direction of research for academic papers. In other words, the power of the administrative management system to intervene in the production of scholars' papers – from topic selection to ideological review – is quite significant. On the other hand, the horizontal dissemination system (i.e., Western and local Chinese databases) is not only a dissemination channel for dissertations but also a tool for assessing the quality of content, and Chinese scholars do not have much freedom to choose between these two channels.

In sum, academic knowledge production and dissemination in China has experienced rapid growth over the past two decades, with a significant increase in the number of papers in both Chinese and English. Although past researchers have offered explanations in terms of government policy and utilitarianism, they have ignored the political economy at play in the intersection of commercial databases and administrative systems. From the perspective of the academic community alone, it is not possible to fully understand why scholarly communication in China has undergone such a dramatic transformation.

Goals of This Book

This book takes a political economy approach to the issue of scholarly communication in China, aiming not only to provide new explanations for changes over the past two decades but also to explore possible future developments. China's scholarly communication environment has similarities to those of other countries, such as the government's emphasis on evaluating the performance and effectiveness of higher education institutions (Grančay et al., 2017; Slaughter & Leslie, 1997). Moreover, for scholars, there is a strong incentive to publish rather than 'perish' (Qiu, 2010; Niles et al., 2020; van Dalen, 2021). However, China is also unique in that the production and dissemination of academic knowledge are subject to the aforementioned administrative management system and the horizontal knowledge dissemination system, both of which are bound by government policies or measures. The dominant forces of both have been more significant in recent years.

Based on the above discussion, we arrange the overall structure of this book through the vertical administrative management system and the horizontal knowledge dissemination system. The policies of science and technology represented by the vertical administrative system reflect the ideas of China's political elite, shaping the production of academic knowledge, including scholars' research directions and publication objectives. This book aims to investigate how these policies and administrative factors influence scholars' publication practices both nationally (Chapter 2) and within higher education institutions (Chapter 3), as well as their potential consequences (Chapter 4).

Chapter 2 explores how the political elite understand scientific knowledge and how this understanding influences academic dissemination. An analysis of 12 pivotal policies spanning the past 70 years, supplemented by memoirs from key policy figures, provides a nuanced insight into this relationship. Initially, during the early days of the People's Republic of China, scientific literature was viewed

as military intelligence, primarily serving the leadership's needs and informing decision-making. However, during the Reform and Opening-up period (改革开放), there was a shift towards leveraging scientific literature for its intrinsic value to science, aided by advancements in literature retrieval and classification systems. The onset of the market economy in 1991 represented a pivotal moment in the evolution of scholarly communication. Private enterprises swiftly adapted to this environment, transforming scientific literature into lucrative information products, and showcasing the commercial viability of these resources. Recent policies implementing regulatory measures for associated businesses highlight the significance of scientific literature in protecting national security. The administrative system has renewed its focus on fostering the exchange of scientific information to bolster government decision-making.

Chapter 3 will focus on the institutional level of universities. China's approach to aligning its universities with those in the rest of the world is to participate in global university rankings. Scholarly publications are an important means of improving such rankings, particularly those in academic journals that are explicitly listed in Western databases. Universities will devise incentive measures for scholars' paper publications based on the science and technology policies enacted by the administrative system. The emphasis on publishing papers indexed in SCI and SSCI (Social Science Citation Index) has become widespread in Chinese universities, driven by the Ministry of Education's China discipline ranking and the planning policies of the Ministry of Science and Technology, particularly following the release of the 'Twelfth Five-Year Plan for Science and Technology Development.' This chapter investigates how scholars in the field of journalism and communication adjust their submission strategies to target international publications, with a focus on the prevalence of international publications among scholars affiliated with prestigious universities when government policies take precedence over community recognition of scholarly excellence. Consequently, the push to publish internationally diminishes domestic journal publications in China, contributing to a class structure within the scientific community.

Excessive reliance on paper publications as the sole criterion for assessing scholars' performance not only leads to the aforementioned class structure but also contributes to the publication of papers in predatory journals. While predatory journals have become a global issue for the academic community, there has been little research on China's publication in predatory journals despite its leading position in paper publications worldwide. Drawing upon Jeffrey Beall's 'blacklist of predatory journals,' Chapter 4 investigates the publication of Chinese scholars in predatory journals. The study reveals that scholars from prestigious universities tend to submit their work to high-quality journals, whereas those from ordinary universities are more inclined to submit to predatory journals. This disruption to the established order of journal submissions in the academic community poses challenges to integration based on scientific norms.

Chapter 5 examines the horizontal knowledge dissemination system that governs how scholarly knowledge is disseminated and evaluated after it is produced,

especially the influence exerted on academic journals. This chapter will focus on China's largest academic database, CNKI, whose developmental trajectory has been closely tied to national policies. Its two most important functions are the economic function of allocating knowledge resources, which determines how Chinese universities acquire academic knowledge, and the political function of academic governance, which governs the circulation of academic knowledge. Judging from the development of CNKI, the company will be more involved in the government's academic governance in the future, becoming the gatekeeper of academic communication in China.

Finally, Chapter 6 will explore the developmental trajectory of scholarly communication in China and advocate for the necessity of adopting a political economy approach to research. The book contends that the cognitive influence of China's political elite on scientific knowledge has shaped scholarly communication in the country. In recent years, there has been a greater emphasis among the political elite on 'a holistic approach to national security' (国家总体安全观), shifting the notion of scientific knowledge as the primary productive force towards the idea that scientific knowledge must serve national security. This represents a significant shift in China's scholarly communication, particularly in encouraging local scholars to submit more to local academic journals and restricting companies like CNKI, Wanfang, and VIP from selling Chinese research data abroad. By timely adopting a political economy approach to research, we can complement the shortcomings of past studies that have relied solely on a bibliographic perspective to study scholarly communication.

Notes

1 Data source: National Bureau of Statistics of China website, URL: https://www.stats.gov.cn/xxgk/sjfb/zxfb2020/202201/t20220126_1827037.html, accessed on May 8, 2022.
2 Association of College & Research Libraries. Principles and Strategies for the Reform of Scholarly Communication 1. http://www.ala.org/acrl/publications/whitepapers/principles strategies.
3 See https://web.archive.org/web/20240421033148/https://www.gov.cn/test/2005-09/23/content_69616.htm

References

Borgman, C. L. (2000). Digital libraries and the continuum of scholarly communication. *Journal of Documentation*, *56*(4), 412–430.

Chang, S. I. (2022, September 9). Interview with the Editor-in-Chief of China Quarterly, a leading journal of contemporary China studies: "The biggest challenge is academic freedom" (in Chinese). *BBC*. Retrieved from https://www.bbc.com/zhongwen/trad/chinese-news-62288327

Fu, J., Frietsch, R., & Tagscherer, U. (2013). *Publication activity in the science citation index expanded (SCIE) database in the context of Chinese science and technology policy from 1977 to 2012* (No. 35). Fraunhofer ISI Discussion Papers-Innovation Systems and Policy Analysis.

Grančay, M., Veinhardt, J., & Šumilo, Ē (2017). Publish or perish: How Central and Eastern European economists have dealt with the ever-increasing academic publishing requirements 2000–2015. *Scientometrics*, *111*(3), 1813–1837.

Habermas, J. (1973). *Legitimations probleme im spatkapitalismus*. Frankfurt am Maim.

Himanen, L., Auranen, O., Puuska, H.-M., & Nieminen, M. (2009). Influence of research funding and science policy on university research performance: A comparison of five countries. *Science and Public Policy*, *36*(6), 419–430. https://doi.org/10.3152/030234209X461006

Ministry of Science and Technology of the People's Republic of China. (n.d.). From https://web.archive.org/web/20240309015930/https://www.most.gov.cn/xxgk/xinxifenlei/fdzdgknr/gjkjgh/201107/t20110713_88230.html

McGrail, M. R., Rickard, C. M., & Jones, R. (2006). Publish or perish: A systematic review of interventions to increase academic publication rates. *Higher Education Research & Development*, *25*(1), 19–35. https://doi.org/10.1080/07294360500453053

Merton, R. K. (1973). *The sociology of science: Theoretical and empirical investigations*. University of Chicago press.

Meng, Y. (2007). A mission-oriented pattern of S&T policy in China. Retrieve 2022, July 1, from https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=6758957e7418e9af3be97a1df77e213e97b56dda

Miller, A. N., Taylor, S. G., & Bedeian, A. G. (2011). *Publish or perish: Academic life as management faculty live it*. Career Development International.

Niles, M. T., Schimanski, L. A., McKiernan, E. C., & Alperin, J. P. (2020). Why we publish where we do: Faculty publishing values and their relationship to review, promotion and tenure expectations. *PLoS One*, *15*(3), e0228914.

Qiu, J. (2010). Publish or perish in China: The pressure to rack up publications in high-impact journals could encourage misconduct, some say. *Nature*, *463*(7278), 142.

Shelton, R. D., & Leydesdorff, L. (2012). Publish or patent: Bibliometric evidence for empirical trade-offs in national funding strategies. *Journal of the American Society for Information Science and Technology*, *63*, 498–511.

Slaughter, S., & Leslie, L. L. (1997). *Academic capitalism*. Politics, Policies, and the Entrepreneurial University.

Stack, M. (2016). *Global university rankings and the mediatization of higher education*. Palgrave Macmillan.

The Institute of Scientific and Technical Information of China. (2021, December 27). Statistical data of Chinese science and technology papers. Retrieve 2021, December 30, from https://lib.cpu.edu.cn/_upload/article/files/95/12/1271ec824d10a3a9f1ce19ce5ee6/b71204f2-a402-453e-89e2-876996a703f9.pdf

van Dalen, H. P. (2021). How the publish-or-perish principle divides a science: The case of economists. *Scientometrics*, *126*(2), 1675–1694.

Xi, J. P. (2016, June 1). Striving to build a world scientific and technological power. Speech at National Scientific Technology Innovation Conference, General Assemblies of the members of the Chinese Academy of Sciences and the Chinese Academy of Engineering (CAE), the Ninth National Congress of the China Association for Science and Technology (CAST). *People's Daily.*

Xia, J. (2017). *Scholarly communication at the crossroads in China*. Chandos Publishing.

Xue, Y., Zhang, C., & Lai, Q. (2014). China's rise as a major contributor to science and technology. *Proceedings of the National Academy of Sciences*, *111*, 9437–9442.