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An Altmetrics-Based Framework for Evaluating the Societal Impact of Chinese Scientific Papers in the Context of “Breaking the Five Only”

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Abstract

Over the past two decades, China’s scientific and technological evaluation has been ‘hijacked’ by SCI, resulting in adverse consequences where academic orientation, scientific and technological achievements, and evaluation have deviated from the nation’s strategic priorities. The state has proposed in a timely manner to break the ‘SCI supremacy’ and ‘break the five-only’ . By reviewing Altmetrics and research progress on the social impact of scientific and technological achievements and papers both domestically and internationally, and combining it with an analysis of the social communication environment of Chinese scientific papers and the pathways through which they generate social impact, this study proposes analyzing the composition of the social impact of scientific papers from eight dimensions across four levels—economic, political, social, and cultural—namely: economic contribution, policy reference, social value, social evaluation, social dissemination, civic literacy, cultural exchange, and cultural contribution. It aims to identify and extract relevant indicators, applying literature analysis, surveys, big data mining, and quantitative research methods to quantify qualitative social impact indicators. Through statistical analysis to identify correlations and patterns in the data, and in conjunction with the dissemination behavior of scientific papers, their ‘impact pathways’ on audiences, and impact levels, methods such as the Analytic Hierarchy Process and entropy weight method are employed to determine the weight of each indicator, construct a social impact evaluation model for papers, conduct social impact evaluation of scientific papers, and establish a social impact evaluation system for scientific papers. Only by combining the academic impact and social impact of scientific papers can we comprehensively evaluate the contributions of scientific papers, establish a scientific evaluation system, and effectively guide Chinese researchers to truly ‘write their papers on the land of the motherland’ .

Full Text

Preamble

Constructing a Social Impact Evaluation System for Chinese Scientific Papers Based on Altmetrics: Breaking “SCI Supremacy” and the “Five Only” Doctrine

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Abstract

Over the past two decades, China’s scientific evaluation system has been held hostage by “SCI supremacy,” leading to misaligned academic priorities, distorted assessment of scientific achievements, and flawed talent evaluation that deviates from national strategic needs. In response, Chinese authorities have called for dismantling “SCI supremacy” and breaking the “Five Only” doctrine. By reviewing Altmetrics and research progress on social impact evaluation of scientific achievements and papers both domestically and internationally, and analyzing the social environment for disseminating Chinese scientific papers and the pathways through which they generate social impact, this study proposes analyzing the composition of social impact across eight dimensions within four levels: economic, political, social, and cultural. These dimensions include economic contribution, policy reference, social value, social evaluation, social dissemination, civic literacy, cultural exchange, and cultural contribution. Using literature analysis, surveys, big data mining, and quantitative research methods, we aim to quantify qualitative social impact indicators. Through statistical analysis to identify correlations and patterns in the data, and by examining the dissemination behaviors of scientific papers, their “impact pathways” on audiences, and levels of influence, we will employ methods such as the Analytic Hierarchy Process and entropy weighting to determine indicator weights, construct a social impact evaluation model, and establish a comprehensive evaluation system for the social impact of scientific papers.

Only by combining academic impact with social impact can we comprehensively assess the contributions of scientific papers, establish a scientific evaluation sys-

tem, and effectively guide Chinese researchers to “write their papers on the land of their motherland.” The concept of “SCI supremacy” artificially elevates citation-based indicators to rigid, prerequisite, and even sole criteria for evaluating scholars, achievements, and institutions [1]. Over the past 20 years, this has fundamentally shifted research orientation in China’s scientific community: some researchers have moved from addressing national needs and serving economic development to pursuing international frontiers and hot topics. Consequently, the evaluation standards for scientific achievements and talent have shifted from application- and society-oriented assessment to SCI-dominated metrics centered on paper counts, citation frequencies, and impact factors [2]. This has not only resulted in delayed domestic application of research outcomes and staggering waste of research funding but has also led to research agendas being hijacked by SCI considerations, causing Chinese academic discourse to lose its voice and domestic journals to struggle for survival.

As early as 2016, at the “Three National Conferences on Science and Technology Innovation,” President Xi Jinping emphasized: “We must reform the science and technology evaluation system, establish a classified evaluation system oriented toward innovation quality, contribution, and performance, and correctly evaluate the scientific, technological, economic, social, and cultural value of scientific and technological innovations” [3]. This statement underscores the importance of multi-dimensional impact assessment, including social impact. In February 2020, the Ministry of Education and Ministry of Science and Technology issued the “Opinions on Regulating the Use of SCI Paper-Related Indicators in Higher Education Institutions and Establishing Correct Evaluation Orientations,” proposing to “break the ‘SCI supremacy’ of papers and explore the establishment of scientific evaluation systems” [4]. In July of the same year, the Ministry of Human Resources and Social Security and the Ministry of Education released the “Guiding Opinions on Deepening the Reform of Professional Title Systems for University Teachers (Draft for Comments)” [5], marking the official launch of the “Five Only” demolition campaign in higher education. On August 2, 2021, the General Office of the State Council issued the “Guiding Opinions on Improving the Evaluation Mechanism for Scientific and Technological Achievements” (State Office Document [2021] No. 26) [6], requiring comprehensive and accurate evaluation of the scientific, technological, economic, social, and cultural value of achievements, with targeted assessment of their diverse values based on different characteristics and evaluation purposes. Evidently, within the context of breaking “SCI supremacy” and the “Five Only” doctrine, constructing an evaluation system based on the social impact of scientific papers on national or regional capabilities is imperative.

As the primary carrier of scientific research outcomes and an important form of academic exchange, scientific papers have experienced unprecedented dissemination prosperity in the “Internet Plus” era, spreading widely across social media in various formats. Each country has unique pathways for scientific paper dissemination. Based on the concept of Altmetrics and combined with the characteristics of China’s online environment for paper dissemination and

access, we can select appropriate indicators and introduce additional social impact metrics at economic, political, social, and cultural levels—such as serving national economic strategies, addressing major social issues, influencing policy, and promoting international cultural exchange and public science literacy. By applying expert evaluation combined with quantitative assessment methods, we can preliminarily construct a social impact evaluation system for scientific papers. Only by integrating academic and social impact can we comprehensively evaluate paper contributions, establish a scientific evaluation system, achieve equivalence between Chinese papers and SCI journal papers, and guide Chinese researchers to truly “write their papers on the land of their motherland.”

“Social impact” primarily refers to the influence, changes, or benefits that research brings to non-academic domains such as economy, society, culture, public policy or services, health, and living environment or quality. In a narrow sense, social impact emphasizes influence on a country or region’s social capabilities [7]. While scientific paper evaluation has traditionally focused on academic impact, research on social impact evaluation remains scarce. The State Council’s “Guiding Opinions on Improving the Evaluation Mechanism for Scientific and Technological Achievements” [6] (State Office Document [2021] No. 26) states: “The economic value of achievements should focus on evaluating promotion prospects, expected benefits, and potential risks to economic and industrial development. Social value should focus on effectiveness in addressing major bottlenecks in public health, national defense, public safety, and ecological environment. Cultural value should focus on impact and contributions in promoting scientific spirit, fostering innovation culture, and upholding socialist core values.” Based on this, we propose a framework for evaluating the social impact of Chinese scientific papers using Altmetrics, aiming to provide a reference for constructing a multi-dimensional evaluation system tailored to China’s national conditions.

1.2 Data Sources and Tools Analysis, Indicator Research

In 2010, Priem et al. [8] coined the term Alt-metrics (simplified to Altmetrics in 2011). The essence of Altmetrics is a supplement to established citation-based metrics, emphasizing tracking activities for all forms of outputs (papers, monographs, blog posts, clinical trials, datasets, videos, software, code, reports, courseware, etc.), including citations, reprints, comments, recommendations, shares, and collections. This not only expands our understanding of impact but also enriches our conception of its composition, representing a profound development of traditional bibliometrics. Altmetrics is a social network-based method for evaluating academic impact that uses Altmetric tools to harvest information about research outputs from social networks and reference management systems (downloads, citations, views, comments, retweets, etc.), then employs cluster analysis and statistical calculations to assess both academic and public impact. As a quantifiable indicator of paper social impact, social media influence fills a gap in previous evaluation systems.

China's Altmetrics research has progressed through conceptual introduction and digestion (2012–2014), data source and tool analysis with indicator research (2014–2016), and has now entered the empirical research and preliminary localization stage (2016–present). However, few studies have reported on using Altmetrics combined with other social benefit indicators to establish a social impact evaluation system for scientific papers.

In 2012, Liu Chunli et al. [9] and Wang Xianwen et al. [10] first translated Altmetrics as “selective metrics,” while You Qingbin et al. [11] and Zhao Rongying et al. [12] translated it as “supplementary metrics.” Qiu Junping et al. [13] and Gu Liping [14] used “alternative metrics,” and some scholars adopted the English term directly. Recently, Yu Houqiang et al. [15] conducted a comprehensive analysis of Altmetrics translations from eight perspectives: etymology, dictionary definitions, original intent, precedent, definition interpretation, background, development prospects, and practical considerations, concluding that “alternative metrics” is the appropriate Chinese term under China’s policy of promoting Sinicized scientific terminology. However, since Altmetrics involves collecting and analyzing dissemination traces of papers on social networks as a powerful supplement to academic impact, we believe “supplementary metrics” is more appropriate, and thus use this translation in our paper.

Research on common Altmetrics tools by Wang Rui et al. [16], Liu Entao et al. [17], Yang Liu et al. [18], Zhao Rongying et al. [19], and Wu Shengnan et al. [20] introduced and systematically compared popular tools including Altmetric.com, ImpactStory, Plum Analytics, Paper Critic, PLoS Impact Explorer, Readermeter, ScienceCard, and CitedIn across seven dimensions: target positioning, output types, data sources, metrics, evaluation strategies, result presentation, and other attributes and functions, analyzing their characteristics, advantages, and limitations. Liu Chunli et al. [21] systematically reviewed basic and aggregated Altmetrics tools and identified current issues, summarizing problems in four areas: data coverage breadth and intensity, tracking and collection methods, contextual and demographic analysis, and data screening and processing, while proposing that Altmetrics and ALMs data should adhere to three principles: openness, transparency, and auditability.

Regarding Altmetric data sources and indicators, Altmetric.com collects online attention for a paper (comments, tweets, shares, and reprints) from mainstream news outlets, social media platforms (including blogs, Twitter, Facebook, Sina Weibo, LinkedIn, Google+, Pinterest, Reddit), reference management sites (including Mendeley, CiteULike, Wikipedia, Open Syllabus, Policy Documents, F1000), and multimedia (YouTube). It then applies specific weighting to these different data types to aggregate a metric known as the Altmetric score, which quantitatively represents a paper’s impact. ALMs indicators are divided into five categories: Viewed (including HTML, PDF, and XML metrics from PLOS Journals and PubMed Central); Cited (including CrossRef, Datacite, Europe PMC, PubMed Central, Scopus, and Web of Science); Saved (including CiteULike and Mendeley); Discussed (including PLOS Comments, Facebook, Reddit,

Twitter, and Wikipedia); and Recommended (including F1000 Prime). Google Scholar and Web of Science show high coverage, while Twitter and Facebook show lower coverage. Google Scholar and Web of Science, as well as Twitter and Facebook, exhibit strong positive and linear correlations, whereas Web of Science and Twitter show weak positive correlation.

Regarding disciplinary differences in Altmetrics, scholars have examined library and information science [22], medical informatics and diabetes [23], 24 disciplines across natural sciences, social sciences, and humanities [24], clinical neurology, chemistry and physics, and earth sciences as representative natural science disciplines [25], and aerospace medicine [26]. These studies suggest that Altmetrics features timeliness, source journal diversification, fairness, and life-relevant topics, effectively reflecting academic and social impact in humanities, health, and biological sciences where public interest is high. However, due to its lack of rigor, only by combining Altmetrics with citation analysis can we accurately predict the academic impact of scientific achievements.

Nevertheless, China's data sources differ significantly from internationally used sources. Altmetrics indicators are derived from foreign platforms like Facebook, Twitter, and Mendeley. Due to policy restrictions and language barriers, Chinese scholars rarely use these foreign platforms, making existing Altmetrics indicator systems unsuitable for evaluating Chinese scholars and resulting in a lack of appropriate Altmetrics indicators for assessing their impact. Consequently, a few scholars have begun exploring localized Altmetrics evaluation systems based on China's national conditions.

1.3 Empirical Research Stage to Preliminary Localization Stage

Localization research has only just begun, with limited studies such as Zhang Yao [27], who used Python-based web crawlers to trace literature on social network platforms, collect relevant data, and preliminarily construct an Altmetrics evaluation system for library and information science research in Chinese contexts. Yi Shuqiong [28] selected Baidu Wenku, Docin, CNKI, Baidu Scholar, and Google Scholar as data sources, using biology and management papers as samples to conduct correlation analysis between indicators using SPSS software.

However, these studies utilize too few data platforms, particularly underutilizing WeChat for mobile reading, and make no mention of Toutiao, Xigua Video, or even audio platforms like Ximalaya. Currently, Chinese researchers frequently use platforms including WeChat, Weibo, ScienceNet, and XiaoMuChong for accessing scientific papers. WeChat public accounts provide metrics such as read counts, "like" counts, and article numbers, but lack forwarding, commenting, and rating functions. Toutiao provides recommendation, read, and comment counts similar to foreign social media platforms. Therefore, researching China's scientific paper access platforms and their characteristics, analyzing how social networks disseminate academic resources through viewing, downloading, tag-

ging, recommending, and forwarding behaviors, screening valuable indicators, and establishing a localized Altmetrics evaluation system combined with other social impact indicators will fill gaps in journal paper evaluation and provide references for building a comprehensive, nationally distinctive evaluation system for the social impact of scientific journal papers.

1.1.1 Supplementary Metrics (Altmetric) as the Core of Social Impact Evaluation for Scientific Papers

The social impact of scientific papers is even more difficult to measure than their academic impact, and scholars have conducted limited exploration in this area. In 2017, Ravenscroft et al. [29] preliminarily explored the social impact of scientific papers beyond academic influence from the perspective of how science changes the world, evaluating the social impact of UK Research Excellence Framework (REF) papers using Altmetric data alongside social media posts, news articles, and political impacts generated by academic work. More studies have attempted to measure social impact through social media visibility, such as Bornmann et al. [30] and Robinson-Garcia et al. [31], who used Altmetrics data to evaluate paper social impact. Altmetrics supplements established citation-based methods by tracking activities for all output forms, expanding our understanding of both impact concept and composition, representing a profound development of traditional bibliometrics [32]. Altmetrics tools harvest information about research outputs from social networks and reference management systems (downloads, citations, views, comments, retweets, etc.), using cluster analysis and statistical calculations to evaluate academic and public impact. As a quantifiable indicator of paper social impact, social media influence fills gaps in previous evaluation systems, though using only Altmetrics data from social networks is clearly insufficient for comprehensive social impact evaluation.

1.1.2 Research Progress on Social Impact Evaluation of Research Outcomes

Traditional scientific research evaluation has long focused on scientific and technological impacts, but fortunately, recent research and practice have begun addressing societal impact. The UK's 2014 Research Excellence Framework (REF) was the first national higher education evaluation to incorporate research impact assessment [33]. The Netherlands began systematic evaluation of publicly funded research in the 1990s, and in 2006 launched the "Evaluating Research in Context" (ERiC) project, which placed scientific research's social impact on equal footing with research quality [34]. The US STAR METRICS program, initiated in 2009, aims to collect existing data from research funding and management agencies to build a shared platform for research management and policy studies, developing analytical tools to reflect the economic, social, and scientific effectiveness of federal science investment [34]. In 2018, Australia's Excellence in Research for Australia (ERA) evaluation explicitly introduced Engagement

and Impact (EI) assessment, making new explorations in content, criteria, and methods with significant results [35] (Australian Research Council, 2015).

1.2 Domestic Research Progress

In research on the social impact of scientific papers and journals, Chinese scholars initially used Altmetrics to evaluate social impact in biodiversity [36] and library and information science [37-38]. In recent years, comprehensive evaluations have been conducted on academic paper impact in China's library and information science [39], biology [27], and management fields [28], considering domestic academic and social media environments. Regarding social impact evaluation of research projects, Chinese scholars have conducted studies on using Altmetrics to evaluate the social impact of project initiation [40], though Liu Chunli et al. [41] argue that Altmetrics indicators cannot fully evaluate the social impact of research and output, necessitating further research to identify social impact indicators.

3.1 Dimensions of Social Impact Composition and Indicator Selection

According to the concept of “social impact,” which refers to the influence, changes, or benefits that research brings to non-academic domains such as economy, society, culture, public policy or services, health, and living environment or quality, and in accordance with the State Council's “Guiding Opinions on Improving the Evaluation Mechanism for Scientific and Technological Achievements” [6], we analyze the composition of scientific paper social impact across eight dimensions within four levels: economic, political, social, and cultural. These dimensions include economic contribution, policy reference, social value, social evaluation, social dissemination, civic literacy, cultural exchange, and cultural contribution (Figure 1 [Figure 1: see original paper]).

3.1.1 Economic Level

At the economic level, social impact is primarily manifested through the dimension of economic contribution. Technological innovation strongly drives rapid economic development, which in turn provides robust support for further innovation. As outputs of technological innovation, scientific papers' contribution to the economy constitutes an important indicator of their social impact. Therefore, the economic contribution dimension must examine papers' promotion prospects, expected benefits, and potential risks to economic and industrial development, as well as their role in reducing production costs, increasing profits, and forming patents, technical standards, or guidelines.

3.1.2 Political Level

Many scientists write policy recommendations based on research findings, providing scientific references for national governance and policy formulation. Therefore, evaluating the social impact of scientific papers requires examining their conversion into national and local policy recommendations and their influence on relevant policies, administrative regulations, and decision-making documents.

3.1.3 Social Level

- 1) **Social Value Dimension:** The social value of scientific papers lies primarily in their effectiveness in addressing major bottlenecks in public health, national defense, public safety, and ecological environment.
- 2) **Social Evaluation Dimension:** This dimension mainly examines papers' coverage and reprinting by other media, social awards, project support, and public commentary by authoritative experts in the academic community.
- 3) **Social Dissemination Dimension:** Based on Altmetrics principles, we evaluate the social dissemination power of scientific papers. This involves collecting online attention for a paper (such as comments, pushes, shares, and reprints) from mainstream news media, social networking sites, reference management platforms, and multimedia sources, then applying specific weighting to these different data types to aggregate an Altmetric score that quantitatively represents social dissemination power. According to China's social network and scientific paper dissemination environment, we will first investigate and analyze visible platforms for forestry science papers on both PC and mobile terminals, and statistically analyze paper access patterns. Second, we will screen and select Altmetrics indicators through correlation analysis, reliability testing, and validity analysis. Based on China's current scientific paper dissemination environment, we will survey databases (CNKI, Wanfang, VIP), journal OA websites, the F5000 platform, and domestic preprint services; microblogs (Sina, Tencent, NetEase); academic blogs (Sina, ScienceNet); social networking sites (WeChat, Renren, Kaixin, QQ Zone); online reference management tools (Notefirst, CNKI K-learning); social bookmarking sites (Douban, Docin, Baidu Search, Baidu Reading, Blogbus, QQ Bookmark); academic forums (XiaoMuChong, ScienceNet Forum, Zhihu, Guokr); mobile reading apps like Toutiao; video platforms such as Douyin, Kuaishou, Xigua Video, and Youku; and mobile paper databases like the Open Science Identity (OSID) App and Xuexitong, to statistically analyze paper access.

Altmetrics indicators for scientific papers are divided into five categories: viewed, cited, saved, discussed, and recommended. Drawing on Altmetrics indicators and considering the reading, discussion, recommendation, and citation characteristics of scientific papers, we will screen and acquire indicators from these

five categories, then select them through correlation analysis, reliability testing, and validity analysis, using web crawlers to obtain relevant data.

- 4) **Civic Literacy Dimension:** With the normalization of multimedia dissemination of scientific papers, particularly the popularization of core paper content, papers play an increasingly important role in improving public scientific literacy. During the COVID-19 pandemic, many medical journals actively disseminated their papers in popularized forms with good results. On June 30, 2021, the Ministry of Human Resources and Social Security, National Health Commission, and National Administration of Traditional Chinese Medicine issued the “Guiding Opinions on Deepening the Reform of Professional Title Systems for Health Professionals,” which states in Article 5 on improving the evaluation system that popular science works can be included as representative achievements for review. Therefore, the popular science dissemination and technical training of core paper content should also serve as indicators of social impact.

3.1.4 Cultural Level

- 1) **Cultural Exchange Dimension:** The publication of scientific papers aims to facilitate scientific and cultural exchange. The frequency of core content being presented in lectures and speeches both domestically and internationally promotes scientific and cultural exchange and thus serves as a dimension for evaluating social impact.
- 2) **Cultural Contribution Dimension:** The State Council’s “Guiding Opinions on Improving the Evaluation Mechanism for Scientific and Technological Achievements” states that scientific papers influence and contribute to promoting scientific spirit, fostering innovation culture, and upholding socialist core values, making this a necessary dimension of social impact composition.

3.2 Indicator and Data Acquisition, Weight Allocation, and Evaluation Method System Construction

Based on the characteristics of the four levels and eight dimensions of social impact, we will identify indicators for each dimension. Using surveys, big data mining, and Altmetrics concepts, combined with the characteristics of internet dissemination and access for scientific papers, we will excavate and acquire relevant indicators. Through literature analysis and quantitative research methods, we will quantify qualitative social impact indicators. By conducting statistical analysis to identify correlations and patterns in the data, and by analyzing the dissemination behaviors of scientific papers, their “impact pathways” on audiences, and levels of influence, we will use methods such as the Analytic Hierarchy Process and entropy weighting to determine indicator weights, construct a social impact evaluation model, and conduct social impact evaluations of scientific papers.

3.3 Empirical Analysis

China has over 1,900 agriculture and forestry journals. These disciplines exhibit strong national and regional characteristics, with many papers making significant contributions to regional economies, substantially improving public scientific literacy and relevant skills, and exerting broad social influence alongside high academic impact. However, such papers struggle to compete with ordinary SCI papers in previous evaluation systems. Moreover, prior social impact evaluations of scientific research have concentrated primarily on agriculture and health fields. Therefore, we propose starting with agriculture and forestry papers to analyze the characteristics of each social impact dimension. Using Altmetrics concepts and considering the internet dissemination environment for scientific papers, we will excavate and acquire relevant indicators. Through literature analysis, surveys, big data mining, and quantitative research methods, we will quantify qualitative social impact indicators. By conducting statistical analysis to identify correlations and patterns, and by examining dissemination behaviors, impact pathways, and influence levels, we will use the Analytic Hierarchy Process and entropy weighting to determine indicator weights, construct a social impact evaluation model for agriculture and forestry papers, optimize the model, expand it to other disciplines based on their characteristics, and ultimately establish a discipline-specific social impact evaluation system for scientific papers.

We will refine the social impact model for agriculture and forestry disciplines, then evaluate the social impact of outstanding papers from the China Association for Science and Technology and F5000 papers in other disciplines, thereby proposing a discipline-specific framework and model for evaluating the social impact of academic papers.

4 Practical Problems to be Solved

- 1) **Indicator Determination for Social Impact Dimensions:** Identifying indicators and data for dimensions including economic contribution, policy reference, social value, social evaluation, social dissemination, civic literacy, cultural exchange, and cultural contribution is a novel challenge. Our team will use literature analysis and expert surveys within the academic community to identify data acquisition platforms for each dimension—for example, investigating platforms for patents, standards, and guidelines supported by papers. We will use big data mining to deeply analyze these dimensions and indicators and identify acquisition pathways.
- 2) **Weight Allocation Across Multiple Dimensions and Indicators:** With diverse dimensions and rich indicators within each dimension, scientifically estimating each indicator's contribution rate to paper social impact and allocating weights appropriately will be crucial for objective evaluation. After understanding the internal relationships among dimensions and indicators, we will compare and select optimal weight determi-

nation methods.

- 3) **Evaluation System Construction:** Various methods exist for constructing evaluation systems, including fuzzy comprehensive evaluation, analytic hierarchy process, principal component analysis, and factor analysis. Given the numerous dimensions and indicators in social impact evaluation and few reference examples, we must compare multiple system construction methods to select the optimal approach after accurate weight allocation, requiring further exploration by researchers.

5 Conclusion

In recent years, calls to “break SCI supremacy” and “demolish the Five Only doctrine” have grown louder. However, “breaking” and “establishing” are dialectically unified; the key to dismantling “SCI supremacy” and the “Five Only” lies in clarifying what to establish. To improve the scientific paper evaluation system, we must emphasize the multi-dimensional impact capacity of papers: contributions to national or regional economies, value for social progress, references for political decision-making, dissemination in social domains, promotion of cultural exchange and inheritance, and improvements to public scientific literacy.

This study introduces the impact and contribution of scientific papers to social capabilities, correcting the bias in paper evaluation that overemphasizes academic value while neglecting social value, and exploring a new post- “SCI supremacy” and post- “Five Only” evaluation system, representing theoretical innovation. Only when combined with academic impact evaluation can we comprehensively, scientifically, and objectively assess paper contributions, eliminate scholars’ obsession with “SCI supremacy,” achieve equivalence between Chinese papers and SCI journal papers, promote the implementation of “Five Only” demolition, guide Chinese researchers to “write their papers on the land of their motherland,” and provide new references for journal and achievement evaluation.

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