Editing Practice

ORIGINAL ARTICLE

# The "Five Forces Model" and strategies for enhancing the influence of scientific journals

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## ABSTRACT

**Background:** Based on relevant theory of science of science, we aimed to construct a model for evaluating the influence of science journals and thereby propose strategies to enhance their impact. **Methods:** By using methods such as a literature review, in-depth interviews, and a concept analysis, we considered various aspects related to science journals, including knowledge production, flow, and dissemination, and developed what we call the "Five Forces Model, " along with countermeasures and suggestions. **Results:** We identified knowledge power, persuasiveness, management power, expressiveness, and dissemination power as the five aspects that determine the influence of science journals. The Five Forces Model was built using these five aspects. **Conclusion:** Influence development and enhancement are integrated processes among science journals. Theories on knowledge activities need to be utilized effectively to improve a journal's knowledge power. Paradigm theories need to be understood to increase a journal's persuasive ability. The Matthew effect within the scientific community should be given attention to strengthen managerial capacity. Further, the advantages of structural holes should be leveraged for a journal to showcase its expressive capability. Fully recognizing the functions of science journals can help reinforce their dissemination capabilities.

**Key words:** science and technology journals, theory of science of science, Five Forces Model, enhancement strategy

## INTRODUCTION

In 2019, China Association for Science and Technology (CAST), the Central Propaganda Department, the Ministry of Education, and the Ministry of Science and Technology jointly issued their *Opinions on Deepening Reform to Nurture World-class Scientific Journals* (hereinafter referred to as *Opinion*),[1] which pointed out that scientific journals "inherit human civilization, gather scientific discoveries, lead technological development, directly reflect national science and technology competitiveness and cultural soft power", should be guided by the guiding ideology of "comprehensively grasping the laws of innovative development, scientific management, and talent growth", and effectively enhance the international influence and dissemination capacity of China's scientific journals. This not only clarified the important role of scientific journals but also put forward higher requirements for our country's scientific journals. On September 11, 2020, *Speech at a symposium of scientists* by General Secretary Xi Jinping's noted,[2] "Governments and officials at all levels should respect knowledge, talent and creation, follow the law of scientific development…" Research activities are closely related to

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the development of scientific journals. Therefore, it is important to determine the basic principles of publishing from the development law of science and technology to further improve the impact of scientific journals.

To date, research on enhancing the influence of scientific journals has yielded fruitful results. Domestic experts and scholars have proposed many good paths and strategies based on aspects such as academic quality,[3–5] academic activities,[6] dissemination platforms,[7] brand building,[8–9] editorial skills,[10] and open science.[11–12] Li *et al.* proposed applying philosophical theories to improve the academic quality and influence of journals.[13] Zhao *et al.* pointed out that we should not only pay attention to the academic impact of scientific and technological journals but also enhance their academic voice.[14] While these practical measures and strategies can help improve journal influence, researchers have yet to delve deeply into their underlying mechanisms. These need to be explored and condensed from basic research in journal studies so that strategies to enhance influence can be established.

"Science of science", is a discipline that investigates and uncovers the essential characteristics and development laws of modern scientific technology, its research object. This field has rich connotations and extensions. Knowledge of Science of science can help journal editors gain an in-depth understanding of the social and cultural functions of journals, clarify their publishing concepts, improve editorial efficiency, and expand research horizons, which are basic principles and skills for journal editors in science and technology. Therefore, based on previous research, the "Five Forces Model" was developed in this study to understand the influence of science and technology journals using theories from Science of science.[16] This model was then used to identify strategies to enhance the influence of science and technology journals, with the aim of providing a point of reference for the high-quality development and first-class construction of China's science and technology journals.

## THE FIVE FORCE MODEL OF SCIENTIFIC JOURNAL INFLUENCE BASED ON THEORY OF SCIENCE OF SCIENCE

### *Theories of science of science related to scientific journals*

Science of science is a field with rich connotations and extensions. As a cross-discipline, Science of science exists in and develops through various disciplines.[7] The objects studied by science of science can be extended to all kinds of scientific and technological knowledge and related carriers (people, things, organizations, *etc.*). Scientific journals constitute one type of carrier for scientific and technological knowledge. Scientific journals and their related elements are important research objects and problems in Science of science. The generation, development, and evaluation of scientific journals are accompanied by the development of theories and methods in Science of science. The established theories in this area include the theory of scientific knowledge activities (including the theory of accumulation of scientific knowledge, frontiers of science,[17] free-floating and recombination of knowledge units, social construction theory of scientific facts,[18] and discipline theory when adopted),[19–20] the paradigm theory,[21] the social network analysis and structural hole theory,[22] the Matthew effect in the scientific community, laws governing the growth of scientific knowledge (the law of optimal age for scientific creation, index law of increase in scientific knowledge, three laws of bibliometrics, *etc.*), priority confirmation and scientific reward system,[23–24] and the social functions of scientific journals.

### *The connotation and extension of influence of scientific journals*

Influence is the ability to change others' thoughts and actions in ways that they are willing to accept. Influence can also be interpreted as strategic influence, impression management, the ability to perform well, persuasive power of goals, and impact created through cooperation.[25]

The general influence of scientific and technological journals refers to their ability to promote related academic research and application development by publishing scholarly research results during the same period. This capability originates from the value of academic literature but is also affected by factors such as social recognition and acceptance level within a time frame, diversity of journal content, and dissemination capabilities of both the journal and relevant channels. Therefore, conducting an objective and accurate qualitative analysis and evaluation of journal impact is complex and difficult.

Various influential indicators have been introduced in different journal evaluation systems to reflect journal influence, including citation indicators, reprinting indicators, and circulation indicators. Notably, the AMI evaluation model, which was proposed in the *China AMI Comprehensive Evaluation Report on Humanities and Social Sciences Journals (2018)*,[26] can be used not only to evaluate influence but also to understand other aspects of academic journals, such as external development environment, award status, and institutional norms.

In this study, a review of scientific theory foundations, expert interviews, and a concept analysis were conducted

in line with the premise that journal influence formation involves integrated system engineering. Influence accompanies all processes associated with science journals and is not fully reflected by single indicators or comprehensive indicators alone; it needs to be considered from a systemic perspective. This definition of journal influence relates to how science journals use methods that stakeholders are willing to accept to change or impact the thoughts, perspectives, and actions of the scientific community and society.

### *The development of the Five Forces Model for analyzing the influence of scientific journals*

The Five Forces Model was developed through a literature review and by using the evaluation indicators in the AMI evaluation model that were relevant to this study's theme. These data were summarized to obtain five primary evaluation indicators of knowledge power, persuasiveness, management ability, Expressiveness, and communicative power as well as nine secondary evaluation indicators, including accumulation of knowledge. These are shown in Figure 1 and Table 1.

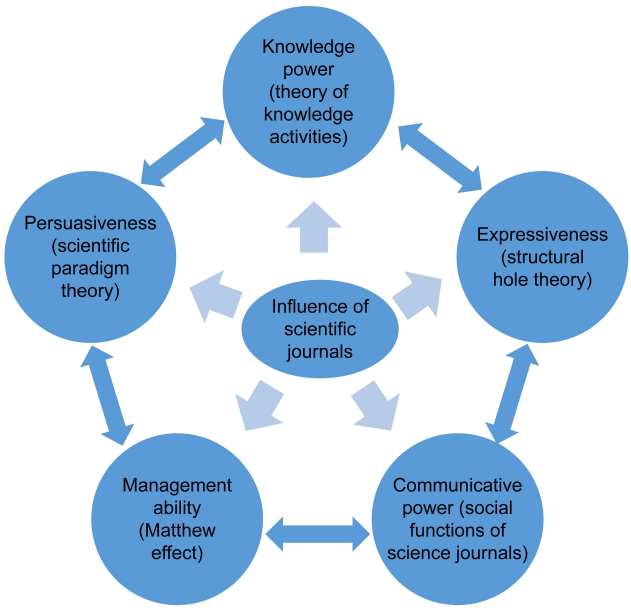


**Figure 1.** A model of the impact of scientific journals based on science of science.

The Five Forces Model is based on the process of knowledge production and dissemination. The aspect of knowledge force in the model was proposed based on the theory of knowledge activities (involving aspects such as knowledge collection, accumulation, creation, symbiosis, and flow), while persuasiveness was proposed based on the scientific paradigm theory. Expressiveness was obtained from the structural hole theory, management ability was proposed based on the Matthew effect and the law of the optimal age for scientific creativity in the scientific community, and communicative power was based on the social functions of science journals. Each of these five forces has distinct but interrelated attributes that mutually influence and reinforce one another. Knowledge power refers to the factors involved in the knowledge production process of existing science and technology journals, and its focus is on evaluating the content quality of journals. It is based on the understanding that abilities such as data collection, accumulation, flow, creation, and coexistence directly affect journal content quality. Management ability refers to the overall capability of managers to manage the people, finances, and assets of a journal. Dissemination capacity evaluates the comprehensive strength of disseminating the final products of scientific and technological journals, which can directly reflect the level and effectiveness of knowledge power and management power. Persuasiveness represents stakeholders' degree of recognition of publication effects and economic benefits. Finally, expressivity reflects the visibility of journals.

## STRATEGIES FOR ENHANCING THE INFLUENCE OF SCIENTIFIC JOURNALS BASED ON THE FIVE FORCES MODEL

### *Utilize knowledge activity theory to enhance the knowledge power of scientific journals*

#### *Pay attention to the quantity and quality of citations, and enhance knowledge accumulation*

Researchers should focus on knowledge accumulation and carefully reading the achievements obtained by predecessors to propose their own innovative points in papers. In our daily review and revision processes for manuscripts, we found that many authors (most of whom are journal editors) do not attach importance to commenting on previous results. This gave rise to the following questions: Do editors emphasize citing others' work when reviewing articles submitted to their journals? Do they remind authors to pay attention to other people's research and help them understand it? If journal editors assist authors with knowledge accumulation and analysis, understanding the structure of academic papers and citations, and summarizing the characteristics of high-impact journals in the field, significant improvements may be seen in future publishing efforts.

#### *Widely utilize scientific and technological information tools to enhance knowledge collection capabilities*

The generation and development of scientific knowledge has certain rules for disciplines that should be collected, disciplines for recollection, and leading disciplines.

**Table 1: The third-level index of the impact model of scientific journals based on science of science**

| Level 1 | Level 2 | Level 3 |
|---|---|---|
| Knowledge power | Knowledge collection | High number of citations |
| | Knowledge accumulation | The number of journal articles/references |
| | Knowledge flow | Cited, annual impact factor, impact factor, five-year impact factor, international citations, *etc.* |
| | Knowledge creation | Number of columns/topics |
| | Knowledge symbiosis | Indicators of journal-subject relations |
| Persuasiveness | Persuasive effect | The number and scope of peer review participants, journal and editorial staff awards, paper awards, average number of participants in academic conferences, circulation, copyright income |
| Management ability | - | Academic misconduct, editorial team, talent team, system construction |
| Expressiveness | - | The number of paper reprints, the number of online platforms, overseas distribution, network visibility |
| Communicative power | The power of speech | Research paradigms, new concepts, cultural leadership |
| | Service force | Discipline construction, knowledge service |
| | Motivation | Open publishing construction, integrated publishing construction, publishing service construction |

Editors need to master discipline knowledge, have keen discovery abilities, and obtain knowledge-related capabilities. With the development of science of science, some scientific and technological intelligence personnel can predict trends in technology development and scientific hot spots. For example, Zhao Hongzhou predicted that quark physics was a "trial-collected discipline" at the time;[19,20] that nuclear physics, which had many conversion effects not yet discovered, was an important "discipline to be collected"; and that condensed matter physics would become a popular "re-collected discipline". Under circumstances of inconvenient information exchange, Zhao Hongzhou used his deep disciplinary accumulation to conduct research on scientometrics, creatively promoting the great development of China's science studies. In the current era of big data, the development of new technologies has enabled experts in scientometrics to develop many scientometrics tools and software that can help researchers find hot spots and mine information. Journal editors can use these tools to further their ability to collect knowledge, identify research hotspots, carry out rich mining, and find "collecting and selecting disciplines" and thus carry out group composition planning, provide guidance and help to authors, and ultimately help authors publish high-quality papers with high citation rates.

### *Organize albums and special issues in a leading manner for knowledge creativity*

The book *Laboratory Life: A Process of Constructing Scientific Facts* contains multiple examples of the essential attributes of scientific activities—that is, scientific facts are not merely reflections of natural phenomena but products of laboratories, resulting from collective debates, negotiations, and compromises among scientists. In other words, they help create science frontiers. Price believes that science frontiers are formed when a group of papers, probably around 30-40 articles, discuss a particular topic and are published within a certain period of time, forming the foundation for the next time period's knowledge base.[17] During the present study, the editor-in-chief of an environmental journal was consulted. The editor was organizing a commemorative issue on the journal's 30th anniversary, prior to which 10-year special issues and 20-year special issues had been published. This field has been continuously developed domestically. At the time of the first special issue, the field had not yet been formed. After the publication of the special issue, signs of gradually increasing and even explosive growth in this research area emerged, indicating that the special issue created a frontier and simultaneously laid the groundwork for the next frontier.

### *Promote scientific cooperation, and enhance knowledge coevolution*

New views and information emerge from weak relationships between individuals in different groups, and individuals positioned at structural holes can gain competitive advantages through information filtering and thus obtain greater innovation capabilities. Thus, people located at structural holes or in cross-boundary positions may find it easy to produce new results. In 2020, the National Natural Science Foundation of China established a cross-science department with the aim of encouraging interdisciplinary research and promoting knowledge coevolution. This collaboration between researchers with different disciplinary backgrounds made it more likely to obtain innovative outcomes. In addition, comprehensive reviews have strong appeal, field specificity, and practical value. These characteristics make them highly attractive and valuable for intelligence analysis, leading to discipline development and high

impact.[27]

### *Improve publishing speed, and strengthen knowledge flow*

Priority claims for scientific discoveries require timeliness; a paper must be published as soon as possible, and it must be released before other researchers discover or publish that scientific discovery to determine its originality. After being recognized by the scientific community, researchers obtain corresponding rights to scientific discoveries. Scientists focus on the scientific rewards they obtain upon being acknowledged by their peers and on quickly publishing their findings. Understanding what "priority" means needs to be accompanied by accelerated manuscript processing speeds and improved review efficiency. Some experts have pointed out that scientists submit manuscripts to foreign journals because they value speed. Publishing a scientific discovery in an academic journal indicates its recognition within the scientific community; the article can rapidly enter the academic exchange system and get cited quickly. This creates a positive cycle. High-impact international journals are usually monthly, biweekly, or weekly publications. Increasing publication speeds not only accelerates knowledge flows but also serves as a reward for scientists.

## ***Deeply understand the theory of scientific paradigm, and improve the persuasiveness of science journals***

### *Organize academic activities, and create an academic exchange platform*

Kuhn stated that scientists can only engage in scientific exchanges with their peers when they enter the regular scientific process.[21] Numerous studies have shown that among the various means of scientific communication, journals are the most effective. By holding academic events, scientific journals provide venues for scientists to publish their personal insights and ideas, thus promoting open scientific communication and disseminating scientific knowledge. Journals should strive to create all kinds of opportunities for scientists, establish platforms for public communication, and promote scientists' achievements and views so that they are regarded as supportive, thereby achieving win-win results.

### *Improve peer review quality, and maintain scientific norms*

Scientific journals have an important process: peer review. This is a quality control function as well as a process of academic exchange. Reviewers provide comments for authors to consider during revisions, and authors respond to reviewers' opinions in this process. This allows paper quality to be improved, and both parties reach consensus through mutual understanding and communication. A responsible and professional team of peer reviewers provides a solid foundation for a journal to ensure the quality of peer reviews. Journals should focus on improving the quality of peer reviews, providing high-quality services to reviewers, conveying their publishing philosophy to experts, and promoting good interactions.

### *Establish various awards to enhance journal appeal*

Scientific journals should recognize the work that has been done by the scientific community. Various awards should be established to stimulate authors, reviewers, editors, and related industry participants. In turn, award recognition can improve the visibility, reputation, and attractiveness of the associated journals.

## ***Pay attention to building a team of talents and enhancing management power for scientific journals***

### *Utilize the Matthew effect to discover potential talent*

High levels of competition, scarce research resources, and objective differences in scientists' abilities are the fundamental reasons for the Matthew effect in scientific communities. Scientific communities must prioritize efficiency when striving to meet their goals; they need to promote human knowledge growth by maximizing and accelerating knowledge acquisition as much as possible while investing as little as possible. From the perspective of fairness, scientific communities should provide everyone with equal opportunities and conditions to showcase their talents and contribute to humanity. However, due to limited resources, this is impossible, leading to a dilemma: limiting the Matthew effect will result in reduced efficiency, whereas not doing so will exacerbate conflicts within the scientific community, potentially leading to the burial of talent and depriving people of development opportunities, thus resulting in inequality. Therefore, the Matthew effect must be appropriately restricted. With respect to journals, the Matthew effect is seen when authors who publish more papers have an easier time publishing again, whereas those without published papers or with few publications often face challenges in gaining opportunities to publish. This disparity is influenced by factors such as the reputation of affiliated institutions, funding availability, academic qualifications, and professional titles. Journals should try to avoid this phenomenon and focus on the value of the submitted papers in order to discover potential talent.

### *Understand and master the law of optimal age for scientific creation to discover outstanding scientists and research teams*

A country must cultivate a team of excellent scientists to reach an advanced level in science worldwide. On

September 11, 2020, *Speech at a symposium of scientists* by General Secretary Xi Jinping, noted, "We should respect the laws governing talent growth and scientific activities themselves, cultivating and nurturing a group of strategic talents with international levels, leading talents in science and technology, as well as innovative teams".[2] Science journal workers can use the best age law for scientific creation to find and predict the best age group for authors in this discipline area. They can scan and analyze experts and scholars based on the threshold value obtained and subsequently provide the support and help necessary to train outstanding scientists. For example, opportunities for communication and rewards can be provided to some young scientists, and green channels can be opened up for them to publish papers and actively promote and disseminate their achievements.

### *Pay attention to career planning and talent development at all levels of scientific journals*

Scientific journals should pay attention to talent team building, including review expert teams, editorial board members, editors, and publishing distribution teams, each with its own responsibilities and professional goals. These teams need to be managed separately, and career plans must be made so that team members can perform well in their respective positions. This can promote the overall growth of the entire team as well as the scientific community.

## ***Leverage structural holes to showcase the expressive power of scientific journals***

Burt proposed the concept of structural holes in his book *Structural Holes: The Social Structure of Competition* upon studying the structure and morphology of interpersonal networks and analyzing how network structures can bring more benefits or returns to network actors.[22] A structural hole refers to a gap within a social network; when Some individuals in a social network may have direct connections with other actors but no indirect connections, leading to "holes" in the overall structure of the network from an external perspective. The node that occupies the hole in the structure is actually a bridge that facilitates the flow of information in the network. Scientific journals should find these structural holes in interest-related networks and leverage their advantages to showcase journal performance. Suitable networking platforms should be chosen, and appropriate disseminators should be identified.

## ***Fully recognize the function of journals, and strengthen the dissemination power of scientific and technological periodicals***

The function of a scientific and technological journal refers to the role it currently plays as well as its potential for future development. It is widely known that certification, refinement, dissemination, and preservation of knowledge are the core functions of scientific and technological journals. The ultimate purpose of publication is dissemination; however, China's scientific and technological journals currently have weak dissemination power, which needs to be enhanced.

### *Play a leading role in academic and ideological cultures*

*The Opinion* has pointed out that scientific journals inherit human civilization, gather scientific discoveries, and lead technological development, directly reflecting national levels of science and technology competitiveness and cultural soft power.[1] The rapid development of open science, data science, and new technologies are challenges facing scientific and technological development as well as scientific journals. Paradigm shifts enrich the connotations and extensions of scientific journals. Under these conditions, how can scientific journals keep to their original intentions and do what they should? How can they better reflect national competitiveness in science and technology and cultural soft power? Scientific journals must recognize their own target positioning and share good stories about China and good voices from China so that they can play a role in academic leadership and ideological culture leadership.

### *Serve discipline construction and expand publicity channels*

Scientific journals should serve scientific development, which means that they should serve discipline construction. Research institutes and university journals should combine key disciplines and local characteristics, analyze the geographical advantages of these units as well as their talent, literature resources, and research advantages to deeply understand and master the latest developments in the field, control future research trends, and propose reasonable topic plans and manuscript collection programs. Science and technology journals need to rely on diversified compilation models and presentation forms for publicity work. In terms of topics, they can use expert solicitations, discipline-based calls for papers, topic symposiums, seminars, and academic forums to play the role of authors at the forefront of scientific research and academic communities. They should continuously explore tactical, strategic, comprehensive, and interdisciplinary topics based on actual development and frontiers in their disciplines of focus and thus expand channels for promoting disciplinary achievements.

### *Improve the level of open and integrated publishing*

It is important to vigorously promote comprehensive openness in publication, focus on the five areas of open science (open access, open data, open practice, open cooperation, and open recognition and reward), provide

the best experiences for scientific researchers, and build a powerful academic journal publishing platform with strong influence and dissemination power. Further, an integrative multimedia publishing matrix needs to be constructed, and abundant and convenient information transmission channels through WeChat public account platforms should be explored to meet diverse user needs. Further, the inherent social stickiness of WeChat should be used to construct academic communities. Domestic and foreign experiences can be leveraged for innovative ways of integrating value-added services into publishing.

## CONCLUSION

This paper clarified the concept of scientific journal influence based on a theory of science of science and presented the Five Forces Model for scientific journals, along with strategies to enhance the influence of scientific journals based on this model. However, this only provides a shallow view of how scientific knowledge can be applied to research on science journals, and there are some shortcomings. More empirical studies on the Five Forces Model are needed, and information on the various influences needs to be refined further.

In the future, we will explore relevant theories and laws from the perspective of science journals, conduct sample-based empirical studies, and contribute to improving the overall level of China's science journals. Improving the influence of science journals is a systematic project that requires not only the efforts of journal editors but also the collaborative contributions of other stakeholders within the scientific community. Everyone needs to contribute bricks and tiles for building our country's science industry and for the development of scientific journals.

## DECLARATIONS

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### *Author contributions*

Liang YX: Conceptualization, Resources, Writing—Original draft, Writing—Review and Editing. Yang ZK: Methodology, Writing—Review and Editing. Tian H: Methodology, Resources. Liu JJ, Li CX, Dong WJ: Investigation, Data curation, Resources. All authors have read and approved the final version of the manuscript.

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### *Conflict of interest*

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### *Data availability statement*

No additional data.

## REFERENCES

1. China Association for Science and Technology, Propaganda Department of CPC Central Committee, Ministry of Education, Ministry of Science and Technology. [Opinions on Deepening Reforms to Cultivate World-Class Scientific and Technological Journals]. China Association for Science and Technology. Updated April 02, 2021. Accessed June 02, 2024. http://www.cast.org.cn/xs/zcfg/YWHD/art/2021/art_3c24b26982554efbac53f672322388c0.html.
2. [Xi Jinping: Speech at a Scientists' Meeting]. Xinhua. Updated May 03, 2020. Accessed June 02, 2024. http://www.xinhuanet.com/politics/leaders/2020-09/11/c_1126483997.htm
3. Wang HY, Zhou HY, Luo D, Do XN, Zhang H. Bolstering scientific journal influence by improving quality and quantity of articles: Taking Journal of Materials Science & Technology as an example. *Chin J Sci Tech Period.* 2022;33(6):688-695.
4. Wang CY, Wang Z, Chu JX. Does the cover paper help to enhance the influence of academic journals? An empirical study based on four core journals of journalism and communication. *Chin J Sci Tech Period.* 2023;34(7):868-874.
5. Tian Y. [Research on measures and practices to enhance academic influence of sports journals through topic planning: Taking Beijing Sport University Journal as an example]. *Public Commun Sci Tech.* 2023;15(12):38-43.
6. Wu LY. The practice of important activities issues of societies to promote the influence of journals. *Acta Ed.* 2023;35(4):443-446.
7. Fan ZZ, Li SQ, Li MM, Cai F. Practice and thinking of academic live broadcast to enhance the influence of journals. *Acta Ed.* 2022;34(5):552-555.
8. Li RJ, Wang XY, Li YX, *et al.* Organizing anniversary activities to enhance scientific journals' brand influence. *Acta Ed.* 2022;34(3):295-300.
9. Qian JX, Feng CG, Li SC. Building an international academic conference cluster to enhance the brand influence of scientific journals:taking Safety and Environment as an example. *Acta Ed.* 2024;36(1):103-107.
10. Fu RH. [The study of journal influence with humanistic quality as an editor: Taking science and technology journals for example]. *China*

*Newsp Ind*. 2023;(12):56-57.

11. Sun Y. [Yang Wei, a member of the Chinese Academy of Sciences: Enhance the influence of China's scientific journals through open science]. Updated November 11, 2022. Accessed February 05, 2024. https://digitalpaper.stdaily.com/http_www.kjrb.com/kjrb/images/2022-11/02/08/KJRB2022110208.pdf
12. Liu PP, Yin H. [The role of open access in enhancing the influence of SCI science and technology journals in China]. *Sci Tech Publ*. 2023;(9):106-113.
13. Li NN, Li S, Li SN, LY, Li YP. [The impact of philosophical theories on enhancing the influence of scientific and technological journals]. *Tianjin Sci Tech*. 2024;51(1):130-132.
14. Zhao RY, Zhu WJ, Wang XY. [From academic influence to academic voice: a four-dimensional evaluation framework for scientific journals]. *China Sci J Res*. 2023;34(5):576-583.
15. Editorial Committee of Guide to Scientific Writing and Editing. *Guide to Scientific Writing and Editing*. Beijing: Seismological Press; 2010: 81.
16. Liang YX, Yang ZK. Editors of scientific journals should know something about science of science. *Chin J Sci Tech Period*. 2020;31(4):425-431.
17. Price D. Networks of scientific papers. *Sci*. 1965;149(3683):510-515.
18. Latour B, Woolgar S. Zhang BL, Diao XY, trans. *Laboratory Life: The Construction of Scientific Facts*. Beijing: Dongfang Press; 2004.
19. Zhao HZ. [Discussion on the mining model of scientific discoveries (Part 1)]. *Sci Sci Manag S. T*. 1981;2(2):3-5.
20. Zhao HZ. [Discussion on the Mining Model of Scientific Discovery (Part 2)]. *Sci Sci Manag S. T*. 1981;2(3):34-38.
21. Kuhn, TS. Jin WL, Hu XH, trans. *The Structure of Scientific Revolutions. Fourth Edition*. Peking University Press; 2012.
22. Bert. Ren M, trans. *Structural Holes: The Social Structure of Competition*. Gaiti Press; 2008.
23. Ma LP. [Priority of scientific discovery and reward system for science]. *Qilu J*. 2003;(6):63-67.
24. Marcuse H. Lin JR, trans. *Science and Knowledge in a Social Context*. Orient Publishing House; 2001.
25. [Influence]. 360 Baike. Accessed February 05, 2024. https://baike.so.com/doc/5107174-32364614.html
26. China Social Sciences Evaluation Institute. *China's AMI Comprehensive Evaluation Report of Humanities and Social Sciences Journals (2018)*. China Social Sciences Evaluation Institute; 2018.
27. Zhang XM, Xu JJ, Zheng JF, Sun LW. Strategies for organizing big reviews and analysis of their impact. *Chin J Sci Tech Period*. 2021;32(2):194-198.