



THE END OF PUBLISH OR PERISH? CHINA'S NEW POLICY ON RESEARCH EVALUATION

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OBSERVATIONS

A short paper series presenting first observations on fascinating yet under-explored developments in science and society in China and beyond. The articles reflect ongoing studies by scholars and guests of the Lise Meitner Research Group "China in the Global System of Science" at the Max Planck Institute for the History of Science.

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In February 2020, China's Ministry of Science and Technology and Ministry of Education released two policy documents that laid down potentially tide-changing guidelines for academic publishing and research evaluation. The new policy proposes a future shift away from the prevailing "papers only (唯论文)" climate. Since China is now the world's leading producer of scientific articles, the impact of this policy will likely be felt globally. This short paper takes a look at what this policy change entails and assesses its potential significance for research behavior and scientific publications.

Background: SCI-Worship and the Saturation of Publish or Perish

Since the late 1990s the publication of papers has been a key concern for scientific researchers in China, as related quantitative metrics have been the primary evaluation criteria for funding allocation, career advancement, and institution ranking. Particularly emphasized have been the numbers of papers published in journals included in the worldwide Science Citation Index (SCI) and the Social Sciences Citation Index (SSCI). The academic quality of these papers is further measured by the number of citations and downloads.

To raise their competitiveness in this environment, institutions in China often set high publication quotas for researchers to meet, urge them to publish in internationally indexed journals, and offer cash bonuses when they do so. It has been observed that such a publishing burden has given rise to research misconduct, such as plagiarism and redundant self-citing. Innovation also tends to suffer in the metric-driven academic system, when researchers are more inclined to publish on already popular topics instead of less studied ones.

In the past decade, the annual number of articles in SCI journals written by authors from Chinese institutions has increased by 375%. Data have shown that as of 2018, one fourth of the article and review content in top SCI journals was produced by researchers affiliated to Chinese organizations. In stark contrast, journals that were not included in SCI but in one of the other indices of the Web of Science Core Collection (SSCI, AHCI, and ESCI) get only 5% of their content from the People's Republic.

Efforts to regulate the emphasis toward research paper production and international citation indices are not unprecedented. Over the past years, the Chinese government has set forth a series of reforms concerning scientific publications, academic integrity, and the evaluation of research personnel, projects, and institutions. Some universities have withdrawn from providing monetary rewards for SCI papers and compiled their own "black/white lists" of journals, in which international journals with high acceptance or retraction rates are advised against and more domestic journals are welcomed. But until February of this year, no standardized guidelines or instructions for practicality existed, and the publish-or-perish culture is now officially under serious scrutiny.

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New Policy: The End of SCI-Supremacy and the Rise of Chinese Journals?

According to the new policy, universities and research institutions are now banned from setting up quantitative goals and from offering financial incentives for researchers' publishing behavior using SCI-related metrics. The number of SCI-papers published should also not be used as the

main criterion for rewarding degrees, recruiting and promoting personnel, ranking institutions and disciplines, or assigning funding and prizes.

Publication of papers will no longer be a key evaluation indicator for applied science research, a perhaps long-awaited relief for Chinese clinicians, who have been frequently featured in the “paper mill” scandals in recent years. For researchers in basic science, a limited number of “representative works” will be used for assessing research quality. Individual scholars can choose no more than five representative papers each year, one third of which must be published in Chinese journals, if national grants or awards are in pursuit. Publication in top international journals (e.g., *Cell*, *Nature*, and *Science*) is still encouraged, but equally important is appearing in the domestic ones selected for the “Action Plan for the Excellence of Chinese STM Journals,” an official list of 285 high-quality Chinese scientific journals.

Cautious Reactions among Researchers and Publishers: Enthusiasm and Concerns

Reactions to the new policy are so far cautiously optimistic. Judging from the responses on social platforms, many Chinese researchers welcome the end of “SCI-supremacy” and feel relieved from the constant publication strain. But the lack of specific recommendations for alternative evaluation criteria so far generates uncertainty. Some scientists raise doubts about assessment methods such as peer reviews, which are subjective and prone to fueling the already prevailing clique-culture and back-door relationships among Chinese academics.

Some publishers express concern about the future of Chinese journals. At first glance, the new preference for domestic journals is expected to boost Chinese publishers. However, the officially recommended shortlist consisting of fewer

300 titles—further categorized into leading (22), major (29), successive (199), emerging (30), and mega (5)—will likely create new hierarchy within the Chinese publishing industry with a large amount of average journals struggling to attract submissions. Under the now-reformed policy, some researchers are worried that their papers might continue to be judged by where they are published, with the current SCI-driven system replaced by a less objectively-defined index structure “with Chinese characteristics.”

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While the recent documents mainly target the hard sciences, calls to reduce “excessive reliance” on quantitative metrics in soft sciences are also underway. It is believed that Chinese researchers from humanities and social sciences are generally more isolated from the international communities in comparison to their natural science colleagues, and therefore less dependent upon international citation indices and English as an academic language. Naturally, such characteristics could vary widely among different disciplines, as the quantitative social sciences tend to be more strongly integrated at a global level and therefore more heavily employing SSCI-related metrics. Overall, many scholars welcome the new orientation towards qualitative appraisal and Chinese publications, since it not only relieves them from the pressure of pursuing Western-favored topics and writing in English, but also endorses their research value of producing domestic social and political impact.

Potential Global Impacts: Fewer Papers but More Collaborations?

On a global scale, there will likely be a considerable decrease in the number of paper submissions from Chinese authors to SCI journals, especially the low-quality “filler” papers in the English-language journals outside of the top-ranking quartiles. Predatory journals, which feed on publication fees without providing proper review procedures, might end up losing a large chunk of their Chinese patrons. Statistics suggest that the impact will be felt most quickly in the Open Access industry that relies on authors’ fees, as almost 30% of the content of OA SCI journals has originated from researchers affiliated to Chinese institutions. Still, more collaborations between Chinese and international publishers are to be expected, as more domestic journals will seek to establish higher global visibility to raise their competitiveness. Currently, more than 60% of the 285 “Action Plan” journals are published in English. This percentage will most likely grow, since the “[internationalization](#)” of national journals falls under the essential guidelines for developing China’s scientific publishing industry.

Changes So Far and Uncertainties Ahead

Some practical changes have already taken place, for instance in the application process for national-level funding. Now, when submitting their project proposals to the National Natural Science Foundation of China, researchers may only list five representative papers without any mention of citation scores, a new development witnessed this year. More recently in late July, a joint [policy](#) document released by the Ministry of Science and Technology and the National Natural Science Foundation of China officially forbids using national grants to encourage paper production.

Nevertheless, now more than six months after the initial policy change, many specifics about the new appraisal standards remain shrouded to the public. Interestingly, as the timing of the initial release coincided with the spread of the COVID-19 pandemic, the publication of COVID-19 papers became a recurrent sight in the discourse. Questions such as if Chinese authors should prioritize domestic journals when publishing COVID-19 papers, and whether clinicians focusing on publishing research papers at the height of an epidemic is a symptom of “SCI-worship,” were often featured in the [media](#).

Furthermore, if or when a state-initiated academic evaluation system will be established, how effective the new methods will be, whether the changed direction will affect China’s research competitiveness on the global stage, and how much effect it will have on the authority’s control over the dissemination of scientific knowledge, are still questions that need more time to be answered. While it will not be long before the quantitative impact of the new policy takes shape for further research, qualitative studies on how it affects the incentives of Chinese scholars to publish and to collaborate with peers worldwide also seem worthwhile.

Further Readings

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