

## Hongye Fan: A Pioneer in the Historical Studies of Science in Modern China

Zuoyue Wang  and Weimin Xiong

© 2021 Ministry of Science and Technology, Taiwan

**Abstract** Professor Hongye Fan 樊洪业 (1942-2020) was a distinguished historian, scholar, and editor in the Chinese Academy of Sciences (CAS) in Beijing who helped lay the foundation for the historical studies of science in modern China with his writings, editing work on primary sources, and organizational efforts. Trained in biology he published historical studies on a wide-range of topics, including Jesuit missionaries in China, the May Fourth movement, Science Society of China, Lysenkoism, and the CAS. His major editorial achievements included the journal *Yuanshi ziliao yu yanjiu* 院史资料与研究 (*Materials and Studies on CAS History*), the 24-volume *Zhu Kezhen quanji* 竺可桢全集 (*The Complete Works of Coching Chu*), a 54-volume Chinese scientists' oral histories book series, and a national project to document the lives and careers of senior Chinese scientists. He also mentored a new generation of historians of science in modern China.

**Keywords** Hongye Fan 樊洪业 ▪ History of Science in modern China ▪ Chinese Academy of Sciences ▪ Zhu Kezhen

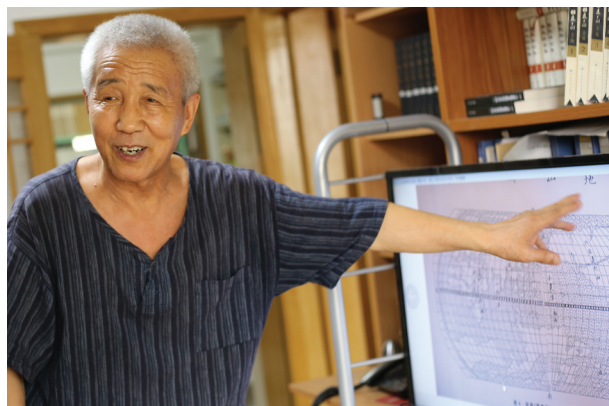
Professor Hongye Fan 樊洪业 ([Figure 1](#)) of the Chinese Academy of Sciences (CAS), a distinguished historian, scholar, and editor who probably did more than anyone else to promote the historical studies of science in modern China, passed away on 29 August 2020 in Beijing after battling cancer for several years. He was 78.

---

Zuoyue Wang  
Department of History, California State Polytechnic University, Pomona, USA  
email: zywang@cpp.edu

---

Weimin Xiong  
Department for the History of Science and Scientific Archaeology, University of Science and Technology of China, China  
email: xiong163@ustc.edu.cn



**Figure 1** Hongye Fan giving a seminar at his home in Beijing on 13 July 2016 (photograph by Weimin Xiong).

Like many of the pioneering historians of science in China (and elsewhere), Fan received his early training in science rather than history. Born on 9 November 1942 in Japanese-occupied Fushun in northeastern China, he enrolled in 1960 in the Chemistry Department at Jilin University, the first new comprehensive university created in 1950 by the government after the establishment of the People's Republic of China in 1949. At Jilin Fan majored in biochemistry, and after graduating in 1965 started working as a research assistant in the CAS Institute of Microbiology in Beijing. Like many of his peers, Fan actively participated in the Cultural Revolution (1966–1976), joining the Chinese Communist Party in 1969, but was soon purged as a so-called counter-revolutionary “May 16” element (五一六分子). He survived the ordeal and by 1975 had become an editor of a journal at the Institute.

As China entered into the reform era in the late 1970s, Fan found himself working as an editor for a newly founded liberal CAS periodical called *Ziran bianzhengfa tongxun* 自然辩证法通讯 (*Journal of Dialectics of Nature*), which defined itself as “a comprehensive, theoretical journal of the philosophy, history and sociology of natural science.”<sup>1</sup> He thrived under the enlightened leadership of Baoheng Li 李宝恒 and Dainian Fan 范岱年, philosophers of science who served as the first two deputy chief editors of the journal (the chief editor Guangyuan Yu 于光远 played a largely honorary role). In 1979, the first year of the journal, Fan contributed two influential articles under the pseudonyms Xiyuan Shi 石希元 and Youbin Yu 于有彬, published in issues 1 and 3 respectively. The first was on Lysenkoism, a state-sponsored Soviet biological doctrine, and its disastrous effects in the Soviet Union and China, and the second was on Wenkui Bao 鲍文奎, a Caltech-educated Chinese geneticist whose experimental wheat field had been plowed over during the height of Chinese Lysenkoism in 1954. Then, in a third article in issue 4 in 1980, writing again under the name Xiyuan Shi, Fan stirred up a controversy that reached to the very top of the Chinese party-state. In it he took on the famous Chinese writer Mo Yang 杨沫 who, with her extensive

<sup>1</sup> On the roles the *Journal of Dialectics of Nature* played in the Chinese politics of science in the 1980s, see Miller (1996).

official connections, had attacked scientists in the Institute of Microbiology for their critical evaluations of the work of a researcher there, Yaguang Liu 刘亚光. Fan provided evidence countering Yang's claims, and many senior Chinese scientists rallied to Fan's support, regarding this as a case of defending the autonomy of the Chinese scientific community. The dispute ended when the Chinese leader Deng Xiaoping 邓小平 sided with Fan and the scientists (Fan and Xiong 2016).

In the early 1980s Fan joined the discussion on the "Needham Puzzle" and coauthored two influential articles, published in *Ziran bianzhengfa tongxun* (1982, issue 5; and 1983, issue 1), on why China had "lagged behind" the West in science and technology since the seventeenth century. Continuing to reflect on this question, and inspired by the works of the sociologists of science Thomas K. Merton and Joseph Ben-David, Fan decided to pursue empirical studies on the social history of modern science in China. These led first to the book *Yesu huishi yu Zhongguo kexue* 耶稣会士与中国科学 (*Jesuits and Science in China*) in 1992, and then to a series of meticulous and insightful studies on the May Fourth Movement and the Science Society of China. As a member of the *Zouxiang weilai* 走向未来 (Toward the Future) group of mostly young and reform-minded intellectuals who edited a wildly popular book series, Fan participated actively in the push for social and political changes, even after his appointment as a deputy director of the CAS Institute of Science and Technology Policy and Management Science (ISTPMS) in November 1988. However, only months later, his support for the pro-democracy student movement in 1989 led to his dismissal from that position.

Fan devoted himself, during the 1990s, to fostering the studies of CAS history as the director of a division on the topic within the ISTPMS, succeeding Shuping Yao 姚蜀平, another pioneer of historical studies of the CAS and science in modern China. He designed and implemented a multipronged program, with archival research and collection, oral history interviews, and publications, laying a remarkable foundation for not only CAS history but the history of science and technology in modern China in general. Among the fruits of his labor in this period were the internal journal *Yuanshi ziliao yu yanjiu* 院史资料与研究 (*Materials and Studies on CAS History*) and the publication in 1999 of *Zhongguo kexueyuan bian nian shi* (1949–1999) 中国科学院编年史 (1949–1999) (*The Chronological History of the Chinese Academy of Sciences* (1949–1999)) (Fan 1999). He and his team conducted and published in the journal valuable oral history interviews with many key figures in CAS history and leading liberal intellectuals such as Yu, Liangying Xu 许良英, and Peishan Li 李佩珊. These gigantic projects would not have succeeded without his leadership, and in the process he also helped mentor a new generation of talented historians of the CAS and modern Chinese science, including Zhenzhen Li 李真真 and Yangzong Wang 王扬宗, who would soon succeed him as leaders of such research within the academy. As an engaging writer, Fan also published more than a hundred articles on the history of science in newspapers and magazines from the 1980s onward.

In many ways, Fan's contributions to the historical studies of science in modern China reached new heights after his formal retirement in 2002. As the chief editor of the 24-volume *Zhu Kezhen quanji* 竺可桢全集 (*The Complete Works of Coching Chu*), and working with a dedicated editorial team, he successfully guided this monumental project, which included sixteen volumes of Zhu's diary from 1936 to

1974, to its triumphant completion in 2013. Under Fan's insistence on "cunzhen" 存真 ("preserving the true") and "qiuquan" 求全 ("seeking completeness"), the collection is not only a detailed documentation of the life and career of Zhu Kezhen, a founder of modern Chinese meteorology and longtime CAS vice president, but also a gold mine of primary sources on modern Chinese science and history (Fan 2004–2013).<sup>2</sup> At the same time, Fan edited a valuable, high-quality, and wide-ranging series of 54 books of oral histories of Chinese scientists, the *20 shiji Zhongguo kexue koushushi congshu* 20世纪中国科学口述史丛书 (*Oral Histories on Chinese Science in the Twentieth Century Series*). One of the compilers of this obituary, Xiong, participated in the project as an author and can testify to Professor Fan's careful, erudite, and effective mentorship of young scholars involved in the series (Fan 2009–2018). Finally, Fan devoted much of his time and energy during the last years of his life to assisting and advising a massive national project, under the able leadership of Li Zhang 张藜, another one of his mentees, to document the lives and careers of hundreds of leading Chinese scientists, *Lao kexuejia xueshu chengzhang ziliao caiji gongcheng* 老科学家学术成长资料采集工程 ("Project to Document the Academic Developments of Senior Scientists"). His devotion to the project, calling it "our common cause," helped to mobilize and inspire many other historians of science, including both of us, to get involved in it as contributors or volunteers.

As the above makes clear, Fan's contributions to the historical studies of science in modern China included not only the insightful studies and rich documentation he produced, but also the large number of younger scholars he helped train. These included, besides those mentioned earlier, Jian Zhang 张剑, Jiuchen Zhang 张九辰, and Wei Qian 潜伟. Many of them have become leaders in the field both inside and outside China. We count ourselves as among his mentees and benefited enormously from our many academic and personal interactions with him over the years. His influence extended beyond academia, with his numerous and much-appreciated popular writings, and beyond mainland China, winning him many admirers overseas such as Professor Cuihua Yang 杨翠华, a historian of science in the Academia Sinica in Taiwan.

Professor Hongye Fan once visited the gravesite in Hangzhou of Mingfu Hu 胡明复 (1891–1927), a pioneering mathematician and leader of the Science Society of China in the early twentieth century. Calling himself a "kailu xiaogong" 开路小工 ("path-opening laborer"), Hu devoted his tragically short life not to mathematical research but to the building of institutions and improvement of conditions for others to do science in China. Then and there, Fan made a silent vow to himself that he would follow Hu's example and become a laborer for the historical studies of science in modern China. With his tireless efforts, truth-seeking spirit, perceptive insights, and monumental achievements, he succeeded beyond even his own ambitions in building resources and opening paths for others, especially historians of science in modern China. We are all in his debt.

## ORCID

Zuoyue Wang  <http://orcid.org/0000-0003-3533-4687>

<sup>2</sup> For more see Zuoyue Wang (2018).

## References

- Fan, Hongye 樊洪业, ed. 1999. *Zhongguo Kexueyuan Biannianshi* 中国科学院编年史 (*The Chronological History of the Chinese Academy of Sciences [1949–1999]*). Shanghai: Shanghai Science and Technology Education Press 上海科技教育出版社.
- Fan, Hongye et al. 樊洪业等人. 2004–2013. *Zhu Kezhen Quanji* 竺可桢全集 (*The Complete Works of Coching Chu*). Shanghai: Shanghai Science and Technology Education Press 上海科技教育出版社.
- Fan, Hongye, ed. 2009–2018. 20 Shiji Zhongguo Kexue Koushushi Congshu 二十世纪中国科学口述史丛书 (*Oral Histories on Chinese Science in the Twentieth Century Series*). Changsha: Hunan Education Press 湖南教育出版社.
- Fan, Hongye 樊洪业, and Weimin Xiong 熊卫民. 2016. “Wei Zhongguo Xiandai Kexueshi Yanjiu Pulu — Fan Hongye Yanjiuyuan Fangtanlu” 为中国现代科学史研究铺路—樊洪业研究员访谈录 (“Paving the Way for the Historical Studies of Science in Modern China: An Interview with Professor Fan Hongye”). *Journal of Guangxi University for Nationalities (Natural Science Edition)* 广西民族大学学报 (自然科学版) 22 (4): 1–12.
- Miller, H. L. 1996. *Science and Dissent in Post-Mao China: The Politics of Knowledge*. Seattle: University of Washington Press.
- Wang, Zuoyue 王作跃. 2018. “Essay Review of *Zhu Kezhen Quanji*” 竺可桢全集 (“The Complete Works of Coching Chu”). *East Asian Science, Technology and Society* 12 (2): 201–209. doi:10.1215/18752160-6578188.

**Zuoyue Wang** 王作跃 is a professor of history at the California State Polytechnic University, Pomona, specializing in science, technology, and politics in modern US, China, and transnational contexts. Born in China and originally trained in physics, he received his PhD from UC Santa Barbara and published *In Sputnik's Shadow: The President's Science Advisory Committee and Cold War America* in 2008 (its Chinese translation *Zai weixing de yinying xia: Meiguo zongtong kexue guwen weiyuanhui yu lengzhan zhong de Meiguo* 在卫星的阴影下美国总统科学顾问委员会与冷战中的美国 appeared in 2011). In 2017 he published in Chinese *Kejigeming yu Meiguo xiandaihua* 科技革命与美国现代化 (*Scientific-Technological Revolutions and American Modernization*). He is currently studying the history of Chinese American scientists and US-China scientific relations, for which he received a grant from the National Science Foundation in 2010–2014.

**Weimin Xiong** 熊卫民 is a professor (特任教授) in the Department for the History of Science and Scientific Archaeology, University of Science and Technology of China (USTC), Hefei, China. With a PhD from the Graduate School of the Chinese Academy of Sciences (CAS) in 2007, he has been engaged in research and teaching at the CAS Institute for the History of Natural Sciences, the University of the CAS, and USTC successively. His interests include the history of science and technology, higher education, and oral histories in modern China. Among books he authored or co-authored in Chinese are *Hecheng yige danbaizhi: jiejing niu yidaosu de rengong hecheng* 合成一个蛋白质: 结晶牛胰岛素的人工全合成 (*Synthesize a Protein: The Total Synthesis of Crystalline Insulin Project in China*, 2005), *Dui yu lishi, kexuejia you hua shuo: 20 shiji Zhongguo kexuejie de ren yu shi* 对于历史, 科学家有话说: 20世纪中国科学界的人与事 (*Scientists Have Something to Say about History: The People and Issues of Twentieth-Century China's Scientific World*, 2017), and *Xingzou zai geming, kexue yu zhexue zhijian: Fan Dainian koushu zizhuan* 行走在革命科学与哲学的边缘: 范岱年口述自传 (*Walking on the Edge of Revolution, Science, and Philosophy: The Oral Autobiography of Fan Dainian*, 2017).