Telling China’s story through reports on scientists: A comparative analysis of the reports on Tu Youyou in Chinese and Western media

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Abstract
As the first native Chinese scientist to win a Nobel Prize in science, Tu Youyou, who is a researcher of the China Academy of Chinese Medical Sciences, is an iconic figure in the Chinese scientific community. Tu’s story in Chinese and Western media reports has aroused heated discussion, creating a great opportunity for China to increase its voice in international communications. Through content analysis of relevant reports in Chinese and Western media, we found that, when reporting on the personal character of scientists, Western media politicize scientific and technological events. On the other hand, Chinese media tend to focus on the scientific research and stress a communal spirit among researchers, but the reports have the problem of similar contents and style. Based on this analysis, we proposed several suggestions on how to best tell China’s story through reporting on scientists.

Keywords
Tu Youyou, scientists, international communication

1. Introduction
In 2011, Tu Youyou, a tenured researcher of the China Academy of Chinese Medical Sciences, made her name on the international scientific stage when she won the Lasker Award in Clinical Medicine for the discovery of artemisinin. On 5 October 2015, Tu was also awarded the Nobel Prize in Physiology or Medicine for that discovery, becoming the first native Chinese scientist to win a Nobel Prize in science. Soon after, Tu Youyou, artemisinin and traditional Chinese medicine (TCM)
became popular topics in both domestic and international media. This landmark event for China’s scientific community has generated a chain effect in China’s efforts to increase its voice in international communications and so deserves in-depth study.

First, Tu’s achievements have demonstrated the prosperity and progress of Chinese science and technology. The Nobel Prize in Physiology or Medicine is the highest award received in the Chinese medical profession to date. Tu’s winning of the award is a monumental achievement that reflects China’s scientific and technological power, comprehensive national strength and international competitiveness. It is closely related to the peaceful development of the country and humanity as a whole. Furthermore, Tu’s artemisinin research is inspired by TCM literature. The drug is widely used in the global fight against malaria, saving the lives of millions—a major contribution of Chinese medicine to the human race. It also plays a positive role in encouraging the people of the world to learn about and understand China.

Science and technology are the results of humans’ perception and grasp of natural laws. Scientific discoveries and technological inventions can cross the barriers of ideology, political systems, religions and cultures and be shared by all humanity. Therefore, publicity about scientific and technological achievements and figures has the inherent advantage of breaking through cultural barriers and shaping China’s image in a more acceptable way. How to make people in other countries recognize and trust China’s scientific and technological achievements through media reports is an important task for China’s external communications. Because Tu Youyou is a native Chinese scientist with notable influence in the international arena, an analysis of media reports about her could provide insights into China’s efforts to increase the country’s influence and tell the Chinese story through the promotion of scientific and technological achievements and figures.

2. Literature review

The mass media serves as an important channel to promote the scientific spirit and introduce scientists to the public. The earliest research on the image of scientists can be traced back to a 1999 study that pointed out that the main sources of Korean students’ cognition about scientists were movies, news, autobiographies and cartoons (Song and Kim, 1999). In recent years, scholars outside China have focused more on the depiction of female scientists. Contemporary representations of scientists in the media are often examined with a particular emphasis on stereotypes related to gender and science as a profession (Mitchell and McKinnon, 2019).

Research on scientists’ media image in China is at an early stage, having made a late start compared to other countries. Chinese scholars mostly take mainstream media in China as the research focus and explore the characteristics, evolution and factors influencing media-constructed images of scientists from a variety of theoretical perspectives. Wang (2018) analysed the discourse of reports in the People’s Daily on Yuan Longping, a famous Chinese scientist, and found that the reports included publicity of values. To examine scientists’ portrayals in the Chinese press and their changes in different social discourses, Xu and Wang (2020) analysed reports on scientists in the People’s Daily from 1949 to 2019 based on semantic network analysis. Zhang (2016) researched reports in the People’s Daily based on framing theory and concluded that various factors affect the media portrayal of scientists, including political, economic, media organization and cultural factors.

With the development of technology, scholars have begun to turn their attention to the role of new media in depicting the image of scientists. Social media have produced a lot of high-quality scientific communication products that even influence the agenda of traditional media (Wu and Zhang, 2016). However, the influence of mainstream media cannot be ignored. After examining image-building about scientists in new media, some scholars have found that new media’s depiction of Chinese scientists is not enthusiastic and that its communicational effect is limited (Zhang, 2012). Others have combined scientists’ image-building with international communication in their studies. Gong and Huang (2016) analysed reports about Tu Youyou in China Daily and suggested that they portrayed China as a socialist country with an advanced culture.

Most current research focuses on analysing comprehensive media but ignores the important role of specialized media. The results are mostly descriptive.
and lack quantification. Moreover, no research has explored how the Western media has reported on Chinese scientists. Therefore, in this study, we examine the reports of four representative Chinese and Western media sources and compare the ways they portray Chinese scientists. Through content analysis, we conducted an in-depth analysis of the topics, news sources and wording of those reports. We make suggestions about the international communication pattern of Chinese media based on our analysis.

3. Research design

3.1 Selection of research subjects

This study analyses the content of mainstream Chinese and Western media reports on Tu Youyou. For Chinese media, we chose the People’s Daily and Science and Technology Daily. The People’s Daily is one of the most influential mainstream media in China, and Science and Technology Daily is an authoritative and specialized medium focusing on science and technology. Both are circulated internationally and have a worldwide impact. For this study, we went through all the reports about Tu Youyou carried in those two newspapers to learn about how the case was covered by Chinese media. We analysed the weaknesses and strengths of China’s external communication process and how the narrative of the Chinese story is conveyed.

For Western media, we chose The New York Times, which is one of the most authoritative international newspapers published in the US, and The Guardian, which is a comprehensive daily newspaper in the UK. We studied the number of reports on Tu Youyou carried in those two newspapers, as well as the types and themes of the reports. These two newspapers have a strong influence in the English-speaking world and have a strong focus on international affairs.

3.2 Composition of the research sample

For sample selection, we used ‘屠呦呦’ (‘Tu Youyou’) as the keyword for searching in the CNKI newspaper database and the People’s Daily graphic database (1946–2021). We used ‘Tu Youyou’, ‘Chinese + malaria’, ‘Nobel Prize in Medicine’ and ‘Nobel + parasite’ as the keywords for searching in the LexisNexis global news database. In that way, we located all reports on Tu Youyou carried in the People’s Daily, Science and Technology Daily, The Guardian and The New York Times from 24 June 2003 to 31 December 2021 and obtained 55 valid samples after excluding duplicate and irrelevant reports.

4. Analysis of the differences between Chinese and Western media reports

4.1 Reports in Chinese media

Through an examination of relevant reports in the People’s Daily and Science and Technology Daily, we found that there were only two reports about Tu Youyou in Chinese media before 2011. In 2011, the year when Tu won the Lasker Prize, the number of reports increased. In 2015, after Tu won the Nobel Prize, the number reached a high point. After that, the number declined year by year, until reaching another peak in 2021, with the broadcast of a TV series on the stories of the winners of the Medal of the Republic (Figure 1).

A search for ‘屠呦呦’ in the CNKI journal database returned 30 reports on Tu Youyou from the People’s Daily, from 13 October 2011 to 1 June 2021. Most of the reports were published in 2011 and 2015, when Tu won the two international awards. Of the 30 reports, 54% were on the front page or in the Headline News section, 13% were in the Science and Technology Insights section, and 17% were in the Health Times section (Figure 2).

In the Science and Technology Daily, 12 reports were published from 24 June 2003 to 2 July 2021. Most of the reports were published in 2015 and 2016 after Tu Youyou received the Nobel Prize. Except for two front page reports on Tu’s winning the Nobel Prize and her donation of her book Research on Malaria-treating Artemisinin (1971–1978) to the Nobel Museum, the other reports were all included in the Medical and Health Technology section (Table 1).

4.2 Reports in Western media

We located eight reports on Tu Youyou in The New York Times, from 13 September 2011 to 13
October 2015. Among them, two were published after Tu received the Lasker Prize in 2011, and six were published after Tu received the Nobel Prize in 2015. Four reports were in the Asia Pacific section, two in the Science section, and two in the Foreign section (Table 2).

*The Guardian* produced five reports about Tu Youyou, from 5 October 2015 to 25 July 2018. Most of the reports were published after Tu received the award in 2015 and no reports have been published lately. Three reports were carried in the Science section, one in the Opinion

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**Figure 1.** Tu Youyou reports in the *People’s Daily* and *Science and Technology Daily*.

**Figure 2.** The relative percentages of pages for Tu Youyou reports in the *People’s Daily*. 

Culture: 10%  
Health Times: 17%  
Science and Technology Insights: 13%  
International News: 6%  
Headline News: 44%  
Front page: 10%
Compared with Chinese media, Western media has paid little attention to Tu Youyou. Most of the reports in Chinese and Western media were published in 2015 and 2016 after Tu won the Nobel Prize, and there was little attention to her winning the Lasker Prize in 2011. Tu’s winning of the Nobel Prize is a science and technology event, but Western media reports put disproportionate emphasis on its political characterization. Most of the reports in The New York Times were published in the Asia Pacific and Foreign sections, which diluted the scientific and medical significance of Tu’s award.

4.3 Comparison of reporting formats in Chinese and Western media

The reporting format shows the media’s attitude towards a particular event. As Table 4 shows, the reporting formats of Chinese media were more diverse, and commentary and in-depth coverage were frequently used to explore the significance of Tu Youyou’s achievement. By contrast, news is the most common format of Western media reporting.
Concentrated on Tu’s Nobel Prize, those reports had a common format and reporting angle.

News commentaries are the heart and soul of the media. They can influence and shape public opinion and inspire deep reflection on the issues behind events. In terms of the topics of commentaries, Chinese media have extensive interests and tend to look at issues from wider perspectives, such as the debate between Chinese and Western medicine, the weaknesses of China’s scientific research system and the prospect of TCM. By contrast, commentaries in Western media are focused and brief. For example, one of the commentaries published by The Guardian described the contributions of the three Nobel Prize winners in 2015 to the eradication of global diseases, while another briefly introduced the achievements of five female scientists, including Tu Youyou. This is evidence of the limited attention Tu Youyou receives from Western media.

4.4 Comparison of information sources of Chinese and Western media

In news reporting, the media report based on the information provided by their sources. The choice of and emphasis on sources reflect the media’s judgement of and attitudes towards a given event. Table 5 shows the differences in information sources cited by Chinese and Western media.

The sources of information cited by the People’s Daily were extensive and comprehensive. The articles quoted a number of comments by scholars, officials and other stakeholders from China and other countries, reaffirming the inspirational role of TCM in Tu Youyou’s artemisinin research and the significance of Tu’s award to the development of TCM. Most of the quotes came from Chinese government officials and institutions, including the National Family Planning Commission, Peking University Health Science Center, the China Academy of Chinese Medical Sciences and the China Association for Science and Technology. The People’s Daily also quoted extensive comments by African officials and members of Chinese medical teams in Africa, which showed the significant impact of artemisinin on people in other parts of the world. The Science and Technology Daily, with a clear scientific and technological focus, sourced most of its quotes from experts and scholars, who interpreted the significance of artemisinin from a professional medical perspective. Through interviews with members of Tu Youyou’s research team, the coverage in the newspaper also noted the hard work of the research team and demonstrated the spirit of Chinese researchers.

Western media also quoted comments from scholars and experts. Unlike the words of recognition or congratulation that often appear in Chinese media, most of the comments quoted by Western media carried a negative or revealing tone. By questioning Tu Youyou’s award or China’s scientific research system, they shifted from an objective and neutral stand at the beginning of the reports and became...
more critical. For example, one report quoted comments made by Richard K Haynes, a scholar at the University of Science and Technology in Hong Kong, who challenged Tu’s award of the Lasker Prize and stated that naming one inventor was a ‘travesty’ (McNeil Jr, 2012). He also raised questions on Tu’s award of the Nobel Prize. A report from The New York Times took China’s research system as its target. The author referred to the concern expressed by a professor at Beijing Jiaotong University that ‘There are many problems in the institutions and mechanisms of scientific work in China’ (Perlez, 2015). The report also named vague sources such as ‘some analysts’ and ‘a journalist’, attempting to create the impression that China’s scientific research conditions are backward. It also concentrated on Tu’s status as a scientist without a PhD degree and an overseas education, and not being named as an academician, to suggest faults in China’s research reward mechanism.

In Chinese media, Tu’s award was reported as an event for national celebration. Chinese government officials were frequently quoted in the reports, which showed the significance of Tu’s award from a broader perspective, but inevitably led to similar narratives. Compared with the ‘straightforward presentation’ of Chinese media, Western media tended to use Tu’s original words in her earlier interviews with media, including her feelings about the award and her perception of her personal identity. Such an approach is more direct for establishing the identity of the protagonist in the news. For example, the words of Tu Youyou quoted by The Guardian spoke about her great sense of social responsibility and humanistic care:

I saw a lot of children who were in the latest stages of malaria. Those kids died very quickly. It is scientists’ responsibility to continue fighting for the healthcare of all humans. What I have done was what I should have done as a return for the education provided by my country. (Sample and Walker, 2015)

4.5 Comparison of the content of Chinese and Western media reports

**Chinese media reports had more diverse topics and far-reaching implications.** The topics chosen by Chinese media were more extensive and diverse, and the reports looked into the deeper issues behind Tu Youyou’s award, such as the inheritance of TCM, the collision between Chinese medicine and Western medicine, the current situation of China’s academic environment and problems in China’s research environment (Table 6). By contrast, Western media coverage was less diverse: all the reports focused on Tu’s personal life and research experience.

Among the reports in Chinese media, TCM was a major area of interest for the following reasons. First, Tu’s award highlighted the collision between TCM and Western medicine and triggered a debate about Chinese and Western medicine in China. The People’s Daily and Science and Technology Daily both published several commentaries to show that Chinese medicine and Western medicine are not in conflict or mutually exclusive. The research and development of TCM and modern technology are not contradictory. In a society of highly advanced science and technology, no scientific research can do without the application of modern technology, and no one contends that Chinese medicine would not accept modern technology. Tu’s research has created a new option for activating traditions and starting a new journey. However, for medicine, what is most important is still its efficacy (Luo, 2015).
Second, after Tu’s award, the media started to pay attention to the inheritance and development of TCM. In October and November 2015, the People’s Daily published a series of reports titled ‘Reflections on Tu Youyou’s Nobel Prize’, which focused on the life of folk TCM practitioners, TCM research and TCM governance (Wang and Li, 2015).

Tu Youyou’s awards of the Lasker Prize and Nobel Prize also inspired the media to reflect on problems in China’s scientific research system. First, China’s science and technology system has problems at the management level. According to Li (2015), a chief researcher of the China Academy of Chinese Medical Sciences, the reason that Tu’s research results from 30 years ago were recognized only today is excessive government intervention, privilege and hierarchy in the scientific research system. A commentary in the People’s Daily pointed out that, although the conditions for scientific research have greatly improved, few high-quality results have been produced because the whole scientific and technological community tends to seek quick success and instant benefit. In addition, the application process for scientific research projects is too complex and cumbersome because the projects are overseen by multiple government departments; the assessment mechanism puts too much emphasis on the number of published papers, and researchers are forced to put quantity before quality. Therefore, there is an urgent need to reform the research system and improve the academic environment (Bai, 2011a).

Second, Tu has made great achievements but has not been elected as an academician simply because she does not have a PhD degree or overseas educational background, which shows the unreasonable features of China’s scientific research reward mechanism. Whether the election of academicians is objective and fair is not only about the dignity and credibility of academicians themselves, but also affects the professional ambitions and enthusiasm of all science and technology workers (Bai, 2011b).

Western media tended to politicize science and technology events in their reports, while Chinese media focused more on the scientific research. In the reports related to Tu Youyou, the results of China’s scientific and technological development were distorted and incompletely presented by Western media. The New York Times and The Guardian both mentioned the background of Tu’s artemisinin research in several reports. By underscoring the relationship between the artemisinin discovery and the Vietnam War, they defined the development of artemisinin as an aid to the Vietnamese communists, who were struggling in their battle against the US. Such a characterization reinforced the political attribute of artemisinin research. The New York Times reported that ‘few people realize that in one of the paradoxes of history, the drug was discovered thanks to Mao Zedong, who was acting to help the North Vietnamese in their jungle war against the Americans’ (McNeil Jr, 2012).

The Chinese media, on the contrary, presented the background to the research from the perspective of human life and health and pointed out that artemisinin was originally developed to bring down the number of malaria cases in the world: ‘In the 1960s, when chloroquine lost its effect on malaria and humans were suffering from malaria, Tu Youyou accepted the challenging task of malaria drug research from the “523” office of the national research project on malaria control’ (Wang, 2021). In the Chinese media’s review of Tu’s research

| Topic                                             | Number of reports in the People’s Daily | Number of reports in the Science and Technology Daily | Total number of reports |
|---------------------------------------------------|----------------------------------------|-------------------------------------------------------|--------------------------|
| Tu Youyou’s research journey                      | 10                                     | 4                                                     | 14                       |
| Tu Youyou’s international awards                  | 8                                      | 2                                                     | 10                       |
| Development of TCM                               | 7                                      | 2                                                     | 9                        |
| Problems in China’s scientific research system    | 5                                      | 3                                                     | 8                        |
| Others                                            | 0                                      | 1                                                     | 1                        |

**Table 6. Topics of Tu Youyou reports in Chinese media.**
history, the focus was on how Tu discovered artemisinin from TCM literature and how she overcame difficulties in her research by drawing on ancient wisdom. The connection between Tu and TCM was visible but was rarely underscored in Western media reports.

**Chinese reports focused on collective spirit, whereas Western reports emphasized personal character.** In their reports on Tu Youyou, Western media paid more attention to her personality and described her profile from multiple perspectives. For example, in describing Tu’s research experience, they not only portrayed her as a mother but repeatedly mentioned the sacrifice of her personal life to complete the task assigned to her by the government. *The Guardian* reported that, to observe the disease firsthand, Tu was sent to Hainan Province, an island off the southern coast of China, and had to leave her 4-year-old daughter in the care of a Beijing nursery. When she came back, her daughter barely recognized her (Sample and Walker, 2015).

Western media also emphasized the identity of ‘women scientists’ in their reports. For example, a piece of news on the winners of the Nobel Prize in Physiology or Medicine specifically noted that Tu Youyou was the 12th woman to get the prize (Sample and Walker, 2015). In a 2018 commentary, *The Guardian* stated that there were many amazing and inspiring women in science, including five women scientists whose work and achievements made them great role models for us all, and Tu Youyou was one of them (Charman-Anderson, 2018).

The reports in Western media quoted Tu Youyou frequently, which presented a true picture. However, they did not mention the experience and feelings of other researchers in Tu’s team and ignored the collective identity of Chinese scientists represented by Tu. The emphasis placed by Western media on Tu’s individuality also overlooked the overall progress of science in China. This has to do with Western society’s emphasis on individualism and the pursuit of personal values.

The reports in Chinese media focused more on the collective identity of Chinese researchers represented by Tu Youyou and underscored the important role played by the national research system and collaboration between different research teams. At different stages of the development of artemisinin, various research institutions in the country played unique roles, which together contributed to the success of the research. In their reports on Tu’s research, Chinese media quoted the members of her research team to present the image of a united team. For example, whenever Tu talked about the research results, she always said, ‘The success of the research is attributed to the hard work of everyone in the team’ (Xia, 2019). A commentary in the *Science and Technology Daily* observed that the development of artemisinin was the result of the nationwide system and quoted Tu as saying, ‘In the battlefield of global malaria control, the power of individuals is small. Only a well-organized army guided by a clear purpose can defeat malaria’ (Fu, 2021).

Chinese reports also highlighted the spirit of perseverance, dedication and sacrifice of Tu and her team. In the 1970s, ‘The research equipment was rudimentary, with no exhaust system or protective equipment. In addition to dizziness and eye swelling, the researchers also had symptoms like nose bleeding and skin allergies. Tu herself also suffered from toxic hepatitis. Even so, they did not stop at the discovery of artemisinin’ (Wang, 2021). Although Tu’s team has already achieved great things, the members continue to expand their research into new areas. In addition to the anti-malaria research, the team is exploring the efficacy of artemisinin for fighting cancer and treating lupus erythematosus. (Fu, 2021). The reports in Chinese media have demonstrated the great spirit of a generation of Chinese researchers, who are dedicated and devoted to serving the country. However, although the reports have sent a positive message to society, they remain a somewhat mechanical way to shape a positive image.

**5. Suggestions**

**5.1 Promoting empathic communication by presenting the personalities of scientists from multiple perspectives**

From the perspective of science communication, the public’s perception and trust in science can be divided into ‘instrumental trust in the effective application of scientific and technological achievements
in society’, ‘symbolic trust in the objectivity and accuracy of scientific knowledge and methods’ and ‘ethical trust in the personality, competence and other virtues of scientists’ (Liu, 2018). Chinese media are strong on the first two points. In their reports, they quoted domestic and international experts extensively, as well as those from the African region, providing a full picture of the contribution of Tu’s research to global health. Compared with the reports in Western media, reports in Chinese media provided a more detailed account of how Tu combined TCM with Western technology and a more concrete illustration of the principles of artemisinin, thus reinforcing the scientific validity and effectiveness of the artemisinin therapy.

In shaping the personal image of scientists, mainstream Chinese media often like to take a macroscopic perspective and build their reports on key phrases such as ‘benefiting the world’, ‘serving the country through scientific research’ and ‘carrying forward the spirit of Party members’ to create an image of scientists who are dedicated to their work and the people and love their country. Although those reports are effective in conveying China’s mainstream values and showcasing the progress of scientific research in China, the image created is too monotonous and abstract, lacking detail and vividness. Therefore, in their reports on scientists, the media should give equal importance to promoting collective values and creating individuals’ profiles.

When reporting, one should avoid exalting scientists and should report at a ‘human’ level. Every scientist has his or her personality, be it playful, humorous, serious or reticent. One could use the words of the people around the scientist and his or her own words to form a full picture of the scientist’s rich character. For example, in a series of articles commemorating Yuan Longping in May 2021, Shangguan News and other media chose details of the scientist’s life as the focus, which struck a deep chord with the public. From Yuan Longping’s wife, his hairdresser and his cat, ‘Huahua’, those episodes showed aspects of his everyday life, shaping the image of a frugal and easy-going scientist, which resonated powerfully with the audience. In another example, after the 2020 National Science and Technology Award was announced, the official Weibo account of the People’s Daily posted a video of an episode in the award ceremony. After Gu Songfen received the award on stage, his wife Jiang Zefei moved through the crowd and came to his side. The touching scene of the couple holding their hands showed the emotional side of the scientists outside their research and brought them closer to the audience.

In the case of Tu Youyou, the media should focus on her female character. The status of women is one of the criteria for measuring the progress of a country and society; women’s independence and freedom are a mark of a country’s level of development. Therefore, a positive women’s image will have a positive impact on the communication of the country’s image. Tu’s painstaking research and her courageous efforts in research projects make her an outstanding representative of resilient and progressive Chinese women. When reporting, the media can tell the story of hardworking Chinese women from the angle of women’s progress, convey the message that women are no weaker than men, and, on that basis, shape China’s image as a country of gender equality, freedom and fraternity, removing the stereotypes held by people of other countries and triggering the empathy of the international community.

5.2 Making less propaganda and breaking through cultural barriers

When reporting Tu’s work, most of the Chinese media adopted positive communication. Their reports often focused on the significance and impact of Tu’s award and the pride of the nation. In addition, Chinese media highlighted the scientists’ Communist Party of China membership and their connection with the country’s development. They frequently quoted words of praise by government officials in their articles, which makes a foreign audience resistant to the information in the articles. Western media, on the other hand, paid more attention to Tu’s personal growth and research experience and quoted her own words extensively to present her image as a scientist.

Although the narrative style of Chinese media can have an inspiring effect when communicating to the domestic audience, it is difficult to break the cultural
barrier when communicating across different cultures. There is a cross-cultural communication context and an environment of communication through new media. As some Chinese government agencies and official media still lack a strong voice and influence in international communication, one should use less propaganda in reporting. To make the communication content of Chinese media more acceptable to foreign audiences, one may start from the micro-level and plan relevant reports based on shared values. Chinese media could replace the repeated emphasis on scientists’ achievements with a review of their research experience to reduce the resistance to communication brought about by cultural differences.

5.3 Producing high-quality journalism and meeting external challenges head-on

The negative reports of Western media on Tu’s award mainly focused on three aspects. First, they doubted whether Tu as an individual could receive the award on behalf of the whole team. Second, they distorted the current situation of science and technology development in China. Third, they questioned the Chinese science and technology system.

In the face of the distortion of Tu’s award and China’s academic environment by Western media, Chinese media should take the initiative to publish reports and give timely responses to the questions by using facts. For instance, the People’s Daily published a commentary on the question of whether it was fair to award the Lasker Prize solely to Tu. The author cited the examples of previous Nobel Prize winners and used statistics to show that giving the award to the chief scientist is a common principle followed by all international prizes in science. The author stressed that awarding the chief scientist is not meant to promote individualism but to recognize the unique contribution made by the chief scientist in the research. In the case of artemisinin research, if Tu had not discovered the method of extracting artemisinin, the subsequent determination of its structure and the modification of the drug would not have been possible (Bai, 2011c).

The above mentioned commentary was published after Tu was awarded the Lasker Prize. It was objective because it was based on facts. However, probably because of the low level of international attention to Tu at that time, the commentary did not have a wide impact internationally. Until 2015, Western media were still quoting the comments of scholars from Oxford University and Hong Kong University of Science and Technology in their Nobel Prize reports, suggesting that Tu was not individually eligible for the prize. Unfortunately, there has been no further response from Chinese media on the matter. Therefore, we believe that Chinese media should keep track of global public opinion, continue to produce high-quality commentaries and quote the words of scholars and experts with global influence in commentaries in order to respond to external questions. As for the problems that do exist in China’s scientific research system, the media can play a supervisory role and push the government to take timely measures to resolve the problems and strengthen China’s science and technology system.

5.4 Presenting the achievements of China’s science and technology development through multi-channel communication

The media can produce special reports through multiple communication forms such as text, news photos and short videos to present a real picture of the scientific research environment in China and showcase the strong support given by the relevant government departments to scientific research at the micro-level. The vigorous development of new media platforms also brings opportunities for science and technology communication. The traditional undertakers of science and technology communication are authoritative government agencies and scientific research institutions, which are distant from the public. Now, through new media, the boundaries of information dissemination have been weakened. Chinese scholars and scientists can use new media technologies to build an interactive platform for science communication and dialogue with the public.

The media should strengthen self-confidence in China’s traditional culture and find an appropriate theme for their reporting to enhance the international community’s knowledge of the development of
TCM. The awards to Tu Youyou turned the world’s attention to the power of TCM. However, Chinese media focused their reporting on the confrontation between and integration of TCM and Western medicine, as well as the problems in TCM’s development, and failed to use the opportunity to promote the values of TCM. Rather than discussing the survival or abolition of TCM, the media should focus on the content of TCM culture that reflects the common experience and wisdom of humanity, popularize TCM concepts such as ‘yin and yang’ and ‘meridians and collaterals’ in a way that is easily understood by the Western audience, and introduce the Chinese wisdom represented by TCM.

**Declaration of conflicting interests**

The authors declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

**Funding**

This study was supported by the ‘Enhancing the international communication capability of the scientific community to tell a better China story’ research project organized by the National Academy of Innovation Strategy (grant no. 2021-hjs-010).

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