

A Discussion on TCM Disputes and Communication based on the Science Communication Theory

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Abstract—In the recent years, TCM has been becoming an increasingly popular topic in the society, disputes over TCM have been augmented in the meantime with the advance of modern science and technology, especially with rapid development of social media. In the modern age, science communication is bestowed with profound connotation rather than a simple combination of science and communication. This article tries to apply the science communication theory to analyze the relationship between disputes over TCM and its communication in history. It's found that in terms of science communication, the disputes over TCM can be divided into three stages, and the audience-oriented theory plays an extremely important role in discussing how to address the disputes faced with TCM.

Keywords—*disputes over TCM; communication; Science Communication Theory; enlightenment*

I. INTRODUCTION

With the rapid development of globalization since the beginning of the 21st century, traditional Chinese culture has caught the eye of the whole world. Among which, traditional Chinese Medicine (TCM) has come under the spotlight, flexing its muscles on the global stage. In the meantime, domestically, under great controversy and destruction, TCM has nowadays encountered unprecedented difficulties, and is even confronted with the misery of dying out. Having been perhaps the most admired and compelling cultural quintessence for thousands of years, TCM gets the cold shoulder now. Thanks to the mass media progressing with each passing day, “the campaigns on abolition of TCM”, once the disputes in scientific community, has come into view of the public. As the mass media shoulders the responsibility of cultural inheritance, a study on “the campaigns on abolition of TCM” from the perspective of communication theory is of great significance.

As a trans-century problem, the disputes over the abolition of TCM have come down to a public concern since the beginning of the 21st century. Thanks to the mass media, the public have become more interested in TCM and they can participate in the disputes with their own viewpoints. For the sake of the public, as the disputes represent in full swings at all levels, in various areas and groups, how do they make their own judgments? Whether the public should trust the professors, such as Zhang Gongyao, or TCM doctors and scholars? The doubts above are closely related to the public understanding of science and science communication which are of utmost importance in modern society. In science communication, the study on “the campaigns on abolition of TCM” from the perspective of science communication theory remains to be a cutting-edge research program. In China, the combination of TCM disputes and science communication remain to be further explored.

II. DISPUTES OVER TCM IN THREE STAGES OF SCIENCE COMMUNICATION

Science communication firstly appeared in the book—“the Social Function of Science”, written by John Bernal, a famous British physicist and the founder of scientology. He wrote in this book, “The social function of science requires an overall consideration of science communication, including the communication not only within science community, but also between science community and the public.” [1] After that, science communication earned a widespread attention in 1930s, and the roles of the researches on science communication in communication shifted from edge to center. Nowadays, science communication can be divided into three stages: the traditional popularization of science, the public understanding of science and science communication.

A. *Traditional Popularization of Science and TCM Disputes*

Traditional popularization of science is the first stage of science communication. Information at this stage in which the audience is mainly regarded as the receiver, is from the top down by the decrees of the government, in a commanding and unidirectional way. “Central Broadcasting Model” is regarded as the most well-known and acceptable theoretical hypothesis at this stage. The “deficiency”, refers to the lack of knowledge of the public, and needs to be filled up by the scientific community. The model tacitly approves the potential hypothesis that science is absolutely right. The public at this stage are required to know what has been published and follow the authorities. Besides, the public storage of information should be tested. Thus the focus at this stage lies on the development of science education. [2] Essentially, the purpose of traditional popularization of science is to spread static science information and to improve the public scientific quality. However, science community at this stage has no direct relation with the public. Meanwhile, the most authoritative information promulgator is the government.

We can recognize from the above chart that the main initiators, supporters and opponents of these campaigns are mostly the government officials, western doctors or pertinent scholars. They have a certain public influence in the society, though they are under different social and communication environment. The celebrity effect on disputes over TCM has played a leading role in analyzing TCM communication over the years. Zhang Xiaoxia, an associated professor and member of Chinese Medicine Association, published a book-- *The Celebrities and TCM* on January 1st, 2017. [3] This book list many stories about TCM and celebrities, such as Sun Yat-sen, Cai Yuanpei, Liang Qichao, Lu Xun, Hu Shi, GuoMoruo and so on. They share the common point that they firmly oppose the treatment of TCM. Most of them are living in the same era—the Republic of China. The audience then received information passively and knew little about communication and TCM theories. Therefore, the audience then likes to follow others blindly, especially to follow the celebrities. These celebrities have firm standpoints over the abolition of TCM, so that the audience is inclined to follow the celebrities they like. For the government, removing TCM education in *the New Education Decree of the Republic of China* was the first sign of the engagement of the government in the disputes. It's also the first time for the government to support the abolition of TCM. Since the founding of People's Republic of China in 1949, the government has begun to promote the development of TCM and ethnic medicine. The features of each campaign are listed in the chart above and we can recognize that every campaign, initiated either by the government or the professors, seems to be endless.

B. *Public Understanding of Science and TCM Disputes*

“A Report on the Public Understanding of Science”, issued by the UK's Royal Society in 1985, has set up a new model of science communication, emphasizing that the “understanding” involves not only the knowledge of scientific facts, but also science activities and the nature of scientific exploration. Apparently, public understanding of science has surmounted science literacy stage which focused on science

knowledge and expanded to scientific attitude. One of the results of the report is the establishment of “the Committee on the Public Understanding of Science (COPUS)”, which targets in the explanation of science development so that the non-scientist group can easily understand. “Deficiency Model” can perfectly fit in the public understanding of science. The focus at this stage is to enhance public understanding, and the purpose of “understanding” lies in not the public support and appreciation of science, but a comprehensive cognition of science among the public by revealing the risk and uncertainty of science. At this point, scientific community begins to take shape and promotes the development of science communication with joint efforts. [4] Given different preferences, standpoints and interests among science community, the effects of science communication may fail to achieve in terms of the uncertainty of science. However, disputes over TCM in this stage began to be noticed by the public. The ordinary people then began to focus on the information they are interested in but without many personal thinking. The feedback of the ordinary people are rare, but as for the TCM community, they are very sensitive then because of the great influx of western medicine.

C. *Modern Science Communication and TCM Disputes*

As the development of science and technology gains its momentum, human society ushers in a new era of information. The emerging media, especially the Internet, has greatly enriched public access towards scientific information. The public, with the awakening of consciousness, proactively search and obtain information according to their need. From then on, science communication gets rid of the Deficiency Model and turns into a bilateral interactive activities. The public engagement of science communication seems to be overlooked at the previous two stages. However, the campaigns on the abolition of TCM have made it clear that the public are increasingly involved into science communication.

Online disputes over TCM in the new era among professors and TCM practitioners includes clear analysis, heated debate and obvious fact, but the focus is very clear—whether TCM is a science. At this point, the dispute of TCM has provoked in-depth thinking.

Whether we should test the science nature of TCM with positivism and falsificationism? And what is science? According to the explanation from Wikipedia, science is a systematic enterprise that builds and organizes knowledge in the form of testable explanations and predictions about the universe. Whether TCM is a science or not is not only a theoretical issue, but also a practical problem which must be tested by practice. Actually, spanning over thousands of years' clinical practice, TCM has cured millions of people and saved millions of human lives. It proves to be the reason why TCM exists indomitably regardless of the controversies it has suffered. As a kind of culture, science is diversified and differs in the related fields. Therefore, the demarcation of science should also be diversified. Either positivism which focuses on logical empiricism, or falsificationism which believes critical rationalism, idealizes the nature of science.

Theoretically, human beings are not machines but extremely complex systems as a whole. For this reason, TCM doctors stick to study human diseases based on holism rather than reductionism used by western doctors. Holism in TCM emphasizes the harmony not only between organs within a human body, but also between human and natural environment. TCM doctors prefer an overall observation and treatment based on syndrome differentiation. Holism is the core of TCM methodology and epistemology, and the advantage of TCM as well. At this point, TCM is a science, a real systematic integrated science, instead of the narrow definition of science based on natural science. It's unreasonable to evaluate the science nature of TCM with western demarcation of science.

Till now, TCM online disputes between TCM practitioners still hang in there. Both sides own many fans and supporters, who share their opinions on the Internet in a distinct way. The features of online TCM disputes are clear and logical.

Firstly, TCM online disputes differ at varied stages. From the very beginning, Professor Zhang Gongyao posted the article—*A Farewell to TCM* on his blog. [5] His points are further elaborated on by Fang Zhouzi. However, many TCM practitioners, such as He Yuming, a TCM professor from Shanghai University of TCM, pointed out that the opinions of Zhang Gongyao and Fang Zhouzi were groundless, especially Fang's, because he knew little the essence of TCM. From then on, the disputes came to the second stage—the qualification of science communication. In the age of Internet and information, actually, everyone had a chance to become a science communication activist and influence others' points. However, it does not mean that anyone who took part in science communication activities was qualified for science popularization. At this point, Fang Zhouzi explained that he was not a green hand in TCM for he also studied the classics of TCM. Then, Fang Zhouzi and other TCM practitioners developed online and face-to-face debates over TCM. Both sides gave their evidence to support their points. This was the third stage of online TCM disputes. At the final stage, the debates ended without a distinct winner and the challenge launched by the physician Abao had triggered a heated discussion, but it proved to be a dead end again.

Secondly, the celebrity effect of online TCM disputes is very clear. During the debates, both sides have given many examples about the influence that TCM exerted on many celebrities. Lu Xun, one of the greatest writers in China, once said, TCM, wittingly or unwittingly, is a fraud. Fang Zhouzi, once mentioned that Chen Xiaoxu, a famous actress, was killed by TCM. It was first proposed by He Zuoxiu, an academician of Chinese Academy of Sciences. Academician He said, Chen had breast cancer and had been treated by TCM doctors who couldn't even diagnose breast cancer, but she firmly refused modern treatment or even physical examination. A blind adherence towards TCM directly resulted in her death with great pain. At this point, a journalist believed that TCM didn't result in the death of Chen. If she received the procedure but died at last, could we make a conclusion that Chen was killed by modern medicine? Celebrities mentioned in this dispute, are either famous actresses in China, or great writers and statesmen in China. They all have significant influence on the public. The ordinary people may love them

for some reasons, and are willing to believe what their idols believe. In the age of the Internet, the celebrity effect of online TCM disputes proves to be stronger than ever before.

Thirdly, TCM online disputes have all the features of the Internet communication: the audience can easily attend the disputes online; the disputes own strong timeliness but weak authenticity; a highly interactivity results in the boom of network mobs. Some people hide their identities and publish their opinions without a basic social responsibility and they never consider the consequence brought by their words. The signing campaign, for example, which announced to have over one million signs, had already proved to be a fraud, but the crazy "one million" supporters are still mentioned again and again. These kinds of rumors spread in a wide range and had a significant influence on the public. The regulation of Internet rumors remains to be difficult for the pertinent department.

III. THE AUDIENCE IN TCM DISPUTES AND TCM COMMUNICATION

A. *The Audience in Disputes over TCM*

In the traditional media environment, the audience is mainly the receiver of science communication. Although the audience could have feedback towards the news they know, it's usually through letters. Only when the letter was noticed by a media or press, could the audience be the publisher of new information. However, in the new media environment, the feedback of audience is more frequent and diversified. Then, the audiences are more likely to be information publishers and they always change the roles from the audience to publishers. [6] The rapid development of We-media booms the interactivity and feedback system. On the online disputes over TCM, feedback from the audience does play an important role in the discussion of this issue. During the disputes, the audiences not only focus on news they read, but also make comments on the issues.

After reading or studying the debates and articles, the audience forms their own opinions and discuss with each other. In the meanwhile, they may also have the chance to debate with the initiators. Wan Feng, a TCM fan, for example, once had a debate with Fang Zhouzi on a TV program. This highly interactive feedback drove the issue into a deepened stage. Due to the lack of regulation on publishing ideas on the Internet, the amount of feedback proved to be larger than that of in the traditional media environment. The instant feedback of the audiences serves as the important premise of the popularity of the issue and results in a wide attention of the media, which boosts the development of the events.

B. *Enlightenment of Audience-oriented Theory for TCM Communication*

One of the most distinct features of online disputes over is the large amount of attention given to the audience. Studies on audience in science communication are mostly empirical. The definition of audience-oriented theory is proposed by Chen Chongshan, a famous communication researcher, in 1992. He has devoted himself for a long time to empirical studies, exploring the principles of the audience's receiving

information. [7] As for the study on audience theory, in the early 1980s, many people tried to view the position and function of audience in communication activities, based on media-oriented theory. A few years later, the exploration of communication began to be audience-oriented, for the explosion of Internet and technology made people think more on the indispensable position of the audience in the popularization of science. As the core of communication activities, the audience then boasted the right to know and to express, and they had supervision right on public opinions as well. The revolution of the mass media should meet the demand of the audience and defend their rights. Thus, the audience was affirmed to be the leading factor in communication activities. The process from the media-oriented to the audience-oriented has remained to be a qualitative leap in the development of communication study. Science communication serves to transit information and make explanation. The audience, as one of the important aspects of communication, proves to be the key part of the process of communication and its circulation. On the online disputes, more and more ordinary people get involved into the discussion. They are no longer the outsiders of this kind of issues, but the stakeholders. There is no denying that it's a sort of progress of science communication. The audiences begin to get interested in not only "what is it" but also "how does it develop". It means that they desire to know more about everything and start to explore the answer to the confused problems. Even, like Wan Feng, a TCM fan, will debate with Fang Zhouzi, who majors in science and creatures. When the signing campaign had caught the eye of the society, the public also had their own standpoints and were not driven by the professors and opinion leaders. The audience is based on the paramount attention to the audience. It proves to be a huge progress from the media-oriented to the audience-oriented. The audiences are no longer in a passive position but an active one. Apart from the issue itself, the feedback of the audience also attracts the media and presses.

IV. CONCLUSION

As an emerging subject, science communication represents a great potential, especially under the environment of China, whose science popularization is dominated by scientism. [8] The essence of science communication--a sense of democracy and freedom, seems to be more precious. Studies on disputes over TCM from the perspective of science communication are still at a fledgling stage.

In the modern age, everyone in the society should have access to TCM communication, and TCM communication requires more attention from the audience as well. Online disputes over TCM should not be confined to the scientific community only. The ordinary people, with exploring spirits but without pertinent science background, can make their contribution to TCM communication with their own efforts. Online disputes over TCM are arresting in science communication, which is a significant effort from traditional popularization of science to public understanding of science and reflective science communication.[9]Science communication is not only about the scientific community, but also a communication model with great popularity. To study

TCM disputes in light of science communication theories is to explore the origin of the disputes. Over the years, online disputes over TCM reflect the problems of science communication in China. We-media today offers convenience for TCM online disputes, but every coin has two sides. On the Internet, the lack of effective regulations remains to be the barriers to science communication, but we can't avoid the development of media. On the contrary, we should seek new development points under the new media environment and consider the positive effects to the development of TCM communication brought by the audiences. Although disadvantages still exist in the TCM communication and inheritance and there are many uncertainties in science communication, we should firmly believe that all of those difficulties would be addressed in the future and a long-term development can be achieved in TCM communication and inheritance in China. The disputes over TCM are like the mirrors of science communication. [10] In the meantime, the effects of science communication are determined mainly by the following four factors: the government, the science community, the media and the audience. Online disputes over TCM through social media, such as Weibo, have revealed the problems existed in science communication. For instance, the science literacy of the public is in an urgent need to be improved.

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