

177. Science Blogs in China: Exploring in the Forefront of Promoting Public Understanding of Science

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Abstract. As a new scientific community force, science blogs are playing a more and more significant role in science communication by exploring in the forefront of promoting the public understanding of science. Based on the analysis of the development of science blogs and their features, this presentation focuses on why and how science blogs can affect the public understanding from dimensions of the communication model, content (scientific affairs), information sender (scientists), and receiver (the public). I will also discuss the trend of science blogs in the coming world of information. Carried by science blogs and mass media, a new scientific communication ecosystem is forming.

Keywords: Science Blog; Public understanding of science; Science blog circle; Scientific communication

Twenty-five years ago, the Public Understanding of Science published by the United Kingdom's Royal Society argued that scientists must learn to communicate with the public and consider it their duty to do so. For decades, scientists have been making great efforts on promoting public understanding of science through the traditional mass media. Now, scientists have begun reaching out to mass audiences through blogs, by which they could communicate with the public more conveniently.

Science blogs were favored by the scientific community with the unique advantages of open, fast, interaction and efficiency. Scientists from University of Oxford held that science blogs can provide a unique educational bridge between academia and the public and distill important experimental findings into an accessible, interactive format. And the author suggested that we should create mechanisms for institutions to provide appropriate (but not stifling) oversight to blogs and to facilitate high-quality interactions between blogs, institutions, and readers¹.

And now, Science blogs have formed influential online group power with the development and mature of blog technology in China.

The Rise of Science Blogs in China

As early as in 2006, science blogs have been basically alone in China. A reporter from the China Youth Daily wrote in a report that a science reporter wanted to understand the current thoughts of scientists through the science blogs, but he only found two science blogs through the Internet. One of them belongs to Li Miao, a researcher at the Institute of Physics of CAS. Another is Wei Yu, who is an academician of Chinese Academy of Engineering.

Four years later science blogs have developed rapidly in China. A large number of scientists, such as Zuoxiu He, Yigong Shi, Yi Rao, Nanshan Zhong etc., are expressing their views and thoughts on science through the science blogs.

It's gradually found that those science blogs always belong to a website or several websites. The science Blog Circles have gradually thrived following the boom of the individual science blogs.

Sciencenet (<http://www.sciencenet.cn/blog/>), one of the most popular science blogs in China, began in 2007 and now attracts over 4,000 bloggers setting up sciences blogs and thousands of visitors. The blog aims to construct the first media of blogs circle for the global Chinese scientists. In the blog community of Sciencenet, most of bloggers are the scientists in different fields of nature science, who have always expressed their views and thoughts on the science affairs.

Another popular science blog circle is Songshuhui (<http://songshuhui.net>) set up by a group of science amateurs in 2008, which was awarded the Best Weblog and the Best Chinese blog in the fifth BOBs. Most of the bloggers are science amateurs. The aim of it has been vividly described as knocking the hard shell of science and helping people enjoy the inside of science. Different from the Sciencenet concerning about the thoughts of scientists, Songshuhui devotes to the creation of science popularization works.

¹ Shelley A. Batts*, Nicholas J. Anthis, Tara C. Smith. Advancing Science through Conversations: Bridging the Gap between Blogs and the Academy. *PLoS Biol* 6(9): e240. doi:10.1371/journal.pbio.0060240.

Aiming at promoting academic innovation and science communication, it is worth mentioning that the first National Blog Contest in China, held by China Association for Science and Technology in 2009, has successfully promoted the great development of science blogs in China. It was reported that there were 1279 blogs participating in competition, which are from 40 sites and 8 independent domain name blogs, and the participants included 106 Doctorates, 88 masters, 117 professors, 105 researchers and 55 senior engineers. And then the CAST (<http://www.cast.org.cn>) set up a section about Science Blogs to spread excellent blogs from Websites.

Until now, science blogs have been developing and coming to form strong social effects in China.

New Strength for Science Communication

Professor Annian Huang, who set up website for academic exchange before (www.annian.net), now established his science blog in Sciencenet, keeping the highest personal records including 4,942 blogs, 5180,000 visits and 4,043 commentaries (Searched on August 18, 2010). Professor Huang said in Why I established a blog in Sciencenet that my website can't communicate with the public until now, but the blog can. It is a good form for expression of views and communication with the public.

Just as same as Professor Huang, more and more scientists who wouldn't like to contact with the media before recognize the potential value of science blogs now. They use to express themselves through science blogs little by little.

Science blogs provide a free and independent space for scientists. There actually are not enough channels from science researches to science news because of the immature science communication system in China in the past. The reports of academic conferences and the academic achievements are the common parts of science communication, which attract scientists and the public no longer.

Compared with it, what kinds of issues on earth do the scientists discuss through science blogs? We studied the science blogs community of Sciencenet, which is a large group of scientists. Eight kinds of issues are mainly discussed.

- i. The Current Affairs about Science, Such as Nobel Awards in 2010
- ii. The Science and Technology Policy by Chinese Government, Such as 1000-Elite Program
- iii. Discussion on the Science and Technology System at Home and Abroad
- iv. Commentary on Science Culture, Such as Anti-corruption of the Academic
- v. Exchange of Academic Research
- vi. Communicating with the Public, such as the Works of Science Popularization
- vii. Communication of Teaching Between Teachers and Students
- viii. Scientists Valuable Personal Experiences in scientific life and everyday life.

Those issues are involved in the majority of their discussions. It's obviously that science blogs build new platform for scientists, which enable them to enter the media system directly and participate in the science communication as independent information senders. As the sources of scientific understanding, scientists take the duty to communicate to the public more fully through the forms of we-media and hold higher authority and reliability, which is beneficial to delivering better communication results.

We took the 1000-Elite Program as an example, a hot topic in recent two years in China. I searched 61 blogs in Science blogs community of Sciencenet on July 13, 2009, by using the key word 1000-Elite Program. Most of blogs were written by the front-line scientists and researchers, by which visitors could grasp the views on the program. Supporters and doubters had expressed the fresh ideas and even intense argument. Actually, it's hard to get this information through the traditional media. The public can understand the true thoughts of scientists and development of scientific issues.

The different between the traditional science communication and science blogs is just like the differences between 2D and 3D of Video. The public could deeply understand science and technology though the 3D world that was constructed by science blogs with the features of open, fast, interaction and efficiency.

Science blogs have changed the traditional form of science communication and provided new sources and channels for the public to understand science and technology, which play the role of guiding public opinion and promoting public understanding of science and technology attitudes in the context of low science literacy and a serious shortage of scientific information in China.

New Explorations of Science Blogs

Science blogs has changed the traditional made of science communication. Scientists directly enter the medium of science communication system and become the information sender through blogs, which showing the strength of

we-medium. Does it mean that the Science blogs are perfect? The answer is no. New explorations of science blogs are carried out.

Real-name system

Science communication depends on the authority and reliability of the materials of science news. While blogs provide open platforms for bloggers, and freedom is the best character. Contradictions between the rights and responsibilities are difficult to deal with.

Based on the rules of authority and reliability, real-name system is used in the registration by science blogs community of Sciencenet. Sciencenet holds that the nature of science is the pursuit of truth. Science bloggers have the duty to be responsible for what they write.

Although the volumes of blogs are relatively small after real-name system carried out, the volumes of visits are fairly large. The views and thoughts of well-known bloggers have further enhanced the authority of science blogs, even have had great social impacts.

Combined with traditional media

A senior reporter in Nature Science held that journalism is in decline, science blogging is growing fast. Can the one replace the other?¹

In China, it is premature that science blogs can replace traditional journalism. As a new and helpful media promoting public understanding of science, science blogs have combined with traditional media.

More and more traditional journalists are increasingly looking to these blogs to find materials as news topics. In Sciencenet, A net community is forming through science blogs that have more influence than before. Journalists and scientists connect more conveniently.

Some blogs written by scientists have been published in the traditional media. Science and Technology Review, organized by the China Association for Science and Technology, set up the column of Science Blog, in which the excellent blogs was published.

Carried by science blogs and mass media, a new scientific communication ecosystem is forming. Xingdong Fang, father of the Chinese blogs pointed out that Mass communication is a typical cathedral model, and blog communication is a typical bazaar model. A new communication ecosystem dominated by mass communication and blog communication will be gradually formed in society, which will affect on the Internet, media, life, political, economic, social, cultural and other aspects.

The development and innovation of modern communication is providing communication platform between scientists and the public and promoting the public understanding of science. As a reporter pointed out in Nature that in today's overstressed media market, scientists must change these attitudes if they want to stay in the public eye. They must recognize the contributions of bloggers and others, and they should encourage any and all experiments that could help science better penetrate the news cycle.²

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