

## Evolution of Science Popularization Policy in China

ZHANG HUILIANG

China Research Institute for Science Popularization (CRISP),  
86 Xueyuan Nanlu, Haidian District, Beijing 100081, China

Email: leanne2005@sina.com

### ABSTRACT

The government has considered science popularization as an issue of great importance since the founding of the People's Republic of China. Many policies and regulations on science popularization were promulgated in the past 60 years, which had major influence upon various sectors of the society. In this chapter, based on about 1000 policy literatures in relation to science popularization, all the papers would be sorted using certain criteria and 100 most valuable would be selected. Secondly, to understand culture in the policy domain better, the paper will further focus on the background and aim of policy making, the underpinning ideology, as well as the efficacy. This study will reflect on historical evolution of policy and what the policy drive has produced.

**Keywords:** Science Popularization, Science Communication, Science Popularization Policy

### Introduction

The Chinese government has always devoted much attention to science popularization. In 1949, just a few days before the founding of the new China, the first Plenary Session of the Chinese People's Political Consultative Conference (CPPCC) was convened during 23-30 September in Beijing. At the Session a historical document laying the foundation of the new country was adopted — the *Common Program*<sup>1</sup> of CPPCC, the blueprint of the constitution of the new country. As a legal document, the

---

<sup>1</sup> Very few policy documents used in this chapter are translated into English. Most of them are in Chinese. The titles appearing here are tentative translations of the authors.

*Common Program* states in its 43<sup>rd</sup> article, ‘To strive to advance natural sciences to serve the country in its industrial, agricultural and national defense constructions, to reward science discoveries and inventions, and to popularize scientific knowledge’ (CPPCC, 1949). The statement marked the starting point of a national enterprise, Science Popularization (SP), that later evolved and expanded on all levels and to all corners of the country. It also implies that to bring science to the ordinary people is not only a recognized legal activity, but also the commitment of the government.

At about this juncture, the science community in China joined efforts in shaping two national organizations based on the existing science societies, one being the All China Union of Natural Science Professional Societies (ACUNSPS) and the other the All China Association for Popularization of Science and Technology (ACAPST). The two organizations later merged into one in 1958, giving birth to the China Association for Science and Technology (CAST, 1949). These organizations have ever since been serving in succession as the main force in disseminating the sciences to people of all walks of lives. They are the professional actors in the field. Apart from these assemblages, governmental agencies as well as some other non-governmental organizations also get involved or engaged in science popularization, doing the job as part of their responsibilities.

Though SP activities could be tracked even further back, it is at this moment that things began to change. With the mandate made clear in the *Common Program* and a troop of manpower set ready to go, SP soon would sweep the country over in a new approach that is of its own distinction.

### **Assortment of SP Policy Literatures**

SP refers to public understanding of science or public communication of science and technology. Science popularization in China follows an organized pattern. There was once a debate arguing for the replacement of the term with a fashionable phrase relating to science communication, but the old convention persists. That only shows the nation’s passion for this term.

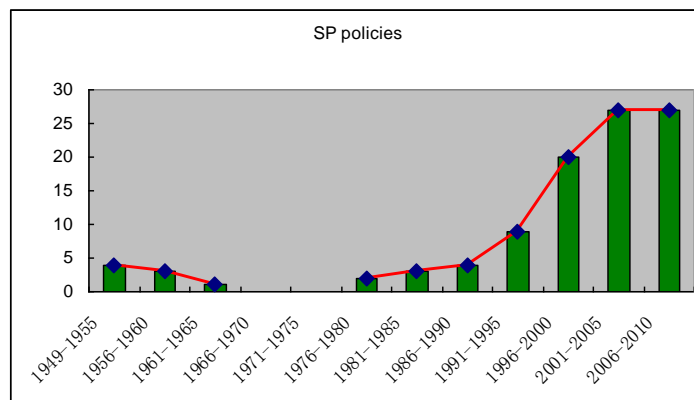
With a view to taking stock of the literatures in the field, the author working with partners in a team collected nearly 1000 SP-related documents and sorted out 100 from them that were believed to be most relevant and interesting. The sorting was subjective. As per the gauging norms set, they should be either of the following:

- State policy of highest legitimacy, either special or comprehensive, that has widest influence over the country
- Departmental (including national organizations') policy that steers SP activities either on a nationwide scale or important within the system or the network of an organization or department
- Departmental (including national organizations') policy supporting massive national projects where SP is part of the goal
- Policy jointly issued by many actors

Their distribution over the years yields a curve that illustrates efforts invested in the sector of SP for more than half a century (Figure 1).

About more than half of the 100 policies are specially created for the execution of SP activities. Less than half are either comprehensive policies where SP is included as one

Figure 1 — SP policy distribution in scale of 5-year interval



component of the whole, or specific ones targeting at certain actions where SP is mobilized as a supporting measure. There are at least about 10 SP policy papers that are of extraordinary importance.

### **SP Policy in Different Periods of Time**

#### ***Beginning and Pioneering Period: From 1949 to 1977***

When the New China was founded, the Constitution of the People's Republic of China was enforced, which stipulates that the nation develop both natural sciences and social sciences, and disseminate scientific and technological knowledge.

In August 1950, the National Congress of All-China Natural Science Workers was convened in Beijing. At this conference, two professional organizations were set up, which were the All China Union of Natural Science Professional Societies (ACUNSPS) and the All China Association for Popularization of Science and Technology (ACAPST). In July of 1956, the central government determined the key issues of ACAPST: firstly, disseminating general scientific and technological knowledge and specialized knowledge among the workers; secondly, disseminating agricultural and related knowledge among the farmers; thirdly, disseminating scientific and technological knowledge, especially the knowledge of national defence, among the soldiers; finally, disseminating basic scientific and technological knowledge and the latest developments of modern science and technology among the officials.

Later in 1958, the two organizations of ACUNSPS and ACAPST merged into one, that is, the China Association for Science and Technology (CAST). The CAST has made significant contributions to the development of science popularization ever since.

In April of 1961, the CAST hosted its National Conference of Science Popularization. In 1962, Prime Minister Zhou Enlai said that 'the CAST has two missions, one is to promote academic research activities, and the other is to popularize science'. In 1964, the CAST hosted a symposium to exchange experiences on 'Science Popularization'.

The decade, from 1966 to 1976, however, saw the abatement of the endeavour. The Cultural Revolution threw the country in turmoil. China Association for Science and Technology was dismissed, and the management of SP at that time was at its lowest point in history.

### ***Booming Period: From 1978 to the end of 20<sup>th</sup> Century***

In March of 1978, the National Conference on Science held in Beijing marked the arrival of the spring for science. Deng Xiaoping attended its opening ceremony and made a remark of historic significance. It was put forward that ‘providing the cadres and the masses with modernized scientific and technological knowledge, learning the advanced scientific and technological knowledge abroad and the latest achievements and creating an atmosphere for trusting in science, learning science and utilizing science in whole society’ was essential for the progress of China.

In 1977, the CAST was restored to its normal function. It hosted some influential scientific and technological activities. Work on scientific and technological books, newspapers, televisions and films were in full swing. A system of networks for science popularization was established and grass-roots organizations were strengthened.

In 1993, the *Law of the People's Republic of China on Science and Technology Progress* entered into effect in 1993, stating in its 6<sup>th</sup> article: The State shall disseminate scientific and technological knowledge to raise the scientific and cultural level of all the citizens (PRC, 1995). The Central Committee of CPC (CCCPC) and the State Council jointly issued *Instructions on Strengthening Engagement in Science and Technology Popularization (the Instructions)* at the end of 1994, just one year after the enactment of the *Law of the People's Republic of China on Science and Technology Progress*.

SP ran into difficulty on two aspects according to the *Instructions*. One, SP work had been losing its priority with some of the local governments, resulting in reduced momentum of SP ardor and strength gathered since 1978. Secondly, superstitious craze revived since the 1980s was expanding

forcefully across the country. Fortune-telling, magic medical therapies, false claims in the name of science, etc. became a fashion in people's daily life. The *Instructions* put forth following suggestions:

- To draw up special state laws or by-laws to govern the practice in the area,
- To set up a joint meeting system to integrate resources from different governmental sectors to run SP in a well designed way, and
- To formulate regulations or policies to encourage social or private organizations to do SP (CPC, 1994).

The *Instructions* gave rise to a series of nation-wide activities in the following years, for example, the 2nd National Congress of Working on Science Popularization convened in Beijing in December of 1999 focused on the issues of trusting in science, campaigning for science, fighting against superstition and promoting scientific thinking and scientific spirit.

### ***Stable Developing Period: Beginning of the 21<sup>st</sup> Century upto now***

The *Law of the People's Republic of China on Popularization of Science and Technology (SP Law)* is the immediate outcome of the *Instructions*. A special group was formed to work on the drafting of the law. After years of investigation, consultation, discussion and repeated revisions, the draft was presented as a bill through the legislative channel and adopted at the 28<sup>th</sup> Meeting of the Standing Committee of the Ninth National People's Congress on 29 June 2002. It was announced as an order of the President of the State.

The *SP Law* is structured in 6 chapters with 34 articles. The chapters cover: General Provisions, Organization and Administration, Responsibility of the Society, Safeguards, Legal Responsibility and the Supplementary Provisions (PRC, 2002). It is made clear SP is a public welfare undertaking. Organizations and institutions, whether governmental or non-governmental, should engage in SP. Citizens have the right to participate in SP activities. On the state side, governments on each level should

take up the leadership in the administration of the work. It also specifies that the state functional department in charge of science and technology is responsible for formulating national plans and provide policies to guide the exercise, and CAST, with its vast network of practitioners, should spearhead the task in various forms.

The *SP Law* laid the foundation and grounds for later SP development. One of the most notable accomplishments is the *Outline of the National Scheme for Scientific Literacy* (2006-2010-2020) (the *Outline*). It was promulgated by the State Council on 6 February 2006. It is the most ambitious scheme ever in China that pushes the Chinese SP enterprise to a climax.

It makes clear the orientations and endeavours of SP in the coming 15 years from the following aspects: guiding principle and goals, infrastructure projects, main actions, supporting conditions, etc. The major objective tasks of the *Outline* consist of four actions and four projects.

The four actions are:

- Minor's Scientific Literacy Action,
- Farmers' Scientific Literacy Action,
- Urban Workforce Scientific Literacy Action,
- Leading Cadres' and Public Servant's Scientific Literacy Action.

The four projects are:

- Science Education and Training Project,
- SP Resources Development and Sharing Project,
- SP Capacity Building Promotion Project for Mass Media,
- SP Infrastructure Project (State Council, 2006).

Immediately after the *Outline* was put into effect, a group was formed, absorbing 23 members from cross-border governmental departments and national organizations. Tasks were divided among the 23 actors and nine guidelines corresponding to each of the actions and projects were developed. Local governments soon took up the *Outline* as a state assignment. Similar working pattern and corresponding package of programs were worked out in each province. In

September 2010, six teams consisting of members from 21 ministries and other organizations under the lead of the General Office of the State Council supervised how the *Outline* was implemented in the past five years in 12 provinces (areas, cities).

The effect of the *Outline* is evident. More money has been put in the domain in the past few years, projects targeted on the four special social groups are yielding practical results, science-based social resources have been integrated and widely shared, media coverage of science and technology is getting wider, science information in various forms is being provided, public awareness of science and technology is obviously going up, and PST is gaining even greater attendance in the eyes of the decision makers.

Today, the *Outline* is a dominant policy in running SP across the country. As the document states, the principle strategy in carrying out the *Outline* is: Government boost, mass participation, raising scientific literacy, and promoting harmony (State Council, 2006).

### **Efficacy of the Policy**

The CAST restored to its normal function in 1977. Within three years, its membership has exceeded over 1 million and now it has surpassed membership of over 5.5 million (CAST, 2010). Being regarded as an impressive social force with a network spreading over the whole country, CAST stands at the forefront to carry out SP strategies and objectives clarified in national science and technology advancement programs or the state five-year plans. It brings technical training to the workers in factories, growing skills to the farmers in the fields, fairs and competitions to the young people on the campus and lectures to the urban citizens in the communities. According to the *Statistical Yearbook of CAST 2010*, in 2009 CAST organized 151,000 science lectures with an audience of 77.3 million, held 69,000 science exhibitions and showcases that visited by 138 million people, distributed 185 million leaflets and printing materials, and trained 3.5 million working people in applicable techniques and skills (CAST, 2010).



Some governmental science-related agencies made their own plans of doing SP. For example, the Ministry of Land and Resources drafted its own *Action Plan for Popularizing Science and Technology* (2004-2010) in 2004, the State Forestry Administration came up with its *Outline of Scientific Literacy for Trade Professionals* (2006-2010-2020) in 2006, and the Chinese Academy of Sciences formulated its *Long and Middle Term Program for the Development of Science Communication* (2006-2020) in 2006. All these plans set concrete goals and secured inputs in their own systems.

### **Conclusion**

The Chinese government takes SP as one of its major responsibilities. It believes that science and technology belong to people. S&T is a powerful tool to build the country into a modern society and bring good life to people. The people, the owners and constructors of the new country, have been suffering from poor education, lower productivity due to bad living habits, superstitious beliefs and refusal to accept ideas handed down from old China. Science could help solve these problems and thus SP is essential. In fact, with the noble inspiration of serving the people, the government has been trying to popularize all the useful knowledge and skills among the people including education, literature, sports and health among many others.

Both, government science-related agencies and national organizations are actively involved. Thousands upon thousands of both full-time and part-time practitioners bring SP to all corners of the countries in varied forms. SP shows up both within and outside the walls of schools, appearing on newspapers and TV programs, being practiced in the factories and farm lands, and echoing in urban and rural communities. As it is stated in the policies, SP in China, under the government boost, should be an everlasting engagement rooted in the society with the widest participation of the masses.

The SP policy package presented here is already comprehensive enough. Yet, there is still enough scope for reasonable development of the enterprise. It has seen fewer measures taken to get the full advantage of the superiority of the

media, less favorable encouragement of private business involvement, less regulation on the evaluation of the input and outcome efficacy, less stress on understanding how people approach science and technology on their own will, and less considerations for the ever growing conflicts between scientific development and public understanding.

### References

- Central Committee of CPC and the State Council (1994) *Instructions on Strengthening Engagement in Science and Technology Popularization*.
- China Association for Science and Technology (1994) China Association for Science and Technology, Beijing, Contemporary China Publishing House.
- China Association for Science and Technology (2010) *Statistical Yearbook of CAST 2010*. Beijing: China Statistics Press.
- Chinese People's Political Consultative Conference (1949) Common Program of CPPCC, available at [http://www.most.gov.cn/eng/policies/regulations/200412/t20041228\\_18309.htm](http://www.most.gov.cn/eng/policies/regulations/200412/t20041228_18309.htm).
- National People's Congress of the PRC (1995) *Law of the People's Republic of China on Science and Technology Progress*.
- National People's Congress of the PRC (2002) *Law of the People's Republic of China on Popularization of Science and Technology*. Beijing: Popular Science Press.
- State Council (2006) *Outline of the National Scheme for Scientific Literacy (2006-2010-2020)*, Beijing, Popular Science Press.