

Beijing Forum 2019

Science and Technology, Health and Society in the Context of Science Culture (VII)

On the afternoon of November 3th, 2019, the Sub-Forum of “Science and Technology, Health and Society in the Context of Science Culture” continued its sessions at Sunlight Hall, Yingjie Exchange Center, Peking University. This session was chaired by Hans Peter Peters, a professor from the Research Center Jülich, Germany. Five speakers gave presentations on the topic of “Science Culture and Scientific Education”.

Michel Claessens, from the European Union, presented a speech on “The WISE Project: Towards an international alliance to promote science culture”. Claessens put forth that science literacy and science culture are widely considered as major factors that support research, innovation and science values. However, science is global, and science culture is ‘glocal’, which means it is both local and regional. We are still lacking an international and consistent approach to science culture that would allow one to make strong inferences about the relationship between average scores on common measures of science literacy and the putative consequences of enhanced science literacy. Claessens shared two international scientific literacy investigations conducted by the Wellcome Trust and the BBVA Foundation, and analyzed the existing problems of these kind of studies. Against this background, 14 organizations/countries have joined forces in an informal alliance to define, measure, promote, support, and connect science culture globally. A kick-off meeting was held in Beijing on 3 November. WISE will conduct a global survey of science, culture and scientific literacy to promote the construction of international science and culture in the future.

Professor Wang Jinying, from Beijing Normal University, gave a report titled “Educational Innovation and Development Based on Digital Transformation”. Professor Wang first introduced the background of digital transition. The innovative development of science and technology has profoundly affected all aspects of people's production and life. It also promotes the transformation of educational content, ideas, and methods. Professor Wang analyzed the effects of digital transformation on education in three ways. First, the advancement of science and technology puts forward higher requirements for the knowledge and ability that young people need. Second, the development of science and technology has provided more efficient tools as well as new challenges

for all aspects of the education system. Third, the development of science and technology has also brought new opportunities for the development of education and teaching research. Teaching research based on big data, combined with leading-edge development in the fields of brain science, neuroscience, psychology and learning science, constantly reveals the course and mechanism of deep learning. The integration of science and education has become an important way for the development and transformation of educational innovation.

Professor Zhang Li, from the Chinese Academy of Sciences, delivered a speech of “The Influence of British and American Cultural Programs on China’s Wartime Development of Science and Technology, 1943–1949”. Based on the British Foreign Affairs Office, the foreign relations of the United States and historical materials of both Needham and Cressey, Professor Zhang summarized the background and the situation of the two cultural programs in China, and compared George Cressey and Joseph Needham from their background, diplomatic mission and their exchange with China. Joseph Needham praised the state of science and technology in China and began a lifelong interest in the history of science and technology in ancient China during his visit in China. But George Cressey was outspoken about the problems found in China, and his criticism of China’s politics and society touched on his dissatisfaction with the government, so he was recalled by the United States government before the end of his mission. After returning home, George Cressey remained committed to promote the normalization of China–US relations.

Gauhar Raza, from the Council for Scientific and Industrial Research, gave a speech on the topic “Cultural Distance between Science and Society: Empirical Evidence of the Past Thirty Years”. Raza mentioned that science communication is a socio-cultural process and should be considered as an interaction of two cultures. The thought structure of individual citizens, and thereby collectives, is shaped through socio-cultural processes. As scientific information, laws and theories generated in a far-removed scientific culture percolate, and some of the ideas assimilate quickly within the thought complex of the public, while others take a longer time to get absorbed. This process is a complex function of factors, both extrinsic and intrinsic to the scientific information. Raza presented the shift in ‘relative cultural distance’ based on the analysis of data collected during Kumbh-1989, Ardh-kumbh-1995, Kumbh-2001, Ardh-Kumbh-2007, Kumbh-2013 and Ardh-kumbh-2019 at Allahabad over a period of thirty years. It has been observed that there is a noticeable shift in the cultural distance between science and public.

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The last speaker was Daniel Lewis, from the Huntington Library, in Pasadena, California. He was not able to be present, so he shared a video titled “Introduction to Asian Materials in the Huntington Library”. He mainly introduced the work of the Huntington Library in the communication of science and culture, including the development process of the library, the collection of books and materials, and the construction and development of the library. Starting with the architecture of the Huntington Library, Lewis described the large-scale Chinese architecture in the Botanical Gardens, which is the largest Chinese garden outside of Asia. Lewis then introduced rare books and manuscripts in Chinese, Japanese and Korean in the areas of science, medicine and technology, as well as the sources of these materials. In the library world, the Huntington Library has played a very strong literary, cultural and historic role in Western countries.