

## Beijing Forum 2019

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

On the morning of November 2th, 2019, the Sub-Forum of “Science and Technology, Health and Society in the Context of Science Culture” continued its sessions at the Sunlight Hall of the Yingjie Exchange Center at Peking University. This session was chaired by Prof. Hong Sungook, Professor of Seoul National University, Republic of Korea. Five keynote speakers delivered lectures.

Masashi Shirabe, Professor of Tokyo Institute of Technology, Japan, opened this session with his speech on “How Do People ‘consume’ Genome Editing Technology in Japan: Impacts of He Jiankui’s ‘genome editing babies’”. Professor Shirabe collected relevant tweets between August 2018 to July 2019 and analyzed the attitudes towards ‘genome editing babies’ as revealed in online tweets by means of network transmission, network research and natural language processing. He found that the number of tweets and the variety of attitudes demonstrated a certain time pattern, and extended to other scientific and even non-scientific topics. A clear polarized tendency was present in those tweets, but the relationship between the polarization and gene editing events remains unclear. Prof. Shirabe believes that although the He Jiankui incident had a major impact temporarily and superficially, its deeper impact is limited and seems to affect only individual values to judge something relevant to “Genome editing technology”.

Prof. Zhou Cheng from Peking University delivered a speech on “The Contribution of Social Contexts to the Springing-up of Nobel Prizes in the Natural Sciences in the 21st Century Japan”. He first summarized the group characteristics of 19 Japanese Nobel laureates in the new century, focusing on their age of birth, award-winning age distribution, educational experience and economic-cultural characteristics. As a result, Professor Zhou concluded that the Springing-up of Nobel Prizes in the Natural Sciences in the 21st Century Japan is closely related to Japan's cultural “soil”, to the country’s postwar educational reform, and was deeply influenced by the mentor's spiritual temperament, as well as benefited from the steady growth of research and development funding. Most of the researchers emphasize the homology of Chinese and Japanese cultures, but Professor Zhou took the development of medical discipline as an example to remind the differences between the two countries. Based on the analysis of the history of the development of science and

technology in Japan, Prof. Zhou highlighted three points: science, technology and innovation seem to benefit more from favorable research environment than from individual support to researchers; the demonstration of positive morals from mentors sometimes counts more than titles, economic incentive and positions; and the stable and sufficient funding is essential to support free exploration at the research frontiers.

Prof. Chen Fan from Northeastern University presented a speech on “The Socialization of Technology and Technological Innovation in China.” She first defined the term “socialization of technology” as the process to make the technology to be accepted by the society, recognized by the public and become socially compatible through the social integration of technology and the social accommodation to public psychology. Nature, politics, economy, and culture are four elements that influence this process. Chinization of technological innovation is to, under the background of internationalization of technological innovation, adhere to the way of technological innovation with Chinese characteristics, namely regarding technological practice in China as the foundation, using foreign basic theory on technological innovation for reference, to find the combination point between the foreign theory on technological innovation and the technological innovation of China, and performing analysis on the facts and experience of technological practice in China, thus to gradually set up theoretical system of technological innovation with Chinese characteristics, to guide the practice of Chinese technological innovation and promote the interactive process for Chinese technological innovation theory and practice. Prof. Chen proposes that the technological innovation theory with Chinese characteristics will gradually occupy a place in the academic circle of international technological innovation.

Professor Chong Chaehyun from Sogang University delivered a speech on “Confucian Sage AI or Confucian AMA”. He started his talk by pointing out that the anxiety of contemporary society towards artificial intelligence is often derived from individualism, essentialism, non-physical cognition and other dominant contemporary thinking. Yet for the purpose of securing the co-evolution between AI and humans, the construction of “ethical AI”, especially ‘Confucian sage AI’ is of paramount importance. Confucian sage is the most virtuous one which has been interpreted as having consistent, stable and integrated character traits. From the situational understanding of virtue, the Confucian sage can also be understood as one who acts the proper behaviour with the proper qing (情, embodied moral cognition), which forms the core concept of Confucian sage AI,

for its down-to-top, interactive, and communal characteristics. This concept dispels distinctions between subject and object, and between the centre and the peripheral. Constructing ethical AI is a significant experiment for human flourishing and therefore could provide fruitful insights on the moral education for humans.

Professor Cong Yali of Peking University gave a speech entitled “Cultural Difference in Biomedical Technology Development”. She analysed existing regulations and pointed out that most of the current regulations is based on the idea of risk-based management, which reveals a tension between respect/protection of human and risk. However, there are regional and global differences in the evaluations of risk. A key issue, therefore, is the role of cultural judgements on technology in the formation in the formation of international consensus. At the same time, the definition of consensus is also worth discussing. Is it the consensus of the scientific community, the national consensus, or other levels of consensus? Professor Cong called on participants to consider the scope of scientific consensus, including political, cultural, economic, environmental and other non-scientific factors.