



‘China’s Current Science, Technology and Innovation: Opportunities and Challenges

Speaker: Professor Stéphanie Balme

Chair: Ravi Bhoothalingam

Date: 21st Feb 2020, 3PM

Venue: Seminar Room, ICS

Dr. Balme presented her talk in the form of a work-in-progress, for a larger text on the state of Chinese scientific innovation and its further opportunities, written in conjunction with the quantum physicist Pierre Lemonde, from the National Centre for Scientific Research in Paris. She outlined certain research questions and aspects key to her study: namely, the state of STI in China: its strengths and weaknesses, China’s socio-political system as a possible risk to STI (Science, Technology and Innovation), the consequences of the same on the world, the impact of an authoritarian system on science, the idea of techno- nationalism, and the importance of scientific diplomacy.

A further illustration was presented on the evolution of China’s relationship with science and innovation. Dr. Balme traced the beginning of China’s relationship with developing technology, with the first wave occurring in the years between 1910 -1940, with the 1945 civil war causing a lull in development for several decades. Further elaborations on the nature of the Communist Party’s use of scientific rhetoric for the means of propaganda were presented, such as Mao Zedong’s famed dismissal of Einstein’s theory of relativity. The development of China’s STI was traced by the speaker, subsequently, to a major investment on the Communist Party’s front, with an unusual emphasis on speedy results, political pressure, very few ethical benchmarks, and rapid growth. It took nearly 40 years to build China’s STI ecosystem. Recent examples were provided in the form of the Belt and Road Initiative (2013).

The speaker further argued that even as China’s current STI environment seemed to be progressing at a rapid rate, there was an absence in deep innovation- i.e., the growth of self-created technologies, and not elaborations on the projects of other parts of the world. Examples she provided included the Chinese moon landing on the furthest part of the moon, and the Chinese improvement on the Mo-Bike, invented in Norway in the 1970s. However, argued Dr. Balme, what China lacked for currently in innovation may be circumvented by extraordinarily creative business and marketing models, and that Chinese additions to science innovation lay in AI (artificial intelligence). Examples were provided in the form of the Internet Plus (2015). The political consequences of the same proved to be interesting: Dr. Balme argued that much like several other authoritarian governments in the world, technology is providing the Communist Party an increased legitimacy within national media and popular press. The history of Chinese STI, she argued lay centred on the three pillars of the State, the Army and the Party, and so does the future. Extensive academic censorship,

lack of interdisciplinary academic endeavors and intellectual freedom serve as severe impediments to Chinese growth in STI.

A novel and lengthy question and answer session followed the talk. Questions were raised on the exact nature of scientific censorship in China, and the possibility of the 21st century as the Chinese century in world domination and scientific growth. The speaker responded that circumstances suggested the affirmative was indeed possible, and pointed to several tech giants already dominating the US and broader world market, such as Huawei. Further questions and doubts were registered on the nature of Chinese scientific patents, theft and fraud in the scientific landscape by China, supported by the Chinese government. Dr. Balme responded with an enumeration of the several factors influencing the same, along with a suggestion of several other countries around the world, including the US, indulging in the very discrepancies.

A question was raised regarding the West enabling China's defensive censorship and tech innovation structure, and Dr. Balme responded by the dismantling of the idea of the 'West', as a uni-dimensional identity and pointed to several other factors that may influence the same, while agreeing to the weight and logical correctness of the question. A last round of questions discussed the state of higher education in China and the consequences of China's STI growth on immediate neighbours such as Taiwan. Also, the state of collaboration and attracting international talent to Chinese industries, as well as the placement of funding for scientific study and innovation being diverted only to large, urban settlements and universities and not less dense regions. The talk was concluded by the Chair, Dr. Ravi Bhoothalingam, who pointed to several key consequences of Dr. Balme's talk, and traced the history of scientific education and training in China and East Asia.

This report was prepared by Anandita Thakur, Research Assistant, Institute of Chinese Studies, Delhi.

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