



INSTITUTE OF CHINESE STUDIES

A Systemic Analysis of the State Council's Next Generation Artificial Intelligence Development Plan

Speaker: Ravish Bhatia

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The session was perhaps crucial at the point of time when the scheduled seminar coincided with the ongoing discussions about China's rise as a technological super giant. Ravish Bhatia, a past intern at the institute was the speaker for the seminar. He began by talking about the 'General Purpose Technology' (GPT) which began with the invention of electricity and later, the internet. Artificial Intelligence (AI) is next in line. The speaker emphasized on the use of the term 'systemic' i.e. China's industrial push which takes the national innovation approach. China's advent into AI received global attention when President Xi Jinping mentioned two books in one of his speeches; *Augment Life* and *Masters of Gotham*, earlier this year. The speaker discussed the concept of 'national innovation approach' and the key elements of the plan. He gave a brief historical overview of the concept in which he explained that in order for socio-technologies to take place, a close link between the various industries is essential, which in turn influences the change in macro-economics.

He discussed the basic framework which was deemed as crucial for the AI development in China. He drew a comparison between US and China wherein US's development is based on 'open innovation' which involves a bottoms-up approach while China's development is based on an 'open and coordinated' approach that involves a top-down approach. The key principles underlined in the plan were formulated in order to create a strategic situation in which China

wanted a comparative advantageous position. He mentioned the targets and principles from the official White Paper which was released by China on AI. The focus areas as mentioned in the plan were built on open and coordinated AI science and economic systems. The speaker insisted that the funds for those projects came from various enterprises and investments made by various Chinese companies.

He mentioned about the sudden increase in the number of research papers produced by China, which is more than that of the US; however they lag behind in quality content. China is also investing heavily in various collaborative ventures such as the OPPO-Stanford, Beidou-Silicon Valley etc. and the focus on 'deep planning' and establishment of number of data labs.

One of the highlights of the presentation was the speaker's attention to detail regarding the civil-military technological diffusion from which many lessons can be drawn. This aspect is particularly important as it gives impetus to creation of technological changes. The military assistance is crucial as many a times their interest and investments sponsor new technological innovations, in areas where the state often falters. The speaker also discussed about the importance of 'human resources' and how China has created a number of programmes, scholarships etc.. The speaker mentioned the 'Thousand Talent Programme'.

The speaker argued that the ongoing 'trade wars' is more like 'tech wars' between China and the US. China seems to have made progress in the production of semi-conductors, big data systems and 5G networks. He mentioned about 'AI+X' which uses other critical industries in order to build other AI industries. Some of the examples quoted were that of Micron, QUALCOMM, ZTE (in acquiring patents), the Made in China 2050 initiative, production of high processing GPU China Lexicon etc. The speaker emphasized on the importance of accumulation of data, which is crucial in order to build algorithms, a precursor to the big data analytics where China is directing major attention, China is also focusing on becoming a tech super giant and one of the most important ways in which it intends to fulfill its goal is by development and accumulation of data within the country (China has shown a growth rate of 15% in the last few years, as mentioned by the speaker).

According to the speaker, the advent of new communications is championed by the 'Internet of Things' and the AI industry, which in turned is pioneered by two largest tech companies which

are Huawei and ZTE. China issued its guidelines on AI development in July 2017 and the speaker highlighted the implementation of 3GPP by China in December 2017, which resonated well with the AI plan. The speaker based his arguments on Kai Fu Lee's (AI expert) 'Levels of AI' and said that in China, Internet AI has much better prospects in terms of digital penetration while in the US, the performance is better with regards to business AI, due to strong industrial foundations. He also discussed how China is aggressively pushing standards in order to establish its own ground. He also speculated the possibility of markets for 'live streaming' apps in India, as he claimed that both countries have huge populations and those apps have already gained popularity in China. The speaker connotes that the BRICS summit of 2017 had a ubiquitous framework which focused on building innovation system of their own, crunching the big data and making sense out of it. He supported his argument by quoting the example of Japan.

He concluded his presentation by giving certain insights that the government could reflect on which included: coordination of responsible stakeholders, resource optimization and investments in experimental technologies. The key is to understand, absorb, develop and then execute the plan, in order to progress, with regards to the field of AI. There should also be a focus on the high value industries which provide incentive modulizations. In the end, he also praised the sense of 'techno-nationalism' which is dubbed as one of the prime drivers for the Chinese; a general purpose technology which is built on new innovative technological developments.

About the Speaker

Ravish Bhatia is a Yenching Scholar at Peking University and a Frédéric Bastiat Fellow at the Mercatus Centre of George Mason University. He researches and writes on technology policy and industrial economics. He is a commentator for the China Global Television Network (CCTV-English) and his writings have appeared in the Indian Express, Pandaily, Qrius and the Daily Pioneer. He also holds a degree in Electronics and Communication Engineering and is presently based out of Beijing.

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