Reflecting on Chinese Artificial Intelligence and National Responsible Innovation

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Artificial Intelligence (AI) is literally a high technology that sparks off legal and ethical issues of everyone's daily life. However, AI is also representative of the state-intervening ideology[1] in P.R.China where Science and Technology (S&T) are fairly and originally embedded in the national laws as governance tools driving the economy to grow faster[2]. Ideologically, Science and Technology (科技) is an integrated concept in China[3].

There was no conceptual distinction between Science (科學) and Technology (技術), which are actually two interrelated but relatively separate notions in the West. The Chinese government assumes that the combination of Science and Technology is the primary productive force for national development, and the modernization of socialism necessitates the modernization of science and technology[4]. China thus historically has a strong state-supporting and government-endorsing atmosphere in the domestic development of high technologies including AI.

AI and "Saudi Arabia of Data"

Although China's AI policy was thought to have been formalized in the 2017 State Council Plan, its essence was crucially developed upon China's previous national S&T plans[5]. In

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[*] *This is a short piece relating to the modern history and current situation of China's AI policies. It arises from the report co-authored with the colleagues having talked in the CUHK Law Global Governance of AI and Ethics workshop, 20-21 June 2019. But it is also a supplementary piece adding some comments on China's AI policies that dated back to the rise of this technology.*

[1] Zheng Yongnian, *China and the U.S.: A clash of techno-nationalists*, Washington Post (May 15, 2018), https://www.washingtonpost.com/news/theworldpost/wp/2018/05/14/china-technology/.

[2] Ignazio Castelucci, *Rule of Law with Chinese Characteristics*, 13 Ann. Surv. Int'l & Comp. L. 35, 37 (2007). ("In the traditional socialist view, law is a tool available to the political authority for government and policy ('rule by law')".)

[3] Since 1975, Science and Technology had been among the Four Modernizations and Deng Xiaoping proclaimed that its high-speed development was at the core of socio-economic growth in China. Deng said in the 1978 National Science Conference: "The crux of the four modernizations is the mastery of modern science and technology. Without them, it is impossible to build modern agriculture, modern industry, or national defense." See Laurence A. Schneider, *Science, Technology and China's Four Modernizations*, 3 Technology in Society 291 (1981).

[4] *Id.*

[5] Jeffrey Ding, *Deciphering China's AI Dream*, Future of Humanity Institute, University of Oxford 3 (Mar. 2018), https://www.fhi.ox.ac.uk/wp-content/uploads/Deciphering_Chinas_AI-Dream.pdf.

fact, subsequent to the past S&T plans was the 2015 “Made in China 2025” Plan touching upon incubating AI-related industries (e.g. robotics) for the first time. In 2015, there was also the “Internet Plus” Initiative prioritizing the nurture of AI-related technologies. To speed up the advancement of “Internet Plus”, in March 2016, the State Council's "Thirteenth Five-Year Plan for National Economic and Social Development (Draft)", introduced the concept of artificial intelligence highlighted as a key project.

Later on, in May 2016, the National Development and Reform Commission, the Ministry of Science and Technology, the Ministry of Industry and Information Technology, and the Cyberspace Administration of China issued the “Three-Year Action Plan for ‘Internet+AI’”, clearly stating that, by 2018, the country will have to potentially form a 100-billion-yuan (14-billion-USD) scale of AI industries.

Before 2017, China’s AI policies focused more on the economic incentives to the marketplace where the Chinese government regulated digital industries in a loose and even blank-listing manner as an enabler towards the practice of training AI with data. Such practice recognized the key importance of data as a resource and the incredible abundance of data within the Chinese borders, leading to what Lee Kai-Fu named “Saudi Arabia of Data” in his AI Superpowers[6].

For instance, the Chinese regulations for digital competition achieve few regulatory targets in a “sectoral” manner. Such approach cannot conceptualize and determine the competitive collusion by algorithms as OECD proposed in its 2017[7] defining and analyzing the competitive preferences of “algorithmic consumers”[8] in the data-driven monopolistic structure of the relevant market.

AI and its Ethics for Good

As we have shown in our Report on Artificial Intelligence, Governance and Ethics, AI ethics and/or governance were framed and situated in the interaction between government, corporate and some other initiatives requiring normative demands, ethical discourses and the technological presence etc. This actually means the one-side perspective of regulating and governing AI is not addressing the ambiguity of principles in the setting of AI-related stakeholders (public vs private sector; civil society involvement; academic expertise etc)[9].

This somehow contrasts the tendency of recent years that have witnessed a surge of international, transnational and national guidelines on AI ethics, which were made by international organizations (e.g. UN and OECD), political & economic unions (e.g. EU), technical societies (e.g. IEEE) and some other domestic initiatives (e.g. US)[10].

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[6] Kai-Fu Lee, AI Superpowers: China, Silicon Valley, and the New World Order (1st ed. 2018).
[7] OECD, Algorithms and Collusion: Competition Policy in the Digital Age (2017), http://www.oecd.org/daf/competition/Algorithms-and-colllusion-competition-policy-in-the-digital-age.pdf.
[8] Michal S. Gal & Niva Elkin-Koren, *Algorithmic Consumers*, 30 Harv. J. L. & Tech. 309 (2017).
[9] Angela Daly et al., *Artificial Intelligence, Governance and Ethics: Global Perspectives* Jul. 4, 2019. https://papers.ssrn.com/abstract=3414805
[10] *Id.*

Since 2017, China has been turning its own AI plans into some international-level but agile-governance models. The 2017 State Council's "New-Generation AI Development Plan" aimed to foster AI innovation and flourish the AI marketplace with a blueprint that by 2030

- a significant role in global AI R&D and an international leadership of AI technologies will be achieved;
- the scale of the AI core industry will exceed 1 trillion yuan, driving the scale of the related industries to exceed 10 trillion yuan; and
- **a set of mature AI ethics, laws and policies**[11] will be introduced.

To support the implementation of "Three-Year Action Plan to Promote the Development of a New Generation of Artificial Intelligence Industry (2018-2020)", the 2018 AI Standardization Forum released its first **White Paper on AI Standardization**[12]. It signalled that China set up National AI Standardization Group and the Expert Advisory Panel. Governments, Enterprises and Academics appear to be closely linked in the group, and the tech giants like Tencent, JD, Meituan, iQiyi, Huawei and Siemens China are included in the Advisory Panel of AI ethics according to their **Report on the Analysis of AI-Related Ethical Risks**[13]**.**

Their report on AI risks takes the implications of algorithms into serious consideration by building upon quite a few declarations and principles proposed by international, national and technical communities/organizations in relation to algorithmic regulations[14].

In 2019, in China there has been an increasing tendency towards making AI more responsible and ethical from both top-down and bottom-up perspectives. "Beijing AI Principles" proposed by Beijing Academy of Artificial Intelligence, presented concerns about R&D, use and governance of AI[15]. Subsequent to this are "Self-Discipline Joint Pledge of Chinese AI Alliance (Draft)"[16] and the assembly of New Generation AI Governance Expert

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[11] The plan introduced China's attitude towards AI legal, ethical and social issues (ELSI), and prescribed that AI regulations should facilitate the "healthy development of AI". The plans also exemplified AI legal issues including civil and criminal liability, privacy and cybersecurity. It claimed to establish a system of traceability and accountability. Its ethical focus was put upon a joint investigation into AI behavioural science & ethics, an ethical multi-level judging structure and an ethical framework for human-computer collaboration.

[12] 中国电子技术标准化研究院 (China Electronics Standardization Institute), *人工智能标准化白皮书 (White Paper on AI Standardization)* Jan. 2018. http://www.cesi.cn/images/editor/20180124/20180124135528742.pdf

[13] National AI Standardization Group, *人工智能伦理风险分析报告 (Report on the Analysis of AI-Related Ethical Risks)* Apr. 2019. http://www.cesi.cn/images/editor/20190425/20190425142632634001.pdf

[14] *Id.* The references include: 1) ASILOMAR AI Principles; 2) Statement on Algorithmic Transparency and Accountability; 3) The Japanese Society for Artificial Intelligence Ethical Guidelines; 4) Principles for the Governance of AI; 5) Montréal Declaration for Responsible AI (draft) Principles; 6) Top 10 Principles for Ethical Artificial Intelligence; 7) Artificial Intelligence: The Public Policy Opportunity; 8) Partnership on AI to Benefit People and Society; 9) The IEEE Global Initiative on Ethics of Autonomous and Intelligent Systems; 10) AI Code.

[15] Beijing Academy of Artificial Intelligence, Beijing AI Principles (May 28, 2019), http://www.baai.ac.cn/blog/beijing-ai-principles.

[16] Graham Webster, *Translation: Chinese AI Alliance Drafts Self-Discipline "Joint Pledge,"* New America (Jun. 17, 2019), https://www.newamerica.org/cybersecurity-initiative/digichina/blog/translation-chinese-ai-alliance-drafts-self-discipline-joint-pledge/.

Committee[17]. The latter initiatives, to some extent, were led/directed by the governmental institutions (e.g. Ministry of Industry and Information Technology and Ministry of Science and Technology) which coined the term of "Agile Governance" to "ensure that AI always moves in a direction that is beneficial to society"[18].

Further Discussion

China's national policies on AI ethics show either top-down or bottom-up models. On one hand, the top-down model gives high priorities to the AI innovation and entrepreneurship. This means China will probably not introduce precise and over-detailed guidelines at the national level, otherwise it will form an intense regulatory environment exerting pressure on AI technological advancement and commercialization.

On the other hand, the bottom-up model builds upon the government's experimental observation on and/or response to the AI industry itself. Drawing up practicable ethical rules will thus be the main task for the Internet giants, since these rules can be a responsible reflection on the demands of the marketplace as well.

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[17] Lorand Laskai & Graham Webster, *Translation: Chinese Expert Group Offers "Governance Principles" for "Responsible AI,"* New America (Jun. 17, 2019), https://www.newamerica.org/cybersecurity-initiative/digichina/blog/translation-chinese-expert-group-offers-governance-principles-responsible-ai/.

[18] *Id.*

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