China's development problems will rely on AI

By **Max Parasol**

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Chinese firms have been particularly adept at building world-class AI image and language applications over the past five years. But AI is a global endeavour with global ramifications. With Beijing's firm grip on the country's private sector and the opacity between public and private actors in China, how can we decipher the difference between bottom-up innovation and top-down control?

As I argue in a recent China Matters policy brief, we need to understand that AI will provide solutions to many of China's -development problems: from -efficient farming to medical diagnostics in a struggling healthcare system. China's AI achievements have mostly been made by private sector companies seeking to provide these solutions. Notably, many of the companies harbour global expansion designs.

As one analyst, Edward Tse, notes in his work China's Disrupters, the country's development problems cultivate Chinese entrepreneurs with many problems to solve; this is what "makes Chinese innovation so powerful".

Chinese innovation has long had a strong bottom-up element despite eye-catching top-down government policies such as technology development zones and a national AI plan.

With international dialogue on AI governance in early stages, China is now part of the vanguard in setting AI safety and ethics standards and cybersecurity regulations. It seeks to set global standards, making it the perfect time to engage in dialogue on AI ethics and cyber standard-setting.

Beijing has created a domestic regime that may hamper Chinese innovation if international collaboration is strained. Access to major markets, research facilities and talent can be hindered for companies with close links to the Chinese security apparatuses.

Tech is global

Entrepreneurial ecosystems are globalised, entangled networks. A "tech is global" sign hangs on the wall at People Squared co-working space in Beijing.

Chinese AI companies, for example, rely on US-made Nvidia processing chips, US investment and, increasingly, US-based research labs.

Enterprise (or business-to-business) AI requires an ecosystem of partnerships. Zhang Yaqin, president of Baidu, said last year: "For Baidu, the most important thing lies not only in product and technology, but also in partners in the [global] ecosystem."

China and the US are so interconnected through research labs, partnerships, semiconductors/processing chips and staff, it's hard to discern a nationality.

As many countries have now chosen to tackle issues like cybersecurity unilaterally, conflicting obligations are emerging. Many are responding to Chinese cyber unilateralism. Yet the global trading system, particularly in technology, is tightly connected and unless governments can co-operate on global rules and domestic reforms, global innovation may be hindered.

China's massive accumulation of data, largely by private sector companies, will change world history. For example, healthcare will be changed by China's huge data sets, in areas such as lung cancer CT scan image recognition or the identification of rare tropical diseases through deep learning. And China is also not monolithic. Chinese people, academics and private companies are concerned about data privacy. Data privacy was a major domestic discourse in China during 2017-2018.

On the other hand, China observers point to Xinjiang province as an example of the surveillance state in action; this is an issue that must be continually observed. And, while much of the media's commentary on China's social credit system is overblown, it certainly requires moderation. The system is not a single unified apparatus; it began attempting to solve a huge problem — the large unbanked economy.

Only some pilots have scores and each does it in its own way. Contrary to media reports, there is no standardised national social credit score — there is a complex web of systems run by different ministries, levels of governments and regions interconnected by data sharing.

For better or for worse, China is now in the vanguard on many crucial law and technology issues. The way forward is to engage with Chinese stakeholders, especially private Chinese companies and academics, to create better global data privacy regulatory environments. And, of course, China's government must be included in these discussions.

Max Parasol is a Senior Fellow at Monash University and is finalising his PhD studying the Chinese innovation ecosystem. He is the author of a recent China Matters policy brief on AI and the People's Republic of China. The views expressed in this article are the author's. China Matters does not have an institutional view.