

Civilization, China and Digital Technology

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Digital China

In our ever-changing digital age, people make use of intelligent technologies: smart phones, smart cars, and smart cities. Governments invest in innovation. Artificial intelligence is the roadmap of the future. Increasingly, intelligent machines free people from mundane tasks, allowing us to interact with distant others, share ideas, and build collaborative networks. The sedimentation of data in the cloud replaces the sedimentation of knowledge in libraries and museums, what many refer to as 'civilization.' Whereas knowledge allowed people to elevate their status within society in traditional China, digital literacy is allowing masses of ordinary people to transcend space and time, to reconnect emotionally with distant others using video, images and emojis, to participate in China's burgeoning sharing economy, or even to initiate a start-up. China is intent on consolidating a digital civilization; and this has widespread implications for industry, governance, population management, and even international relations.

Civilization matters a great deal to China's leaders. China is sometimes referenced as a 'civilizational state', an idea first proposed by Chinese intellectuals and later promoted by the British Marxist Martin Jacques. In the Chinese political lexicon, being civilized means 'fitting in' with the national plan, accepting the party-state's directives and guidance, and obeying laws. Four normative models of civilization coexist in contemporary China: material, spiritual, political and ecological. The rise of material civilization is equated with a more prosperous society beginning with economic reforms in 1978. Many people sought opportunities in a market that was largely unregulated, where conduct was increasingly immoral. Personal networks (*guanxi*), the black market, and corruption were part of the reality of everyday life. The behaviour of market opportunists needed to be managed, even controlled; hence the normative expectations of a 'spiritual civilization' were delivered in mass media campaigns and advertising.

As Carl Minzer points out, life in China has changed markedly since the economic reform era began. Arguably, the most conspicuous feature of today's China is internet connectivity. In 1996, the nation's first commercial internet service was launched. Prior to this, the nascent technology was viewed as a mechanism for scholars and scientists to share information. In 2000, only 1.8% of the population was online. With the burgeoning of commercial internet services, hundreds of millions of Chinese people rushed to purchase smart phones and tablets, most seeing no need for a computer, or even email. By the end of the first decade of the new millennium, internet penetration had climbed to 34% of the population, a total of 516 million people. The number now exceeds 800 million.

In 2014, innovation became a buzzword with the State Council launching a policy called 'mass entrepreneurship and innovation.' Start-up fever took hold in coastal cities like Shenzhen, Hangzhou, Shanghai and Beijing and the previous decade's focus on creative clusters turned to incubators and maker spaces. The term innovation featured in the government's 2015 Work Report fourteen times, compared with only three the previous year. Masses of Chinese were suddenly aspiring to be digital entrepreneurs. This digital transformation has happened at breakneck speed. Regional governments, mayors and many venture capitalists have been quick to accept the vision that China is becoming an AI superpower.

Beginning in 2015, the 13th Five Year Plan enshrined future-centred initiatives such as Internet + and Made in China 2025, programs aimed at deploying cutting-edge technologies such as cloud computing, the Internet of Things (IoT), robotics, and next generation information technologies with the intent of transforming national firms

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into globally competitive ones. Large parts of the Chinese economy, from commerce, finance, health care, to cultural industries and transportation were reshaped and reimagined. As Lee Kai-fu, a Taiwanese venture capitalist with deep experience in China's nascent digital economy has argued, the expertise that made Silicon Valley successful no longer applies because machine learning algorithms are replacing human endeavour.

By the time the 13th Five Year Plan was unveiled, the affordances provided by China's digital platforms had replicated or localised those of their Silicon Valley counterparts. Western companies like Facebook are now cherry-picking ideas from China's internet companies.

Chinese tech companies have been quick to develop innovative applications, echoing the tide of techno-nationalism, tempered by tech trade wars with the US. China's 'digital champions' include the internet technology companies Baidu, Alibaba and Tencent, (sometimes called BAT), as well as Bytedance, owner of the popular short video app Tik Tok, the e-commerce giant Jingdong.com, food ordering company Meituan, and technology hardware companies Huawei and ZTE.

In recent years, the China Central Television (CCTV) evening news program, broadcast from Beijing, has replaced stories about the productivity of people's manual labour, once a symbol of shared national growth, with news of labour-saving machines. Robot toys proliferate in shopping centres along with virtual reality (VR) amusement arcades. Maker spaces, co-working spaces and fab labs appear in the proximity of university campuses.

Technological innovation has indeed generated profound changes in peoples' lives. Taobao (e-commerce) Villages are helping rural populations tap into the digital economy. The Greater Bay Area in Guangdong Province in south China linking Shenzhen, Hong Kong, Macau, Foshan and Guangzhou, exploits the region's leadership in technology. Moreover, in keeping with the zeitgeist, the Guangdong provincial government has issued 'digital governance' guidelines.

In the cultural domain, meanwhile, the datafication of cultural memory, such as the Mogao Grottos in Dunhuang and the Forbidden Palace in Beijing, attracts financial and technical support from internet companies including Tencent and Alibaba, while digital tourism apps are being developed that provide 'politically correct' knowledge of regions.

Digital Lifestyles

Disintermediation, the process whereby online technology eliminates institutional gatekeepers, has played out in dramatic ways in China. The architecture of many essential services and online transactions are managed by commercial communications companies, not financial institutions as they are in the West. Alipay is operated by Alibaba. Tencent offers WeChat pay. In fact, not using Tencent's WeChat messaging app along with its convenient transaction services, would lead to social exclusion. Most services in China are online, some are only online, and many are only accessible by apps.

QR codes proliferate. Cash transactions are virtually obsolete; even beggars and buskers present a QR code for scanning. Coffee, now associated with modern urban lifestyles, is offered by a Starbuck clone, Linkin Coffee whose orders are received on the company's mini-program, a mobile app downloaded on WeChat. Orders in most restaurants are conveyed to the kitchen on digital devices and food is even delivered by robots and drones; many people even shun restaurants, choosing to have meals delivered by courier services such as Meituan and Ele.me.

Alibaba's Freshippo grocery supermarkets, now operating in a hundred cities, dispenses entirely with the need for people, allowing shoppers to scan payments on Alipay while their purchases are moved to the check-out on conveyer belts. Huawei's Mate 20 mobile phone production line is completely automated, except for humans who make random 'quality checks' and add a final QR code sticker.

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The reality of a digital civilization in China includes the goal of population management.

Facial recognition and big data harvesting are helping the Chinese government regulate society, along with the practice of scoring people's social behaviour called Social Credit, which is likely to expand nationally, following successful pilot schemes.

Predictive algorithms increase efficiency and regulate unruly behaviour but they also endanger civic freedoms. The digital cloud now contains traces of what we read, consume and share. Writing about western realities, Shoshana Zuboff has referred to 'information civilisation', a dystopian vision of Big Tech which has superseded 'industrial civilisation'.

The algorithms that shape identities are changing how humans interact. This transformation is occurring globally; in some nations this constitutes a real threat to democracy. It becomes harder to know if the information people receive on their 'news-feeds' or via social media is human-created or machine-created, or a combination of both. What is fake and what is real? Who, or what, is writing the code?

In this regard, China's coming of age as a digital superpower raises an alarm. The willingness of people in China to surrender data stands in contrast to traditional Chinese society in which people only shared personal information among family and close friends. The traditional social model (*guanxi*) that cemented ties between people has morphed, particularly among younger people, into an online universe of liking, matching and sharing.

Digital Civilization Extending

It's not hard therefore to comprehend the enthusiasm of Chinese people for a digital lifestyle, considering that many essential services were previously obtained through *guanxi*. While the sharing economy in China has alleviated many government concerns about social disruption, it has in turn disrupted business models. Bike-sharing is commonplace, but the ease of ride-sharing has led to more vehicles on the road, not less.

China is increasingly connected to the outside world and China's digital footprint is extending. The take up of WeChat is widespread among many non-Chinese, as are Alipay, Tik Tok, and Huawei phones within many parts of Asia. Chinese digital platforms are connecting up regions, cities and people. China's digital civilization is likely to consolidate as people in Asia become ever more dependent upon Chinese platforms, expertise and algorithms.

Digital China may be the reality for many, especially those Chinese under thirty, who were 'born digital'. But a more alarming scenario is the global sphere. As Lee Kai-fu has noted, human civilization, not Chinese, or Soviet, or Western, is at a critical juncture. This civilizational crisis, he says, is AI-induced, and in the near future it will impact upon regions where economies have been built on low-cost labour, including much of Asia. Computer literacy will certainly benefit society, as long as there are jobs in the future.

For Lee, the world order is changing, not in a geo-political sense, but in a post-human one. This mirrors to some extent the Chinese political weighting now placed on ecological civilization. In the main, emerging technologies are seen as providing solutions to industrial pollution. But as James Beniger has argued, while technological innovations have extended the processes that sustain human life, these subsequently increase the need for control, and improved technologies of control. In this domain, China has made significant progress.

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