

ARGUING WITH ROBOTS

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ON 18 SEPTEMBER, the *People's Daily* unleashed its full fury on an unlikely target: an algorithm. The semi-authoritative newspaper ripped into the popular news aggregator app Toutiao 今日头条 (literally 'Daily Headline'), which had recently racked up a series of fines for propagating lewd and vulgar content. It charged Toutiao's learning algorithm with spreading 'uncivilised content' through 'clickbait headlines' 标题党 and 'eye-catching news' 眼球新闻.¹ Why, the op-ed asked, had pictures of scantily dressed models and other clickbait content become an 'intractable disease' of the app? The answer, it said, lay in the algorithm.

With 120 million active users each day, Toutiao might be the world's most successful news service. That success is in no small part due to the powerful learning algorithms that track readers'

clicks, and curate and personalise the content in their feeds. More pictures of scantily clad women? No problem. Want the latest financial headlines? You got it. Like heartwarming stories about family reunions? Done. Want fewer articles extolling China's dear leader, Xi Jinping? Poof, gone. Users are wowed by how just a few clicks can radically alter the news that populates their feeds — and not always in ways that would be to the liking of the *People's Daily*.



Toutiao
Source: Sohu

One Chinese friend told me that Toutiao's biggest appeal was that it filtered out the 'brainwashing media' 传媒洗脑 (that is, state media) from his newsfeed. While that is well and good for many Chinese users (and Toutiao's bottom line), in China's tightly controlled media and Internet environment, Toutiao's ability to give readers what they want clearly does not sit well with everyone. In the *People's Daily* commentary, the writer 'Yu Sheng' 羽生 (probably a pseudonym) wrote: 'The robot decides what content to recommend and who to recommended it to. And it follows only one standard: whether or not the content is attention grabbing and whether or not it will attract users.'

The *People's Daily's* anti-algorithm tirade is surprising given just how upbeat the Chinese government has been about emerging technology and artificial intelligence (AI) and machine learning in particular. In July, the State Council released the 'Next-Generational Artificial Intelligence Development Plan' — a proposal to harness the transformative potential of AI and machine learning to transform China's society, government, and economy, with the goal of turning China into a world leader in AI by 2025. This includes cultivat-

ing and supporting Chinese 'leading backbone enterprises' 龙头骨干企业 that can potentially dominate the global AI market.

The government's push to adopt AI makes sense. According to a report from PricewaterhouseCoopers, China stands to benefit more than any other country from AI, potentially impacting 26.1 per cent of GDP.² In addition, China's 730 million Internet users are a genuine treasure trove of data for training and learning algorithms. As *The Economist* put it, referring to its boundless reserves, China has become the 'Saudi Arabia of data'.³ In terms of market capitalisation, China already boasts some of the world's largest AI companies, including speech-recognition company iFlytek, facial-recognition giants Megvii and SenseTime, and Bytedance, the parent company of Toutiao.

Indeed, Toutiao is really an AI company masquerading as a news aggregator. The powerful machine-learning algorithms behind its newsfeed are the company's crown jewels, responsible for both its 120 million users and US\$20 billion valuation. The company has bold ambitions to find new uses for its algorithms and introduce its news aggregator to foreign markets.



Subversive code
Photo: Sous Das, Flickr

In October, the company that collects headlines made headlines of its own when, in a bid to attract top talent, it offered pay packages of US\$3 million a year.⁴

And yet, despite its success, Toutiao cannot escape the government's rancour. This stands in notable contrast to other Chinese AI companies. The government has lavished officially collected data and contracts on those that focus on facial or speech recognition, in particular, as these technologies directly serve the one of the Party-state's core objectives — expanding control (the theme of the 2016 *Yearbook*). In October, Human Rights Watch reported that iFlyTech was

collaborating with the government to develop an AI surveillance system that could identify people based on their voices. The Hebei-based iFlyTech has already built the world's most advanced voice recognition platforms, now used by local and provincial governments and police. Facial recognition AI firms including Face++ and SenseTime have also expanded at an astonishing rate, in part because of government contracts.

AI that does not help the government consolidate power or undermines the Party's authority, however, risks facing the government's wrath. In August, censors quickly snuffed out

two chatbots that, learning from conversations with netizens, had developed an anti-Party bent.⁵ ‘Do you think such corrupt and incapable politics can last a long time?’ one bot replied when asked if it loves the CCP. ‘My Chinese dream is to go to America’, the second one chirped. ‘The Chinese dream is a daydream and a nightmare.’

The sin of Toutiao was not so much subversion as giving readers what they want. In an effort to appease angry regulators, Toutiao held a forum in September on using AI to ‘screen and control fake news in the public sphere’.⁶ Company executives showed off Toutiao’s new ‘anti-rumour database’ to top officials from the Central Propaganda Department, the Cyber Administration of China and the State Administration of Press, Publication, Radio, Film, and Television of the Peo-

ple’s Republic of China. Within a few months of operating, the database was able to identify and suppress rumours with an impressive eighty per cent accuracy. Evidently, Toutiao executives were eager to show officials that the company’s learning algorithms could serve the Party-state’s interests too.

But Toutiao will probably keep sparking the fury of regulators until it can train its algorithms to raise the Party consciousness of its readers. The author of the *People’s Daily* op-ed sees a long-term solution in ‘human-machine melding’ 人机结合 — the far-flung idea that machine capabilities and human consciousness will one day merge into a single being. In the meantime, Yu Sheng recommends replacing the robot with a good editor — preferably one with Party credentials.

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