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TikTok's sale: There is no 'one ring to rule them all'

Even if TikTok's American operations were separated, the "new" TikTok would quickly become a different creature, trained on different data and shaped by different users. That makes the political rhetoric about "seizing control of the algorithm" misleading. PHOTO: REUTERS

America may soon own TikTok but not what really matters: the algorithm that decides what we watch, think and share.

Simon Chesterman and Chen Tsuhan

When the United States ordered TikTok's Chinese parent company, ByteDance, to divest its American operations or face a ban, it was framed as a national security issue. The concern was that the Chinese authorities could use the platform's data – or its mysterious "algorithm" – to shape what hundreds of millions of users see and think.

But what exactly is being sold? Is it the company's user base, its data or the algorithm that powers its success? The answer, for now, is murky.

New investors might gain ownership of the platform and access to its data infrastructure, but control of the algorithm itself – the lines of code that decide what videos go viral – is another matter entirely.

An AI algorithm is not a fixed recipe but a learning system. Its outputs shift as it absorbs new data and user behaviour. Even if TikTok's American operations were separated, the "new" TikTok would quickly become a different creature, trained on different data and shaped by different users.

That makes the political rhetoric about "seizing control of the algorithm" misleading. You can own the company; you can even access the source code. But you cannot easily control a system that learns from human behaviour, or from the attention economy that rewards outrage, amusement and emotion over accuracy or reason.

WHEN NEUTRAL ISN'T NEUTRAL

It is straightforward to regulate algorithms that deliberately promote or suppress certain content – banning terrorist propaganda, for example, or removing hate speech. The harder challenge lies with systems that claim to be neutral, while shaping our societies in invisible ways.

Google's famous PageRank algorithm, for instance, ranks websites not by what Google thinks is important but by how many other sites link to them. That sounds impartial, but it rewards popularity, not reliability. Content creators quickly learnt that outrage and emotion attract more links – and clicks – than nuance. The result was an internet optimised for attention, not truth.

Recommendation systems such as TikTok's or Netflix's are more sophisticated but share a similar logic. They rely on collaborative filtering: comparing your preferences with those of other users to predict what you might like next. Mathematically elegant, this approach assumes each user can be represented as a weighted average of others, flattening human diversity into a smaller set of "latent variables".

The result? Filter bubbles that reinforce what we already believe, rather than challenge us with something new.

Advertising has always segmented audiences. But where 20th-century advertisers divided consumers by gender or income, 21st-century algorithms sort us into multidimensional clusters that continuously update and nudge our behaviour. Instead of confronting stereotypes, they embed us within them.

That "neutrality" also has limits set by human hands. TikTok's international version, for example, allows users to share satire or political commentary freely.

Its Chinese counterpart, Douyin, operating under the same parent company, is tightly moderated, with politically sensitive topics such as references to Winnie the Pooh, long used to mock President Xi Jinping, swiftly removed. The code may be similar, but the context and controls are not. The system may learn, but within boundaries set by law and politics.

WHY REGULATION LAGS

Governments are, by nature, reactive. Whether it is nuclear energy, genetic editing or pandemics, regulation trails innovation. Algorithms are even harder to manage because they appear to be "just maths". How do you regulate an equation?

Yet doing nothing carries risks: bias in hiring, discrimination in lending, opaque censorship and erosion of public trust. Over-regulation, meanwhile, risks stifling innovation or driving it elsewhere.

This is the policymaker's dilemma: regulate too little, and citizens suffer; regulate too much, and societies lose out on the benefits of artificial intelligence (AI).

The TikTok case illustrates this dilemma perfectly. The deal may give the US more oversight of data privacy and transparency about where user data comes from and where it is stored. Explicit manipulation such as propaganda or censorship could, in theory, become easier to monitor.

But control of the algorithm itself is another matter. Calling it "TikTok's algorithm" is misleading. Most social platforms rely on similar underlying techniques, notably collaborative filtering, that personalise content to maximise engagement. These systems adapt in real time; no regulator or owner can simply "freeze" them.

The TikTok case highlights how questions of ownership, national security and technological control are colliding in real time. Yet even if Washington succeeds in forcing a sale, the heart of the issue will remain unsolved: the algorithm will keep learning, adapting and subtly shaping how people see the world.

The deeper, implicit issues – the ways personalisation fragments societies and amplifies emotion – will persist, regardless of who owns the platform. In Tolkienesque terms, there is no such thing as "one ring to rule them all". American ownership does not make an algorithm more "democratic", just differently biased according to a different dataset and value system.

TOWARDS BETTER BALANCE

The path forward lies in a mix of technical, behavioural and regulatory measures. Researchers are developing "bridging algorithms" that expose users to more diverse content and AI-assisted fact-checking tools that can keep pace with viral misinformation.

Education also matters. Just as we teach nutritional awareness to promote healthy diets, we should teach information hygiene – helping users to question what they consume online and why it was shown to them.

And regulation must evolve beyond ownership and access. Governments should set baseline standards for transparency, accountability and harm reduction, recognising that most users will accept the default settings they are given.

None of this can be solved by technologists or policymakers alone. At the Information Gyroscope, or iGyro, project at the National University of Singapore, we are building a forum where scientists and regulators can challenge one another's assumptions, and design solutions that are both technically sound and socially responsible.

Our community draws on computer scientists and behavioural economists (plus the occasional lawyer), partnering with industry and government in Singapore and beyond. Cooperation is not always easy, especially with companies whose commercial interests may conflict with social responsibility. But dialogue is a start. It builds shared understanding and can lay the groundwork for the norms and guard rails that formal regulation may later codify.

That conversation could not be more timely. The TikTok case highlights how questions of ownership, national security and technological control are colliding in real time. Yet even if Washington succeeds in forcing a sale, the heart of the issue will remain unsolved: the algorithm will keep learning, adapting and subtly shaping how people see the world.

The deeper challenge, then, is not just *who* owns the algorithm, but *how* societies ensure such systems serve public rather than private or political interests. Algorithms will never be neutral – but with transparency, accountability and cooperation, we can at least try to ensure that they work for us, rather than the other way around.

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