THE US-CHINA DIGITAL BORDER



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The US and China are facing political pressure to decouple technological ecosystems and close digital borders. This includes efforts to localize data, hardware, and software, and increasing restrictions on the movement of these goods between the two nations.



Image source: US-China 7th discussion on trading issue. Tia Dufour. 2019. Wikimedia Commons. Link. “As a work of the U.S. federal government, it is in the public domain.”

Both countries describe these restrictions as matters of national security. However, they are also rooted in a drive to control global supply chains in the technology sector. This economic rivalry is at the root of growing geopolitical tension.



Image source: The 2nd China (Mianyang) Science & Technology City International Hi-Tech Expo. RG72. 2014. Wikimedia Commons. Link. Creative Commons Attribution-Share Alike 4.0 International

This competition for economic power arrives at the expense of data privacy protections in both countries. According to the General Data Protection Regulation, an exemplary EU data privacy law, privacy protections might include the right to:

1) Know what data is collected, why, and who it's shared with.
2) The right to delete your personal data, with some exceptions.
3) The right to opt out of having your data sold or shared for targeted ads.
4) The right to correct inaccurate data; the right to limit the use of sensitive data, such as your SSN, geolocation, or financial information.
5) The right to non-discrimination, meaning businesses can't penalize you for exercising these rights.

Regulation (EU) 2016/679 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, repealing Directive 95/46/EC.

By looking at the case studies of TikTok, a Chinese company operating in the USA, and Apple, an American company operating in China, we show how the absence of data privacy standards pervades across both contexts.



Image: Apple Prineville Data Center, Oregon. Center for Land Use Interpretation.Link. Attribution-Noncommercial-Share Alike 4.0 Creative Commons License.

TikTok in the US and Apple in China map onto each country's data privacy strategy:



Artists offer an alternative vantage point.





Image Source (Left): 贵州省毕节市威宁彝族回族苗族自治 县杨梅山附近的风力发电风车. 維基小霸王 Wikimedia Commons. Link. Image Source (Right): Aerial View of Keller Bay, Texas. Wikimedia Commons. Link. Creative Commons Attribution-Share Alike 4.0 International

2. Apple in China



Image source: Apple Ist, Nanjing, China. 来斤小仓鼠吧. 2019. Wikimedia Commons. Link. Creative Commons Attribution-Share Alike 4.0 International

Apple was one of the major US tech companies permitted to collect data and operate within China. In order to comply with Chinese regulations, Apple made significant structural changes. These changes supported the Chinese state's digital strategy and Apple's revenue interests.



Image source: Apple store shanghai (24513943492). Melv_L - MACASR. 2014. Wikimedia Commons. Link. Creative Commons Attribution-Share Alike 2.0 Generic

Some of the restrictions Apple became subject to include the following stipulations found in the Cybersecurity Law of the PRC (2017):

Article 35

"Critical information infrastructure operators purchasing network products and services that might impact national security shall undergo a national security review…."

Article 37

"Critical information infrastructure operators…within the mainland territory of the People's Republic of China, shall store it within mainland China."

Data Security Law (2021)

Article 30

"Those handling important data shall periodically conduct risk assessments...and submit risk assessment reports...[that] include the type and amount of important data being handled...."

Personal Information Protection Law (2021)

Article 41

"...personal information processor shall not provide the personal information stored within the territory of the People's Republic of China to judicial or law enforcement agencies outside of the territory of the [PRC]."

These restrictions led Apple to locate its data infrastructure in China. In 2025, Apple operated iCloud China in two data centers within China. This accounted for half of Apple's data centers outside of the US. iCloud China was located in the US prior to 2017.



Source: Data Centers (2025). Map View of Apple's Data Centers Outside the US. Data Centers. Link. Screenshot courtesy of authors.



Apple partnered with local governments to navigate this web of regulations. The relationship between Apple and the Chinese state was symbiotic. Apple's first data center in China was key to a national strategy to revitalize rural parts of western China through data center development, starting with Gui'an. The State Council described the Gui'an New District as a "strategic highland for inland openness to the outside world." (Guo Fa No. 2, 2012).

Source: Stokols, A. (2024). How is China's "Eastern Data Western Compute"（东数西算）developing? Sinocities. [Link]; Zhexi Zhang, G. (2024). China's Hinterland Becomes a Critical Datascape. Noema. [Link]; Image Source: Jacques Beaulieu (2013). Source: Caitriana Nicholson (2016). Guiyang, Guizhou. Wikimedia Commons Creative Commons Attribution-Share Alike 2.0 Generic License. [Link].

Apple's collaboration with local company, AIPO Cloud (Guizhou) Technology Co., Ltd (GCBD) in Guizhou created a mutually beneficial arrangement. The government leveraged the operational experience gained from hosting iCloud China to build its own digital governance platform. In turn, Apple gained access to vast rural data streams that open new revenue opportunities.



Image source: iCloud. bangdoll. 2013. Flickr.Link. CC BY-SA 2.0.

With Apple's investment, Guizhou became a critical backend for China's digital economy.

Jan 2018

In response to China's Cybersecurity Law (2017) Apple announced iCloud in China to be operated by (GCBD). Company maintains some operational autonomy.

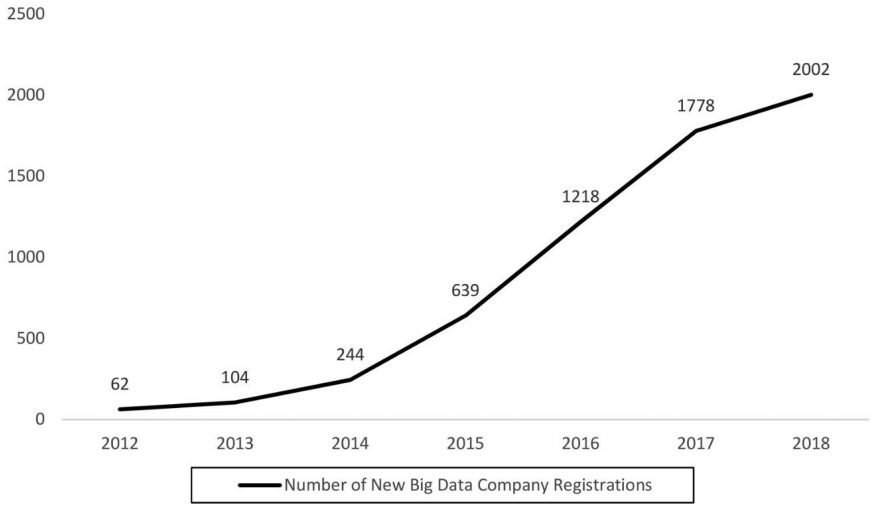
Feb 2018

Apple moved most of its data for China-based users to cloud servers in Guizhou.

May 2018

Apple invested 1 billion into Gui'an New District

The number of newly registered big data companies in Guizhou (2012–2018)



Source: Data extracted from Wu and Lu (2019, 82); Graph extracted from Liu, K. Z. (2025). Making the China data Valley–the national integrated big data centre system and local governance. *Journal of Contemporary Asia*, *55*(2), 203-225; (Brookings, 2016).

In 2021, artists and curators Iris Long and He Zike began an investigative art project titled, *Under the Cloud*. Beginning with the Gui'an New District, they visited digital infrastructures in rural China and organized lectures, exhibitions, and workshops.



Source: Iris Long & He Zike (2022). Under the Cloud. Link. Image Source: Guizhou 01. Flickr. Link. CC BY-SA 2.0

Regarding Gui'an, the artists observed:

"The ground on which these "clouds" rest is becoming increasingly rocky."



Source: Iris Long & He Zike (2022). Under the Cloud. Link. Image Source: the BLOB The BLOB installed by Iris Long and @He_Zike for TEMPORAL STACK: THE DEEP SENSOR (2023). Rosa Menkman. Flickr. Link. CC BY 2.0.

Why is the ground rocky? The artists point to concerns over data privacy and rural development pathways. Chinese citizens cannot consent to how their iCloud data is handled. There is no independent regulatory body outside of party-state control and there is no public reporting mechanism to ensure transparency. Civil society groups warn that iCloud China is part of the domestic surveillance apparatus.

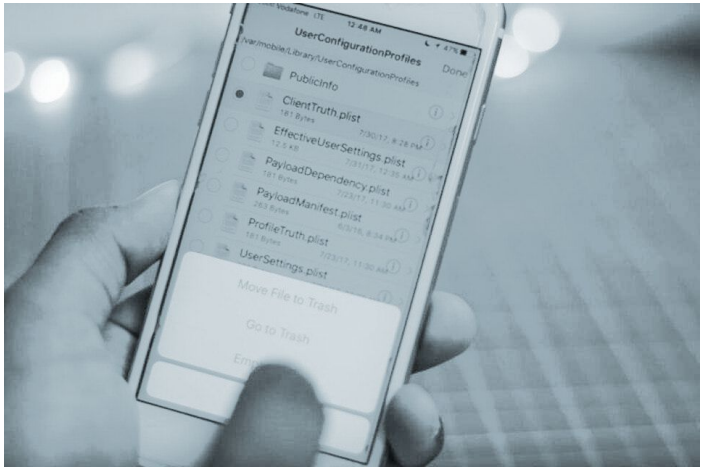




Image Right: Remove iCloud. Myicloud. 2018. Wikimedia Commons. Link. Creative Commons Attribution-Share Alike 4.0 International Image Left: Security camera, September 2018. Cody Logan. 2018. Wikimedia Commons. Link. Creative Commons Attribution-Share Alike 4.0 International

A Counter-Imaginary: *Blind Spot* (2007) by Miao Ying



Miao Ying's *Blind Spot* (2007) exposes how digital technology helps to enforce censorship under an authoritarian government by documenting 2,000 terms blocked on Google China. The artist reveals the invisible, digital borders placed on online information domestically.

Source: Ying, M. 2007. "Blind Spot." Net Art Anthology. [Link]. Image Source: Miaoying newmuseummiao ying 2017. WangWang21. Wikimedia Commons. Link. Creative Commons Attribution-Share Alike 4.0 International

The physical infrastructure behind digital technology also impacts rural life. Bishan Commune was a social-art experiment in Bishan Village, China (2011-2016). Founded by Chinese curators Ou Ning and Zuo Jing, it was part of a rural reconstruction movement seeking to creatively revive rural life through art and democratic engagement rather than hegemonic development models.



Source: Ning, Ou. (2010) “Bishan Commune: how to start your own Utopia”. Link. Image Source: Ou Ning in Bishan Village - 2012. Lanyuan. Wikimedia Commons. Link. Creative Commons Attribution-Share Alike 4.0 International.

The Bishan Commune was terminated by local authorities, forcing Ou Ning to incorporate "economic development" into the project's terminology to survive. This illustrates how radical artistic and independent action is attacked under authoritarianism, and the continued suppression of free speech.



Source: Ning, O. (2015). Bishan Commune: How to Start Your Own Utopia. A notebook by the Chinese activist, editor, and curator Ou Ning. [Link] Image Source: Gfp-china-anhui-fields-ponds-and-sky. Yinan Chen. Wikimedia Commons. Link.

3. TikTok in the USA



Image source: TikTok Headquarters Coolcaesar. 2024. Wikimedia Commons. Link. Creative Commons Attribution-Share Alike 4.0 International.

National security rhetoric continues to frame how TikTok is regulated within the USA.

"We will continue to pursue a positive, constructive, and comprehensive relationship with China."	2010	Obama National Security Strategy
"The scope of our cooperation with China is unprecedented even as we remain alert."	2015	Obama National Security Strategy
"A return to great power competition," though "nothing is preordained about this relationship."	2015	Secretary of Defense Ashton Carter
"China . . . want[s] to shape a world antithetical to U.S. values and interests."	2017	Trump National Security Strategy
"The Chinese Communist Party['s] actions are the primary challenge today in the free world."	2020	Secretary of State Mike Pompeo
"Our relationship with China will be competitive when it should be, collaborative when it can be, and adversarial when it must be."	2021	Secretary of State Mike Pompeo

Source: Bateman, J. (2022). U.S.-China Technological "Decoupling". Carnegie International Endowment for Peace. [Link].

While the US government has restricted Chinese access to the TikTok algorithm, the US government has made few measures to ensure transparency, data privacy rights, and civil liberties.



Source: United States of America v. Musical.ly. (2019). [Link]; Sources: Alex Hern (2019). Revealed: how TikTok censors videos that do not please Beijing [Link].

President Trump signed two executive orders in 2020. The first banned American companies from any transaction with TikTok. The second gave ByteDance 90 days to divest from any US operations. The orders were blocked by courts then revoked by the Biden administration.



Sources: Trump Admin (2020). Executive Order on Addressing the Threat Posed by TikTok [Link]; Order Regarding the Acquisition of Musical.ly by ByteDance Ltd [Link]; Michael T. Borgia et al. (2021). Biden Administration Rescinds Trump's TikTok and WeChat Bans, Issues Two Executive Orders Highlighting Policies on Chinese Tech Companies [Link]. Image source: Wikimedia Commons [Link]. As a work of the U.S. federal government, it is in the public domain.

In 2022, ByteDance employees in China accessed private user data on TikTok. This led the company to move all US user traffic to Oracle Cloud Infrastructure in the US. Similar to Apple's localized servers in China, it is not guaranteed that the US would access private user data as well.



Sources: Emily Baker-White (2022). Leaked Audio From 80 Internal TikTok Meetings Shows That US User Data Has Been Repeatedly Accessed From China [Link]; Albert Calamug (2022). Delivering on our US data governance [Link]. Oracle South Jordan Data Center, Utah, Center for for Land Use Interpretation [Link].

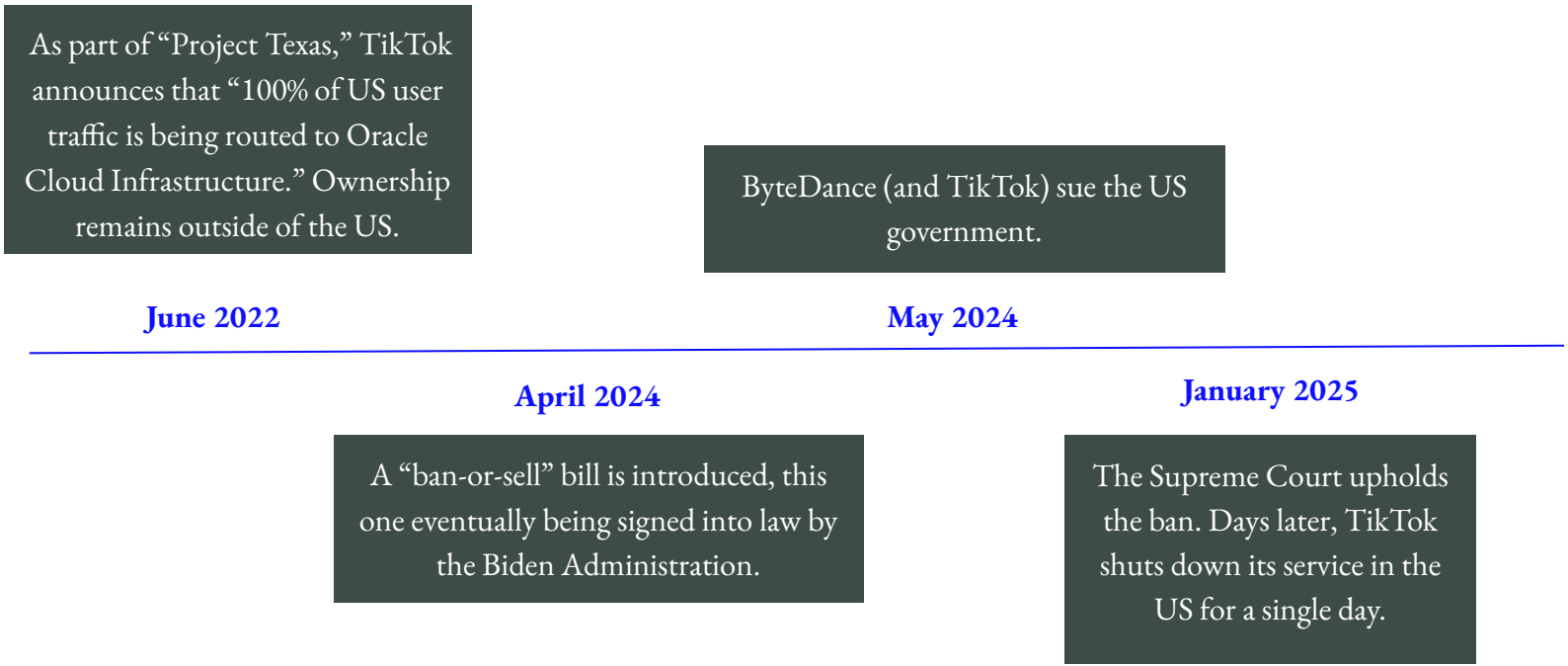
Attribution-Noncommercial-Share Alike 4.0 Creative Commons License.



In 2022, TikTok also unveiled project Texas, a plan for the US Data Security (USDS) division to control all US data collected by TikTok. USDS gains access to TikTok's software code and back-end systems, and moderates platform content.

Sources: TikTok (n.d.). What is USDS and how is it governed? [Link].

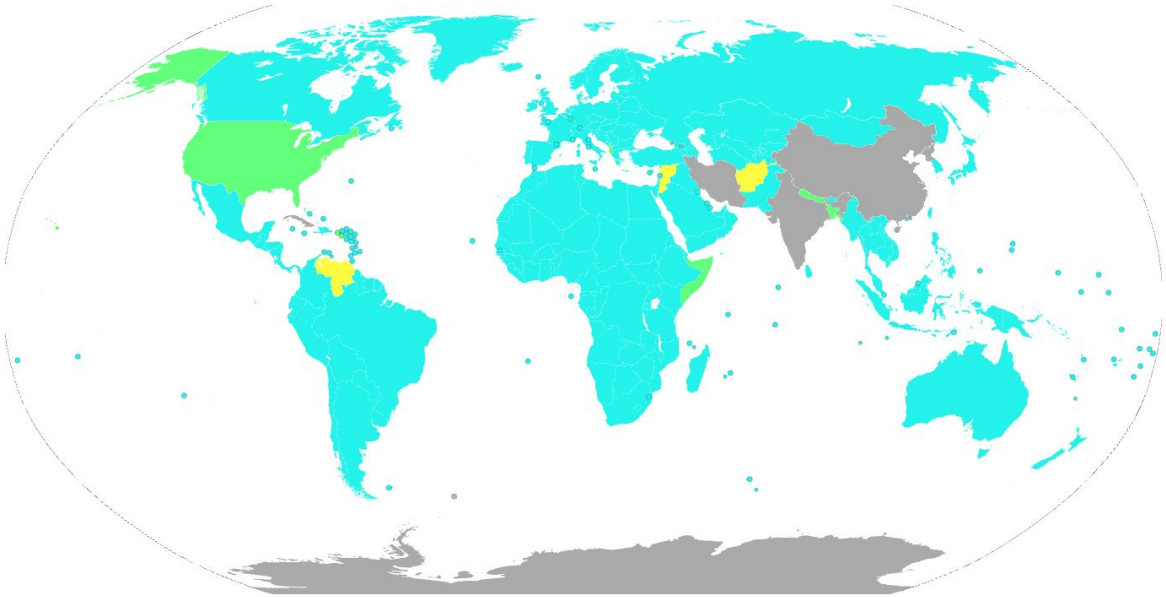
Timeline of Tik Tok Ban in US (2022-2025)



Sources: Rubbert, E (2025). The TikTok Ban: National Security Civil Liberties Concerns. University of Washington [Link].

Lawmakers thought Project Texas was insufficient in addressing their security concerns. As part of a $95B foreign aid bill in 2024, congress passed a law that would require ByteDance to sell TikTok or face a US ban.

September 2025 Map



Blue = TikTok available

Green=TikTok available, but under a de jure ban

Yellow= TikTok available, but under de facto ban

Grey=TikTok unavailable

Sources: H.R.7521 - Protecting Americans from Foreign Adversary Controlled Applications Act (2024). [Link]. Image Source: Availability of TikTok in the World (2025–present). Freedoxm. Wikimedia Commons. [Link].

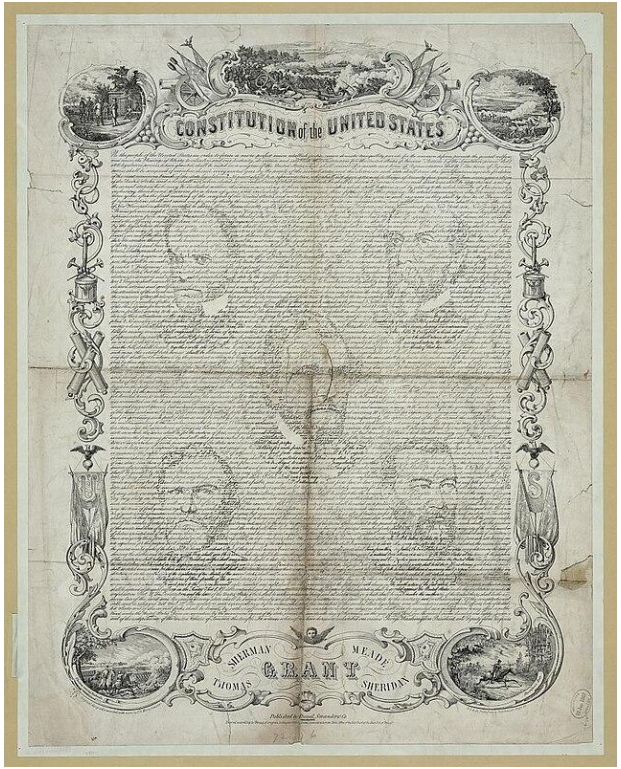
Banning TikTok is unconstitutional. TikTok sues the US government, citing the First and Fifth Amendment.

"...for TikTok, any such divestiture would disconnect Americans from the rest of the global community on a platform devoted to shared content — an outcome fundamentally at odds with the Constitution's commitment to both free speech and individual liberty."

Source: TikTok inc. v. Merrick B. Garland. (2024). [Link]

“Banning TikTok is unprecedented, unconstitutional, and un-American. If the Supreme Court allows the government to shut down an entire platform on such a flimsy evidentiary record, it would set a disturbing precedent for future government restrictions on online speech. It would also increase the risk that sweeping invocations of “national security” will trump our constitutional rights.”

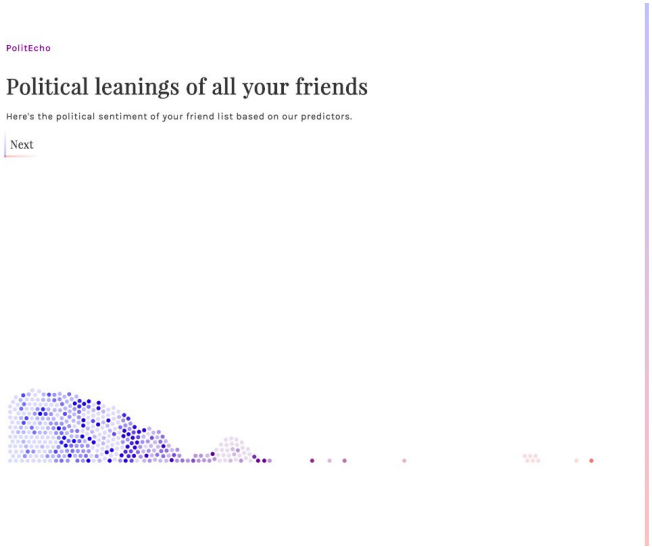
-ACLU, 2025



Sources: American Civil Liberties Union (2025). Banning TikTok is Unconstitutional. The Supreme Court Must Step In [Link]. Image: The Constitution of the United States. Wikimedia Commons. [Link]. This work is in the **public domain** in the United States because it was published (or registered with the U.S. Copyright Office) before January 1, 1931

Closing virtual borders can have harmful effects on the free flow of information. A Counter-Imaginary: *PolitEcho* (2021)

PolitEcho is an open-source Google Chroe plug-in that allows users to see how their social media news feeds were marked by political bias, revealing how social media platforms create echo-chambers.



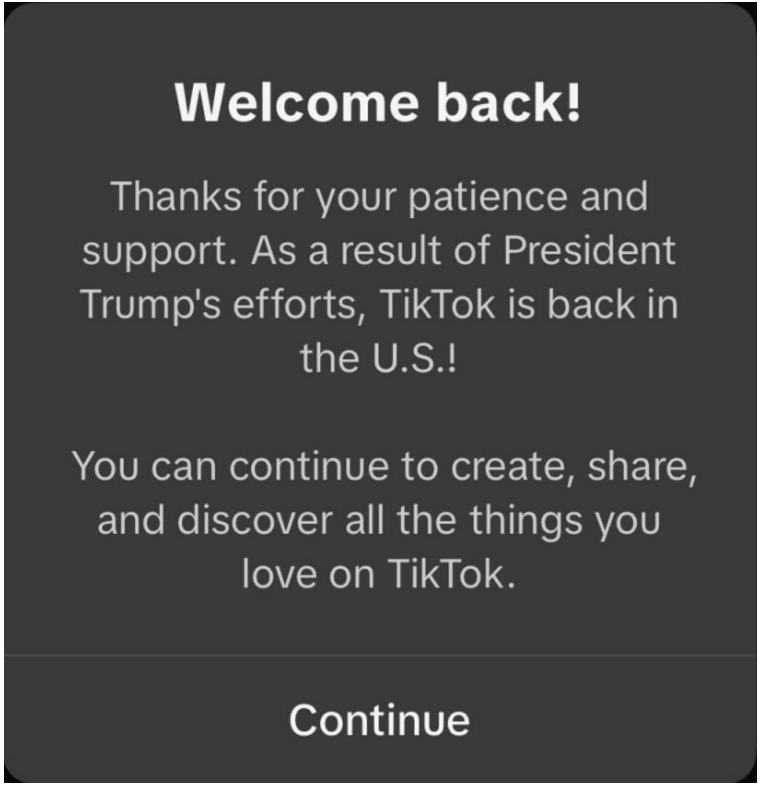
Source: PolitEcho (2021). Is your news feed a bubble? PolitEcho. [Link]. Image Source: Screenshot Via PolitEcho. Link.

A Counter-Imaginary: *Search Atlas* by Rodrigo Ochigame and Katherine Ye



Search Atlas allows users to cross digital borders. Information can be siloed within a country's borders. By exposing how the same query produces different results across regions, it makes visible the cultural, political, and algorithmic biases embedded in these systems.

Despite this, the US Supreme Court rules against TikTok, claiming divestiture "necessary to address its well-supported national security concerns regarding TikTok's data collection practices and relationship with a foreign adversary." TikTok shuts down voluntarily, to resume service a day later when Trump issues no penalties.



Source: Tiktok Inc. v. Garland. (2025). [Link]; Sources: Amy Howe (2025). Supreme Court upholds TikTok ban [Link]; Source: Caitlin Yilek (2025). TikTok starts restoring service in the U.S. after shutting down over divest-or-ban law [Link]. **Screenshot of TikTok announcing the app being unbanned in the United States**. TikTok. Wikimedia Commons. Link. *The depicted text is **ineligible for copyright** and therefore in the **public domain** because it is not a "literary work" or other protected type in sense of the local copyright law.*

Finally, Donald Trump signed an executive order to sell TikTok to a US based firm. TikTok continues to benefit from US-generated revenue and retains <20% ownership.



Sources: John Ruwitch (2025). Deal for TikTok creates U.S. joint venture, and government won't have a stake [Link]. P20250925JB-0765 President Donald Trump signs proclamations and executive orders. Wikimedia Commons. Link. The White House. As a work of the U.S. federal government, it is in the public domain.

The US takes a decidedly gradual and fragmented approach to data privacy legislation. Rather than protecting the right to privacy as a universal civil liberty, US federal law focuses its strictest protections on specific categories of vulnerable data and populations. Those groups include children, healthcare, and government information.



Source: Kokas, A. (2023). *Trafficking data: How China is winning the battle for digital sovereignty*. Oxford University Press.

Conclusion

The cases of Apple and TikTok show that data privacy continues to be marginalized by both the Chinese and US governments. The two countries restrict the other's access to citizens data, but this does not correlate with greater respect for civil liberties domestically.



Image source: Office of the Privacy Commissioner for Personal Data entrance 4. Squirist. 2019. Wikimedia Commons. Link. Creative Commons Attribution 4.0 International.

Citation Slide

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