

# Social Justice Watch 0627

[图集精选](#)

[消息精选](#)

[In China, a Lawsuit Galvanizes the Transgender Rights Movement](#)

[Nobody Ever Says “You Only Got Into MIT Because You’re an Asian Man”](#)

[Putin’s Long War Against American Science](#)

[What a machine learning tool that turns Obama white can \(and can’t\) tell us about AI bias](#)

来源：[Social Justice Watch](#)

[镜像](#)

# 图集精选

[返回目录](#)

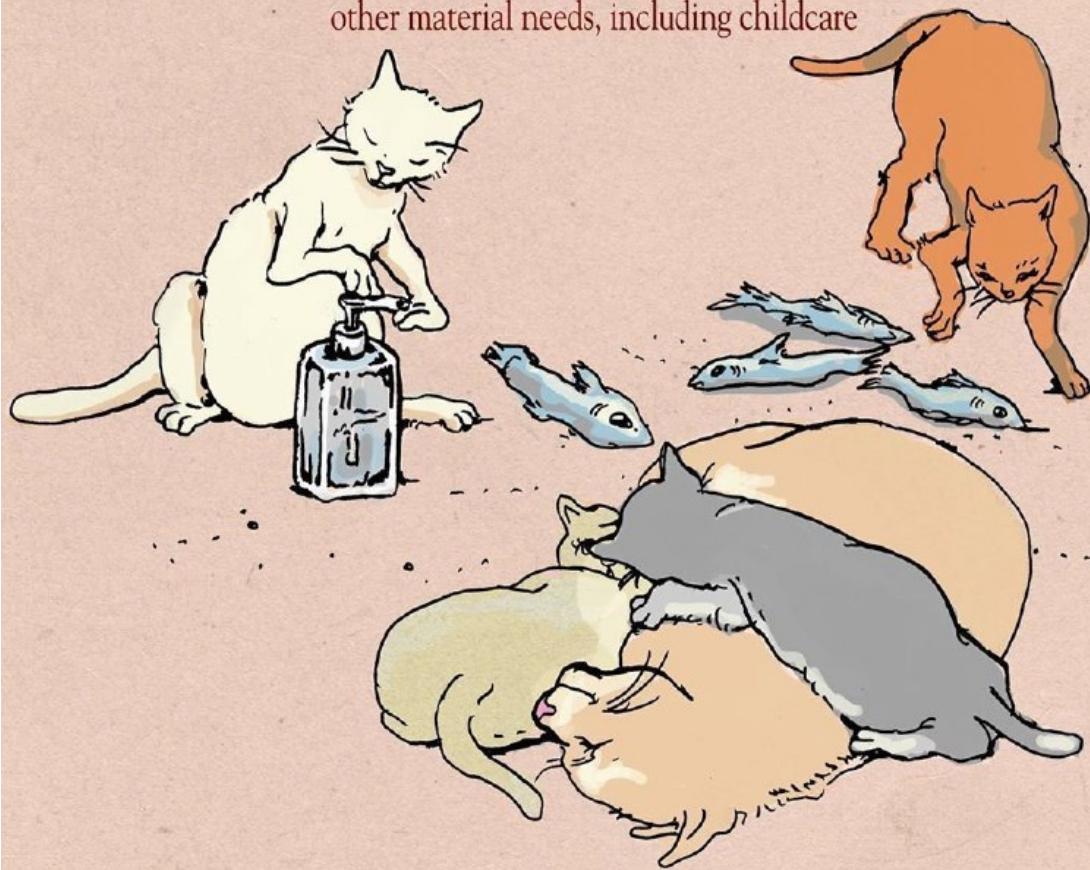


As a woman, I just want the same rights as a rattlesnake. [source](#)

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# **REPRODUCTIVE LABORERS**

protest supporters who provide  
food, water, hand sanitizer and  
other material needs, including childcare



## FRONTLINERS

use umbrellas to guard against projectiles and cameras while keeping hands free for when help is needed

## SHIELD SOLDIERS

frontliners who use impromptu shields to form a first line of defense



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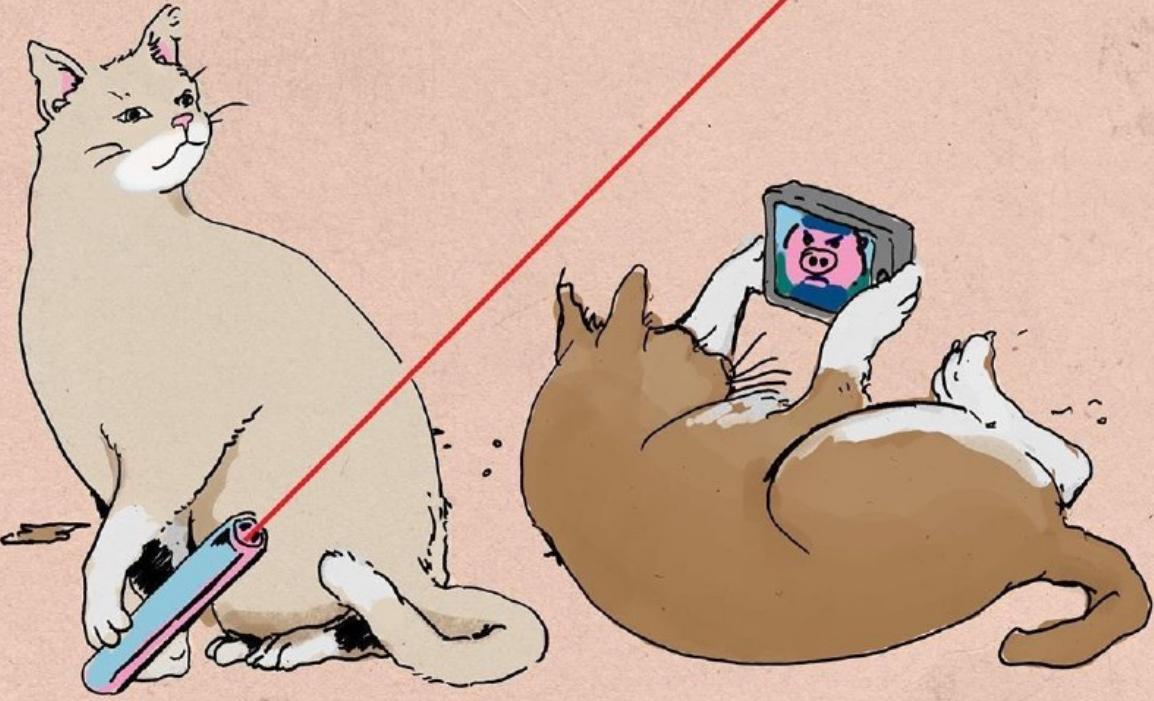
# FIRE SQUAD

protestors who use water and  
traffic cones to suppress  
and extinguish teargas containers



## **LIGHT MAGES**

protestors who use laser pointers to obstruct surveillance cameras, drones and police visors



## **COPWATCH**

protest supporters who use phones to record violent police and document police tactics and weaponry

# MEDICS

protest supporters who are able to treat injuries  
or have materials to treat teargas exposure



## ONLINE COMMS

online protestors who report on police strategies and provide protestors with real-time strategic updates using apps like Signal

## DESIGNERS

protest supporters who make inspiring images, infographics or banners for protestors





Donald J. Trump ✅  
@realDonaldTrump



So ridiculous. Greta must work on her Anger Management problem, then go to a good old fashioned movie with a friend! Chill Greta, Chill!

A photograph of a forest path with sunlight filtering through the trees. The screen shows a navigation bar with signal strength, T-Mobile, Wi-Fi, 8:53 AM, 81% battery, and a back arrow.

<

Follow

**Greta Thunberg ✅**

@GretaThunberg

A teenager working on her anger management problem. Currently chilling and watching a good old fashioned movie with a friend.

a boomer will never own a zoomer on social media. science won't allow it.  
[source](#)

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## Wisconsin

An 18 y/o black woman was SET ON FIRE yesterday by 4 WHITE MEN who approached her car at a stoplight screaming racial slurs at her before throwing lighter fluid and a match in her face.

She suffers from THIRD DEGREE BURNS to her body.

SAY HER NAME: ALTHEA BERNSTEIN [source](#)

[返回目录](#)

# 消息精选

[返回目录](#)

"After being slapped in the face for hours, he was compelled to accept an affidavit stating that he tried to subvert the gov by receiving funds from abroad"

[english.kyodonews.net/news/2020/06/6181e6aa2317-breaking-news-lawyer-accuses-china-of-extracting-confession-by-torture.html](http://english.kyodonews.net/news/2020/06/6181e6aa2317-breaking-news-lawyer-accuses-china-of-extracting-confession-by-torture.html)

Kyodo News+

Human rights lawyer accuses China of extracting confession by torture  
Chinese lawyer Wang Quanzhang, who was jailed for subversion as part of a nationwide crackdown on legal rights activists, says he was tortured by hitting and kicking during interrogations as well as forced to plead guilty by authorities

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[telegra.ph/In-China-a-Lawsuit-Galvanizes-the-Transgender-Rights-Movement-06-22](http://telegra.ph/In-China-a-Lawsuit-Galvanizes-the-Transgender-Rights-Movement-06-22)

Telegraph

In China, a Lawsuit Galvanizes the Transgender Rights Movement  
Days before starting his new job at an events company in the southern city of Guangzhou in February, Eddy decided it was time to have “the talk” with his boss. The 25-year-old — whose name has been changed for privacy reasons — is transgender, and he’d learned...

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[telegra.ph/Nobody-Ever-Says-You-Only-Got-Into-MIT-Because-Youre-an-Asian-Man-06-23](http://telegra.ph/Nobody-Ever-Says-You-Only-Got-Into-MIT-Because-Youre-an-Asian-Man-06-23)

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on our local BBS. I was...

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Imagine someone u love is fast asleep in bed after a long day of working to help others. Imagine that while she is asleep armed strangers break down her door & shoot her in her bed 8 times. If this was ur daughter or sister, u would want justice. [#BreonnaTalyor](#) deserves the same. [source](#)

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cop finds a tampon in their frappuccino: investigation is opened immediately

cops murder a black woman in her own home while she's asleep: no investigation, one of three officers involved is fired months later only due to national outrage [source](#)

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Democracy depends on an informed citizenry and social cohesion. Here's a look at how misinformation can spread through social media, and why it can hurt our ability to respond to crises. [link source](#)

Telegraph

Putin's Long War Against American Science

On Feb. 3, soon after the World Health Organization declared the coronavirus to be a global health emergency, an obscure Twitter account in Moscow began retweeting an American blog. It said the pathogen was a germ weapon designed to incapacitate and kill....

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Here's one feminist life rule of mine: I never judge a man based on how he treats women when they are coddling or praising him. Look closely at how a man reacts when a woman displeases him, stands up to him, or draws a boundary with him, and you will find out who he really is. [source](#)

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when girls mention sexual assaults men's first response is "happens to men too" yet when men talk about the high rates of male suicide which is a very valid problem in our society you will NEVER find a girl say "happens to girls too" because we understand basic empathy [source](#)

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[telegra.ph/What-a-machine-learning-tool-that-turns-Obama-white-can-and-can-tell-us-about-AI-bias-06-27-2](https://telegra.ph/What-a-machine-learning-tool-that-turns-Obama-white-can-and-can-tell-us-about-AI-bias-06-27-2)

Telegraph

What a machine learning tool that turns Obama white can (and can't) tell us about AI bias

It's a startling image that illustrates the deep-rooted biases of AI research. Input a low-resolution picture of Barack Obama, the first black president of the United States, into an algorithm designed to generate depixelated faces, and the output is a white...

[返回目录](#)

# In China, a Lawsuit Galvanizes the Transgender Rights Movement

[返回目录](#)



Days before starting his new job at an events company in the southern city of Guangzhou in February, Eddy decided it was time to have “the talk” with his boss.

The 25-year-old — whose name has been changed for privacy reasons — is transgender, and he’d learned through experience that his gender identity might cause issues with his new manager, a married woman in her 40s. He felt it would be better to be open from the beginning.

To his relief, the woman responded positively to their initial chat. “She said she was OK with it and emphasized she accepted and respected her sexual minority colleagues,” Eddy tells Sixth Tone.

But once Eddy started work, he quickly realized his boss’s acceptance only stretched so far.

When assigning tasks in the staff work group on social app WeChat, the woman

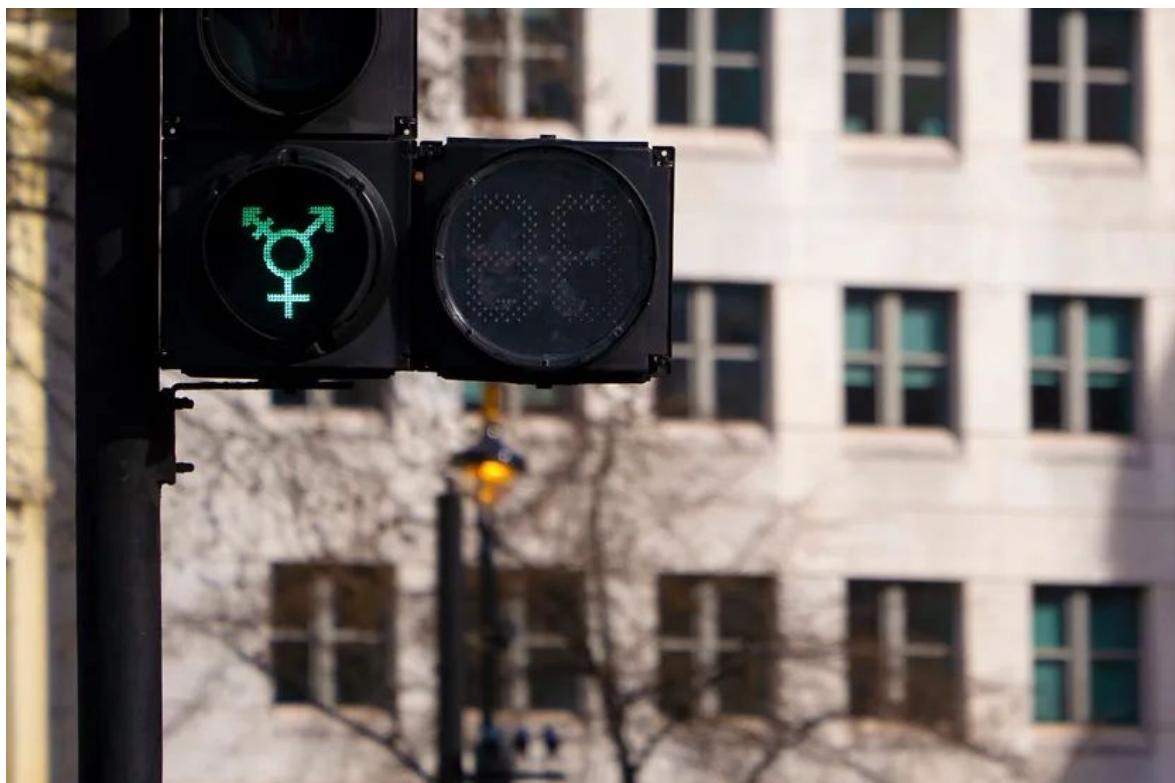
referred to Eddy as “she.” Eddy messaged her privately, asking if she could use the male pronoun in the future. This time, however, she was less understanding.

“She withdrew the message, but claimed I was asking for special treatment,” Eddy says.

Over the following week, Eddy tried to smooth things over with his boss. She asked him to make a list of issues to which she should pay attention, which he did. But when Eddy requested to have a single room or share with a male colleague on business trips, the boss refused, asserting it was “impossible” for anyone to see him as a man.

By May, Eddy felt so uncomfortable he decided to quit.

“It got awkward and affected my enthusiasm for my work,” he says. “I chose this job because I thought I wouldn’t have to handle this kind of issue here, but it still happened.”



Ross Deane/500px/People Visual

Eddy’s experience may be familiar to many of China’s estimated 4 million

transgender individuals. The Chinese public has become more tolerant toward sexual minorities over recent years, but not all LGBT groups have benefitted equally: The trans community remains largely invisible in society, with members consistently reporting they face barriers at home and at work.

Workplace discrimination is one of the most severe issues. According to a 2017 report, the unemployment rate among transgender Chinese is nearly 12% — three times higher than the official national rate at the time. Over 40% choose not to express their gender identity at work.

The pressure to conform to gender norms in the office — and fear of the consequences for not doing so — takes a severe toll on the mental health of China's trans workers, according to Huang Xi, founder of the Psychological Team for Trans People, a Guangzhou-based nonprofit that offers psychological support to transgender individuals.

"Trans people experience high levels of social and workplace discrimination and low levels of support, which leads to depression and anxiety," says Huang.

According to Huang, it's still common for trans people who come out at work to be discriminated against, fired, or demoted, which leads many to conceal their gender identities. Those working in state-owned enterprises and government units tend to be especially fearful, she says.

"Getting a promotion is hard for them, because employers might feel their mental state isn't stable, or they'll have surgery in the future, which they (employers) consider very troublesome," says Huang.

Now, however, transgender Chinese are starting to push back.

This past December, a court in the eastern city of Hangzhou heard one of China's first employment rights lawsuits involving discrimination against a transgender individual. The plaintiff, 31-year-old Jessy Ma, sued her former employer for unfair dismissal, having been fired shortly after undergoing gender confirmation surgery in October 2018.

Ma, who identifies and dresses as a woman, had been open about her gender identity since joining the cultural promotion agency in 2015. After she returned to work two months after her surgery, however, she says the company's human resources manager asked her to resign, since the firm was uncertain whether to

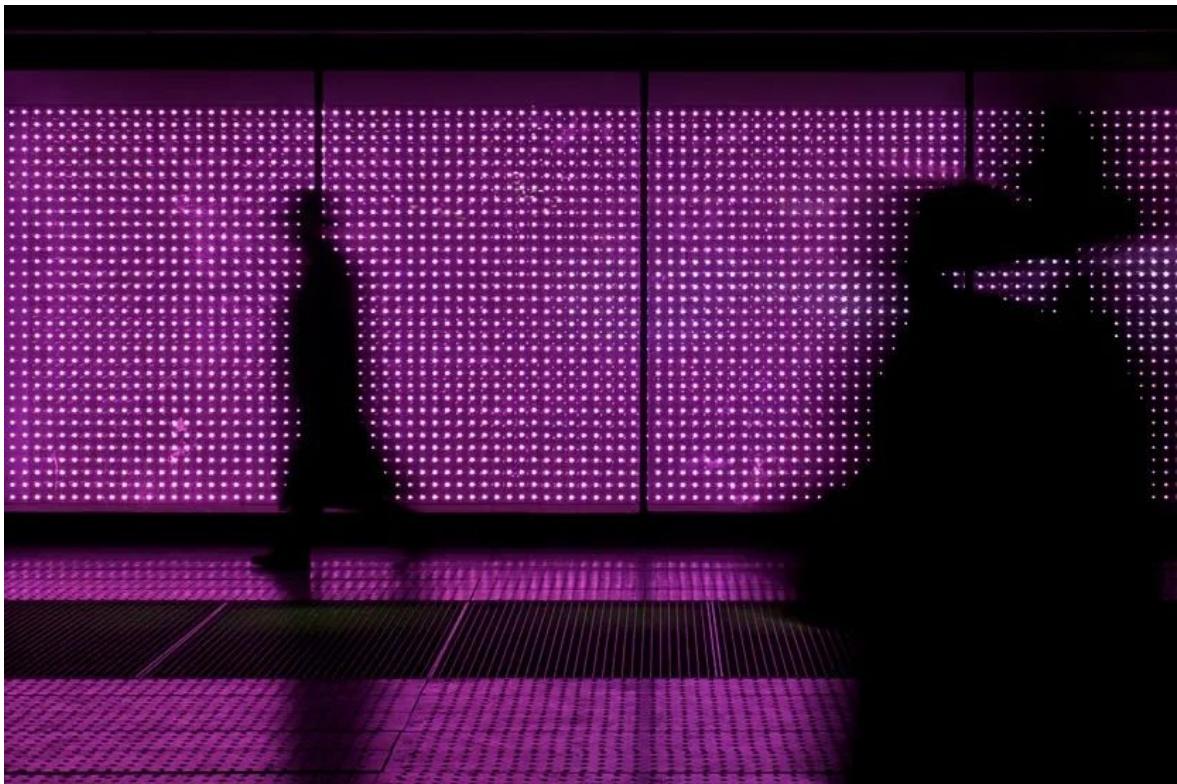
assign her a male or female role.

When Ma refused, the company terminated her contract on grounds of “excessive lateness.” Ma disputed this, arguing the firm had a flexible working culture and that she was the only person fired despite arriving at the same time as several other colleagues.

The case has triggered widespread discussion on Chinese social media, bringing issues such as gender reassignment and transgender rights further into the public consciousness than ever before. Ma, who sued for 10,000 yuan (\$1,400) in compensation and a public apology from her former company, tells Sixth Tone she hopes to inspire others to stand up and demand equal treatment.

“What I want is not just a winning outcome, but to help the general population know more about the transgender community and encourage more trans people to be who they really are,” says Ma.

In January, the court ruled against Ma, concluding there was insufficient evidence that her dismissal was related to her transgender identity. But Ma appealed soon after, and a second hearing took place in Hangzhou May 28. The verdict of this second hearing has yet to be announced.



## E+/People Visual

Zhang Jinghui, head attorney at Beijing Juan-Yong Law Firm, says workplace discrimination cases are difficult for former employees to win, unless they're meticulous in collecting evidence. But if Ma does emerge victorious, it would give other transgender people more confidence that China's legal system will give them a fair hearing, he adds.

"Pluralism is a future trend that needs to be propelled by some landmark, ground-breaking cases," says Zhang.

For Zhang, the courts offer the best avenue for the transgender community to assert their rights for equal treatment. Given the group's relatively small size compared to other social minorities, the lawyer believes it's unrealistic to expect the government to pass legislation focusing on transgender issues at this stage.

The Supreme People's Court, however, might be more easily persuaded to act, according to Zhang. If there are dozens of employment rights lawsuits involving transgender individuals and the cases attract public attention, he says the court may issue judicial interpretations and documents specifying under what conditions employers may legally terminate contracts with members of sexual minority groups.

Transgender Chinese have already scored some notable legal victories. In 2017, a plaintiff from the southwestern city of Guiyang filed a personality infringement lawsuit under China's tort law, alleging a company had fired him because of his gender expression.

The court was in favor of the plaintiff, concluding "the individual's gender identity and gender expression fall under the scope of protection of general personality rights" — the first time the terms "gender identity" and "gender expression" had been used in a Chinese legal judgment.

In another similar case in January, the judge recognized the importance of sex reassignment surgery and called on employers and their staff to treat transgender colleagues with tolerance.

Ma's willingness to fight back against her employer has made a deep impression on Eddy, the former music events company employee. He admits that if he'd been in her situation, he probably would have resigned to avoid trouble. But he

realizes that attitude can be self-defeating.

“After a while, I might find I have nowhere left to go,” he says.

Years of worrying about fitting in have worn Eddy down. As a cognitive science student in the United States, he lived as a woman for four years, fearing that coming out as transgender would condemn him to a lifetime of misery and marginalization. His struggles with his gender identity caused him to become depressed.

In 2017, Eddy moved back to China and started a 10-month internship in the southern city of Shenzhen. He earned the respect of his boss and was well liked by his colleagues, who assumed he was a lesbian because of his masculine gender expression. But he kept everyone at a distance, feeling it’d be unsafe to come out as transgender.

“I wish I could have lived as my authentic self and connected with my colleagues on a deeper level,” Eddy says. “But if I had come out, I knew I would’ve been treated differently, and it wasn’t a risk I could afford to take.”



Adriana Duduleanu/EyeEm/Getty Creative/People Visual

Huang, the nonprofit founder, says Chinese companies are gradually becoming more welcoming toward LGBT employees. But few employers take steps to accommodate the needs of trans individuals, leaving many employees feeling alienated.

“Driven by the pink economy, companies want to establish a diverse and inclusive corporate image and culture,” says Huang. “But their friendship is mainly aimed at the ‘LGB’ group. The ‘T’ is often ignored.”

Huang hopes domestic firms will eventually emulate multinational companies like Goldman Sachs and Lloyds Bank, which provide transgender employees undergoing gender confirmation surgery with financial support and paid vacation.

“It’ll take a long time for domestic enterprises to achieve that,” says Huang. “But if some multinational firms are willing to bring these policies to China, then it’ll show it’s possible to implement them here as well.”

There are some signs good practices are starting to spread. When Zx Ventures, part of global brewing conglomerate Anheuser-Busch InBev, opened offices in Shanghai three years ago, the firm provided male, female, and gender-neutral bathrooms throughout the building.



But for now, many transgender workers continue to live in fear. Kim, a 30-year-old who works as a mechanical engineer at a state-owned enterprise in Shanghai, had sex reassignment surgery in 2018, but told colleagues the operation was for prostatitis.

“Since the surgery, I’ve been constantly worried about being caught and fired,” says Kim, whose name has also been changed for privacy reasons.

As genderqueer, Kim’s gender expression shifts between masculine and feminine. Inside the company, however, Kim is simply perceived as a man who sometimes wears pink outfits and talks in a woman’s voice. These days, Kim keeps their hair short and tries not to stand out.

“They thought I was weird, and my boss asked me to consider other colleagues’ feelings and wear men’s clothes,” says Kim. “When they laugh at me, I just laugh with them.”

Jude Xiao, a 25-year-old transgender man, feels he’s paid a price for expressing his gender identity. After quitting his sales job in 2018, he applied for more than 300 jobs in Beijing and went on over 20 interviews, but didn’t get a single offer.

One rejection was particularly hard to take. A friend helped Xiao secure an interview at a publishing firm, and he felt the discussion went well, but he didn’t get the job. Later, his friend told him the HR manager had called Xiao “excellent in every way,” but said Xiao’s short undercut hairstyle wasn’t appropriate for a woman.

“I was shocked,” says Xiao. “I couldn’t help wondering if that was the reason I’d failed the other interviews, too.”

Eventually, economic pressures forced Xiao to lower his expectations and apply for less attractive jobs. He ended up taking a job at a movie theater owned by a film group, checking tickets and selling popcorn.

“HR thought it was great to find a graduate like me for such a position,” he says. “I started the day after the interview.”

Xiao now works for the film group’s online platform. His salary has been cut in half since the pandemic emerged, but he’s scared of leaving and being unable to find another job.

“I know it’ll be difficult to do it all over again,” says Xiao. “It makes me anxious.”

After his discouraging experience at the events company, Eddy isn’t sure when he’ll start looking for work. He’s currently helping out at a transgender nonprofit, writing music, translating texts, and organizing events.

“My parents support me financially,” he says. “I have the privilege to avoid working right now. But they don’t know I’m trans yet, so I don’t know how long this can last.”

*Additional reporting: Luo Meihan and Wu Ziyi; editor: Dominic Morgan.*

*(Header image: Falko Mueller Fotodesign/IC)*

[原文](#)

[返回目录](#)

# Nobody Ever Says “You Only Got Into MIT Because You’re an Asian Man”

[返回目录](#)



Photo courtesy Philip Guo

I started programming when I was 5, first with Logo and then BASIC. The picture above is me, age 9 (with horrible posture). By the time this photo was taken, I had already written several BASIC games that I distributed as shareware on our local BBS. I was fast growing bored, so my parents (both software engineers) gave me the original dragon compiler textbook from their grad school days. That’s when I started learning C and writing my own simple interpreters and compilers. My early interpreters were for BASIC, but by the time I entered high school I had already created a self-hosting compiler for a nontrivial subset

of C. Throughout most of high school, I spent weekends coding in x86 assembly, obsessed with hand-tuning code for the newly released Pentium II chips. When I started my freshman year at MIT as a computer science major, I already had over 10 years of programming experience. So I felt right at home there.

OK, all of the above was a lie. With one exception: That is me in the photo. When it was taken, I didn't even know how to touch-type. My parents were just like, "Quick, pose in front of our new computer!" (Look closely. My fingers aren't even in the right position.) My parents were both humanities majors, and there wasn't a single programming book in my house. In sixth grade I tried teaching myself BASIC for a few weeks, but quit because it was too hard. The only real exposure I had to programming prior to college was taking AP computer science in 11 grade, taught by a math teacher who had learned the material only a month before class started. Despite its shortcomings, that class inspired me to major in computer science in college. But when I started freshman year at MIT, I felt a bit anxious because many of my classmates actually *did* have over 10 years of childhood programming experience; I had less than one.

Even though I didn't grow up in a tech-savvy household and couldn't code my way out of a paper bag, I had one big thing going for me: I *looked like* I was good at programming. Here's me during freshman year of college:



Photo courtesy Philip Guo

As an Asian male student at MIT, I fit society's image of a young programmer. Thus, throughout college, nobody ever said to me (as they said to some other CS students I knew):

- “Well, you only got into MIT because you’re an Asian boy.”
- (*while struggling with a problem set*) “Well, not everyone is cut out for computer science; have you considered majoring in bio?”
- (*after being assigned to a class project team*) “How about you just design the graphics while we handle the backend? It’ll be easier for everyone that way.”
- “Are you sure you know how to do this?”

Although I started off as a complete novice (like everyone once was), I never faced any micro-inequities that impeded my intellectual growth. Throughout college and grad school, I gradually learned more and more via classes, research, and internships, incrementally taking on harder and harder projects, and getting better and better at programming while falling deeper and deeper in love with it. Instead of doing my 10 years of deliberate practice from ages 8 to 18, I did mine

from ages 18 to 28. And nobody ever got in the way of my learning—not even inadvertently—probably because I looked like the sort of person who would be good at such things. (The software engineer Tess Rinearson writes about this dynamic from a different perspective in her essay “On Technical Entitlement.”)

Instead of facing implicit bias or stereotype threat, I had the privilege of implicit endorsement. For instance, whenever I attended technical meetings, people would assume that I knew what I was doing (regardless of whether I did or not) and treat me accordingly. If I stared at someone in silence and nodded as they were talking, they would assume that I understood, not that I was clueless. Nobody ever talked down to me, and I always got the benefit of the doubt in technical settings.

As a result, I was able to fake it till I made it, often landing jobs whose postings required skills I hadn’t yet learned but knew that I could pick up on the spot. Most of my interviews for research assistantships and summer internships were quite casual—people just gave me the chance to try. And after enough rounds of practice, I actually did start knowing what I was doing. As I gained experience, I was able to land more meaningful programming jobs, which led to a virtuous cycle of further improvement.

This kind of privilege that I and other people who looked like me possessed was silent, manifested not in what people said to us, but rather in what they didn’t say. We had the privilege to spend enormous amounts of time developing technical expertise without anyone’s interference or implicit discouragement. Sure, we worked really hard, but our efforts directly translated into skill improvements without much loss due to interpersonal friction. Because we looked the part.

In contrast, ask any computer science major who isn’t from a majority demographic (i.e., white or Asian male), and I guarantee that he or she has encountered discouraging comments such as “You know, not everyone is cut out for computer science.” They probably still remember the words and actions that have hurt the most, even though those making the remarks often aren’t trying to harm.

For example, one of my good friends took the Intro to Java course during freshman year and enjoyed it. She wanted to get better at Java GUI programming, so she got a summer research assistantship at the MIT Media Lab.

However, instead of letting her build the GUI (like the job ad described), the supervisor assigned her the mind-numbing task of hand-transcribing audio clips all summer long. He assigned a new male student to build the GUI application. And it wasn't like that student was a programming prodigy—he was also a freshman with the same amount of (limited) experience that she had. The other student spent the summer getting better at GUI programming while she just grinded away mindlessly transcribing audio. As a result, she grew resentful and shied away from learning more CS.

Thinking about this story always angers me. Here was someone with a natural interest who took the initiative to learn more and was denied the opportunity to do so. I have no doubt that my friend could have gotten good at programming—and really enjoyed it—if she had the same opportunities as I did. (It didn't help that when she was accepted to MIT, her aunt—whose son had been rejected—congratulated her by saying, "Well, you only got into MIT because you're a girl.")

Over a decade later, she now does some programming at her research job, but wishes that she had learned more back in college. However, she had such a negative association with everything CS-related that it was hard to motivate herself to do so for fear of being shot down again.

One trite retort is "Well, your friend should've been tougher and not given up so easily. If she wanted it badly enough, she should've tried again, even knowing that she might face resistance." These sorts of remarks aggravate me. Writing code for a living isn't like being a Navy SEAL sharpshooter. Programming is seriously *not* that demanding, so you shouldn't need to be a tough-as-nails superhero to enter this profession.

Just look at this photo of me from a software engineering summer internship:



Photo courtesy Philip Guo

Even though I was hacking on a hardware simulator in C++, which sounds mildly hard-core, I was actually pretty squishy, chillin' in my cubicle and often taking extended lunch breaks. All of the guys around me (yes, the programmers were all men, with the exception of one older woman who didn't hang out with us) were also fairly squishy. These guys made a fine living and were good at what they did; but they weren't superheroes. The most hardship that one of the guys faced all summer was staying up late playing *Doom 3* and then rolling into the office dead-tired the next morning. Anyone with enough practice and motivation could have done our jobs, and most other programming and CS-related jobs as well. Seriously, companies aren't looking to hire the next Steve Wozniak—they just want to ship code that works.

It frustrates me that people not in the majority demographic often need to be tough as nails to succeed in this field, constantly bearing the lasting effects of thousands of micro-inequities. *Psychology Today* notes that according to one researcher, Mary Rowe:

[M]icro-inequities often had serious cumulative, harmful effects, resulting in hostile work environments and continued minority discrimination in

public and private workplaces and organizations. What makes micro-inequities particularly problematic is that they consist in micro-messages that are hard to recognize for victims, bystanders and perpetrators alike. When victims of micro-inequities do recognize the micro-messages ... it is exceedingly hard to explain to others why these small behaviors can be a huge problem.

In contrast, people who look like me can just kinda do programming for work if we want, or not do it, or switch into it later, or out of it again, or work quietly, or nerd-rant on how Ruby sucks or rocks or whatever, or name-drop monads. And nobody will make remarks about our appearance, about whether we're truly dedicated hackers, or how our behavior might reflect badly on "our kind" of people. *That's* silent technical privilege.

Ideally, we want to spur interest in young people from underrepresented demographics who might never otherwise think to pursue CS or STEM studies. There are great people and organizations working toward this goal. Although I think that increased and broader participation is critical, a more immediate concern is reducing attrition of those already in the field. For instance, according to a 2012 STEM education report to the president:

[E]conomic forecasts point to a need for producing, over the next decade, approximately 1 million more college graduates in STEM fields than expected under current assumptions. Fewer than 40% of students who enter college intending to major in a STEM field complete a STEM degree. Merely increasing the retention of STEM majors from 40% to 50% would generate three quarters of the targeted 1 million additional STEM degrees over the next decade.

That's why I plan to start by taking steps to encourage and retain those who already want to learn. So here's a thought experiment: For every white or Asian male expert programmer you know, imagine a parallel universe where they were of another ethnicity and/or gender but had the exact same initial interest and aptitude levels. Would they still have been willing to devote the 10,000-plus hours of deliberate practice to achieve mastery in the face of dozens or hundreds of instances of implicit discouragement they would inevitably encounter over the years? Sure, some super-resilient outliers would, but many wouldn't. Many of us would quit, even though we had the potential and interest to thrive in this field.

I hope to live in a future where people who already have the interest to pursue CS or programming don't self-select themselves out of the field. I want those people to experience what I was privileged enough to have gotten in college and beyond: unimpeded opportunities to develop expertise in something that they find beautiful, practical, and fulfilling.

*This piece is adapted from Guo's blog.*

[原文](#)

[返回目录](#)

# Putin's Long War Against American Science

[返回目录](#)



A decade of health disinformation promoted by President Vladimir Putin of Russia has sown wide confusion, hurt major institutions and encouraged the spread of deadly illnesses.

On Feb. 3, soon after the World Health Organization declared the coronavirus to be a global health emergency, an obscure Twitter account in Moscow began retweeting an American blog. It said the pathogen was a germ weapon designed to incapacitate and kill. The headline called the evidence “irrefutable” even though top scientists had already debunked that claim and declared the novel virus to be natural.

As the pandemic has swept the globe, it has been accompanied by a dangerous surge of false information — an “infodemic,” according to the World Health

Organization. Analysts say that President Vladimir V. Putin of Russia has played a principal role in the spread of false information as part of his wider effort to discredit the West and destroy his enemies from within.

The House, the Senate and the nation's intelligence agencies have typically focused on election meddling in their examinations of Mr. Putin's long campaign. But the repercussions are wider. An investigation by The New York Times — involving scores of interviews as well as a review of scholarly papers, news reports, and Russian documents, tweets and TV shows — found that Mr. Putin has spread misinformation on issues of personal health for more than a decade.

His agents have repeatedly planted and spread the idea that viral epidemics — including flu outbreaks, Ebola and now the coronavirus — were sown by American scientists. The disinformers have also sought to undermine faith in the safety of vaccines, a triumph of public health that Mr. Putin himself promotes at home.

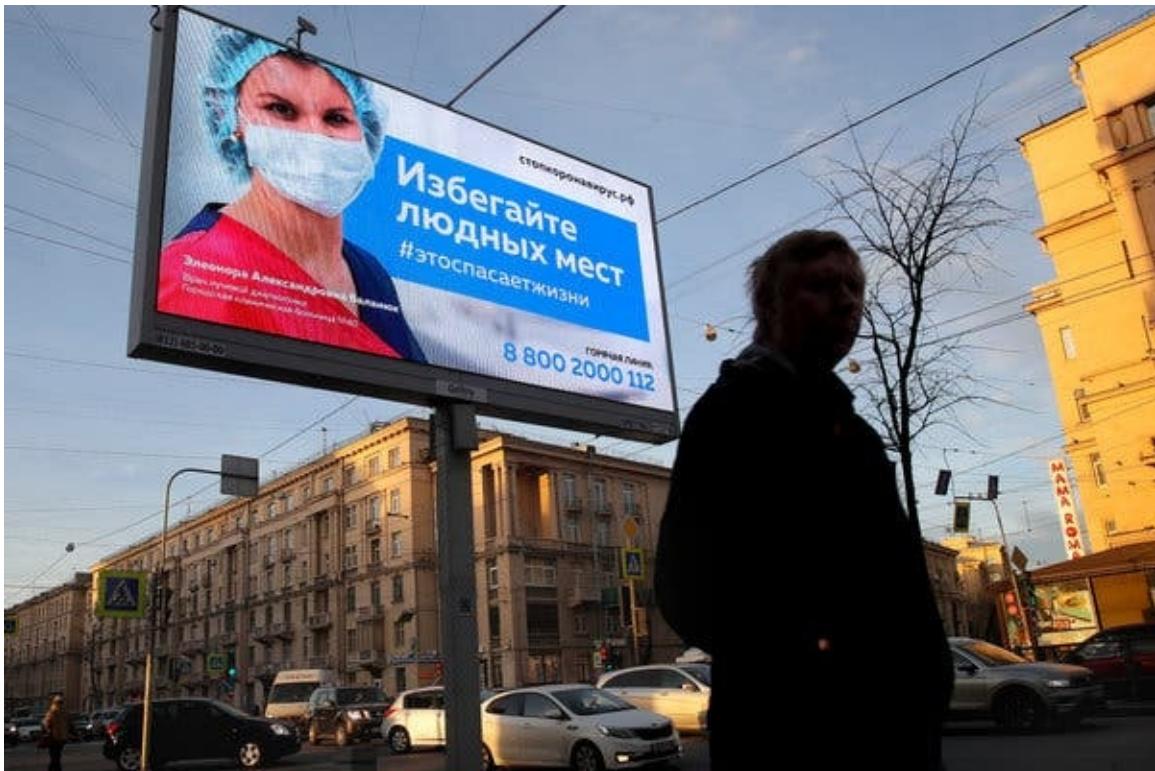
Moscow's aim, experts say, is to portray American officials as downplaying the health alarms and thus posing serious threats to public safety.

"It's all about seeding lack of trust in government institutions," Peter Pomerantsev, author of "Nothing Is True and Everything Is Possible," a 2014 book on Kremlin disinformation, said in an interview.

The Russian president has waged his long campaign by means of open media, secretive trolls and shadowy blogs that regularly cast American health officials as patronizing frauds. Of late, new stealth and sophistication have made his handiwork harder to see, track and fight.

Even so, the State Department recently accused Russia of using thousands of social media accounts to spread coronavirus misinformation — including a conspiracy theory that the United States engineered the deadly pandemic.

The Kremlin's audience for open disinformation is surprisingly large. The YouTube videos of RT, Russia's global television network, average one million views per day, "the highest among news outlets," according to a U.S. intelligence report. Since the founding of the Russian network in 2005, its videos have received more than four billion views, analysts recently concluded.



Because public interest in wellness and longevity runs high, health disinformation can have a disproportionately large social impact. Experts fear that it will foster public cynicism that erodes Washington's influence as well as the core democratic value of relying on demonstrable facts as a basis for decision-making.

"The accumulation of these operations over a long period of time will result in a major political impact," Ladislav Bittman, a former Soviet bloc disinformation officer, said in explaining the Kremlin's long-game rationale.

Sandra C. Quinn, a professor of public health at the University of Maryland who has followed Mr. Putin's vaccine scares for more than a half-decade, said the Russian president was drawing on an old playbook. "The difference now is the speed with which it spreads, and the denigration of the institutions that we rely on to understand the truth," she said in an interview. "I think we're in dangerous territory."

## Living weapons

As a young man, Mr. Putin served in the K.G.B., the Soviet Union's main

intelligence agency, from 1975 to 1991. He worked in foreign intelligence, which required its officers to spend a quarter of their time conceiving and implementing plans for sowing disinformation. What Mr. Putin accomplished is unclear. But public accounts show that he rose to the rank of lieutenant colonel, and that his 16-year tenure coincided with a major K.G.B. operation to deflect attention from Moscow's secret arsenal of biological weapons, which it built in contravention of a treaty signed with the United States in 1972.

The K.G.B. campaign — which cast the deadly virus that causes AIDS as a racial weapon developed by the American military to kill black citizens — was wildly successful. By 1987, fake news stories had run in 25 languages and 80 countries, undermining American diplomacy, especially in Africa. After the Cold War, in 1992, the Russians admitted that the alarms were fraudulent.

As Russia's president and prime minister, Mr. Putin has embraced and expanded the playbook, linking any natural outbreak to American duplicity. Attacking the American health system, and faith in it, became a hallmark of his rule.

At first, his main disseminator of fake news was Russia Today, which he founded in 2005 in Moscow; in 2008 it was renamed RT, obscuring its Russian origins.

Early in 2009, a particularly virulent flu, named H1N1, swept the globe, and thousands of people died. That year, the network featured the conspiratorial views of Wayne Madsen, a regular contributor in Washington whom it described as an investigative journalist. In at least nine shows and text bulletins, Mr. Madsen characterized the deadly germ as bioengineered. "The world is actually fighting a man-made tragedy," one bulletin declared.

That June, Mr. Madsen told RT viewers that the virus makers had worked at a shadowy mix of laboratories, including the Army Medical Research Institute of Infectious Diseases at Fort Detrick, in Frederick, Md. The institute's official job is to help defend the United States against the kinds of pathogens that Mr. Madsen accused it of creating.

In a follow-up show, Mr. Madsen said the virus had been spliced together from other flu strains, including the virus responsible for the 1918 pandemic, and likened its creators to the mad scientists of "Jurassic Park," the hit movie about resurrected dinosaurs. RT's chyron for the show characterized the result as

“Germ Warfare.”

In 2010, the network founded a new arm, RT America, a few blocks from the White House. Mr. Madsen became a regular on-camera guest.

In 2012 Mr. Putin added the military to his informational arsenal. His newly appointed head of the Russian Army, Gen. Valery Gerasimov, laid out a new doctrine of war that stressed public messaging as a means of stirring foreign dissent. That same year, a shadowy group of trolls in St. Petersburg began using Facebook, Twitter and Instagram to fire salvos of junk information at millions of Americans. The goals were to boost social polarization and damage the reputation of federal agencies.

A rich opportunity arose in 2014 when Ebola swept West Africa. It was the worst-ever outbreak of the hemorrhagic fever, eventually claiming more than 10,000 lives.

RT’s gallery of alleged criminals once again included the U.S. Army. The network profiled an accusation by Cyril Broderick, a former plant pathologist, who claimed in a Liberian newspaper article that the outbreak was an American plot to turn Africans into bioweapon guinea pigs, and cited the AIDS accusation as supporting evidence.

The RT presenter noted that the United States was spending hundreds of millions of dollars to aid Ebola victims in Africa but added: “It can’t buy back the world’s trust.”

The trolls in St. Petersburg amplified the claim on Twitter. The deadly virus “is government made,” one tweet declared. Another series of tweets called the microorganism “just a regular bio weapon.” The idea found an audience. The hip-hop artist Chris Brown echoed it in 2014, telling his 13 million Twitter followers, “I think this Ebola epidemic is a form of population control.”

### **C.D.C. in the cross hairs**

Mr. Putin’s campaign of health misinformation was now a global enterprise, with the creative energy of a fun house and the ability to strike anywhere.

The next target was the Centers for Disease Control and Prevention, the United

States' flagship public health agency. In late 2014, a rash of fake news reports falsely claimed that an Ebola victim in Liberia had been flown to Atlanta, starting a local outbreak. A YouTube video showed what it described as C.D.C. personnel, in hazmat suits, receiving and moving the patient in secret. The deceptive video included a truck bearing the logo of the Atlanta airport.

A rush of tweets turned up the volume. “Panic here in ATL!!” one stated. Another exclaimed, “OMG! Ebola is everywhere!”

As the Kremlin grew more confident, it began to simply recycle old narratives rather than wait for new epidemics to emerge. In 2017, Russian trolls used Twitter to give the AIDS falsehood new life. This time the claimed perpetrator was Dr. Robert Gallo, a scientist who in 1984 had actually helped discover the virus that causes AIDS. The tweets quoted him, falsely, as saying he had designed the pathogen to depopulate humanity. The trolls cited a website, World Truth. Its video attacking Dr. Gallo registered nearly four million views.

Six researchers centered at the University of California, Los Angeles, found that, over decades, the false narratives around AIDS had fostered a “lack of trust” among African-Americans that kept many from seeking medical care. Their 2018 study, of hundreds of black men in Los Angeles who have sex with men, reported that nearly half the interviewees thought the virus responsible for AIDS had been manufactured. And more than one-fifth viewed people who take new protective drugs as “human guinea pigs for the government.”

### **Beleaguered defenders**

Within Russia, Mr. Putin has been a staunch proponent of vaccines.

“I make sure I get my vaccinations in time, before the flu season starts,” he told listeners to a 2016 call-in show. At a televised meeting with doctors in St. Petersburg, in 2018, he scolded Russian parents who refuse to vaccinate their kids: “They endanger the lives of their own children.”

Calling the issue “very important,” he warned of possible administrative steps to speed the pace of childhood immunizations. Last fall, Russia’s health authorities laid out expanded rules that require strict new adherence to protocols for childhood vaccination.

At the same time, Mr. Putin has worked hard to encourage Americans to see vaccinations as dangerous and federal health officials as malevolent. The threat of autism is a regular theme of this anti-vaccine campaign. The C.D.C. has repeatedly ruled out the possibility that vaccinations lead to autism, as have many scientists and top journals. Nonetheless the false narrative has proliferated, spread by Russian trolls and media.

Moreover, the disinformation has sought to implicate the C.D.C. in a cover-up. For years, tweets originating in St. Petersburg have claimed that the health agency muzzled a whistle-blower to hide evidence that vaccines cause autism, especially in male African-American infants. Medical experts have dismissed the allegation, but it reverberated.

In a series of 2015 tweets, Russian trolls promoted a video of a black minister in Los Angeles addressing a rally. “They’re not just shooting us with guns,” he told the audience. “They’re killing us with needles.” The minister and accompanying text in the video claimed that childhood immunizations had caused autism in 200,000 black children.

RT America echoed the charge. It focused on “Vaxxed: From Cover-Up to Catastrophe,” a 2016 film by Andrew Wakefield, a discredited anti-vaccine activist. When the film was pulled from the Tribeca Film Festival after a public outcry, the network aired an interview with its creators. “Can we trust the C.D.C. on vaccines?” a plug for the show asked.

Russian trolls fired off tweets containing links to the film and a fund-raising site for its promotion. One claimed that autism rates were about to skyrocket to “1 in 2” vaccinated children.

Mr. Putin’s disinformation blitz has coincided with a drop in vaccination rates among children in the United States and a rise in measles, a disease once considered vanquished. The virus, especially in infants and young children, can cause fevers and brain damage. Last year, according to the C.D.C., the United States had 1,282 new cases, a record in recent decades; of these, 128 involved hospitalizations and 61 resulted in major complications such as pneumonia and encephalitis.

## **The new threat**

The Moscow site that retweeted the coronavirus blog in February belongs to a Russian news outlet called The Russophile. It is tauntingly bold. The author portrait on its Twitter page shows an unidentifiable soldier in green fatigues holding an orange tabby cat. The background image is a colorized Kremlin mosaic. The site calls itself a “news feed from free (= not owned by the globalist elite) media.”

On the site’s About page, under the heading “Some more reasons for our existence,” is a quote attributed to President Abraham Lincoln: “You can fool some of the people all of the time, and all of the people some of the time, but you cannot fool all of the people all of the time.”

The website lists its owner’s name as OOKremlinTrolls and its street address as an imposing building next door to the offices of Lukoil, a Russian oil giant tied to Cambridge Analytica’s digital campaigns to sway American voters. “It’s a nice part of town,” Darren L. Linvill, a Clemson University expert who uncovered the retweets, said of the Russophile address.

The site epitomizes the complicated nature of the new threat, parts of which have evolved to become more open, while others have grown stealthier. “It’s a cloud of Russian influencers,” said Dr. Linvill, a professor of communications who has studied millions of troll postings. The players, he said, probably include state actors, intelligence operatives, former RT staff members and the digital teams of Yevgeny Prigozhin, a secretive oligarch and confidant of Mr. Putin’s who financed the St. Petersburg troll farm.

The new brand of disinformation is subtler than the old. Dr. Linvill and his colleague Patrick L. Warren have argued that Mr. Putin’s new methodology seeks less to create than to curate — to retweet and amplify the existing American cacophony, raising the level of confusion and partisan discord.

Much of the disinformation, like the Russophile site, lies hidden in plain sight. But other elements embody a new sophistication that makes it increasingly hard for tech companies to ferret out the interference of Russia, or any other country. Experts say that Russian trolls may even be paying Americans to post disinformation on their behalf, to better hide their digital fingerprints.

On March 5, Lea Gabrielle, head of the State Department’s Global Engagement Center, which seeks to identify and fight disinformation, told a Senate hearing

that Moscow had pounced on the coronavirus outbreak as a new opportunity to sow chaos and division — to “take advantage of a health crisis where people are terrified.”

“The entire ecosystem of Russian disinformation has been engaged,” she reported. Her center’s analysts and partners, Ms. Gabrielle added, have found “Russian state proxy websites, official state media, as well as swarms of online false personas pushing out false narratives.”

RT America dismissed the department’s charges, which were first made in February, as “loosely detailed.” In her March testimony, Ms. Gabrielle said that her center had intentionally made public few details and examples of the disinformation, so that adversaries could not decipher “our tradecraft,” presumably in an effort to foil countermeasures.

Tass, the Russian news agency, reported that the Foreign Ministry firmly rejected the State Department’s charge. That response echoes an iron rule of disinformation. As Oleg Kalugin, a former K.G.B. general, put it in a video interview with The Times: “Deny, deny, deny — even if the truth is obvious.”

Beijing now appears to be borrowing from Mr. Putin’s playbook, at least the early drafts. It recently declared that the coronavirus was devised by Washington as a designer weapon meant to cripple China.

Mr. Putin has disseminated false and alarming health narratives not only about pathogens and vaccines but also about radio waves, bioengineered genes, industrial chemicals and other intangibles of modern life. The knotty topics often defy public understanding, making them ideal candidates for sowing confusion over what’s safe and dangerous.

Analysts see an effort not only to undermine American officials but also to accomplish something more basic: to damage American science, a foundation of national prosperity. American researchers have won more than 100 Nobel Prizes since 2000, and Russians five. Geographically, Russia is the world’s largest country, but its economy is smaller than Italy’s.

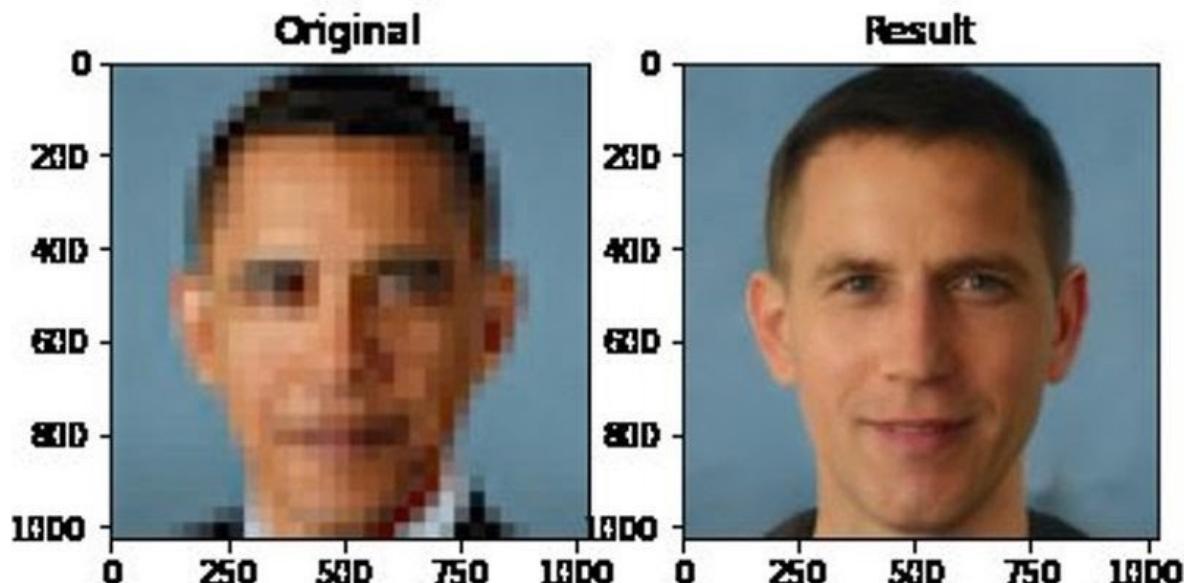
As Dr. Quinn of the University of Maryland put it, Mr. Putin’s salvos are targeting “the institutions that we rely on to understand the truth.”

[原文](#)

[返回目录](#)

# What a machine learning tool that turns Obama white can (and can't) tell us about AI bias

[返回目录](#)



The PULSE algorithm takes pixelated faces and turns them into high-resolution images.

It's a startling image that illustrates the deep-rooted biases of AI research. Input a low-resolution picture of Barack Obama, the first black president of the United States, into an algorithm designed to generate depixelated faces, and the output is a white man.

It's not just Obama, either. Get the same algorithm to generate high-resolution

images of actress Lucy Liu or congresswoman Alexandria Ocasio-Cortez from low-resolution inputs, and the resulting faces look distinctly white. As one popular tweet quoting the Obama example put it: “This image speaks volumes about the dangers of bias in AI.”

But what’s causing these outputs and what do they really tell us about AI bias?

First, we need to know a little a bit about the technology being used here. The program generating these images is an algorithm called PULSE, which uses a technique known as upscaling to process visual data. Upscaling is like the “zoom and enhance” tropes you see in TV and film, but, unlike in Hollywood, real software can’t just generate new data from nothing. In order to turn a low-resolution image into a high-resolution one, the software has to fill in the blanks using machine learning.

In the case of PULSE, the algorithm doing this work is StyleGAN, which was created by researchers from NVIDIA. Although you might not have heard of StyleGAN before, you’re probably familiar with its work. It’s the algorithm responsible for making those eerily realistic human faces that you can see on websites like ThisPersonDoesNotExist.com; faces so realistic they’re often used to generate fake social media profiles.



*A sample of faces created by StyleGAN, the algorithm that powers PULSE.* What PULSE does is use StyleGAN to “imagine” the high-res version of pixelated inputs. It does this not by “enhancing” the original low-res image, but by generating a completely new high-res face that, when pixelated, looks the same as the one inputted by the user.

This means each depixelated image can be upscaled in a variety of ways, the same way a single set of ingredients makes different dishes. It’s also why you can use PULSE to see what Doom guy, or the hero of Wolfenstein 3D, or even the crying emoji look like at high resolution. It’s not that the algorithm is “finding” new detail in the image as in the “zoom and enhance” trope; it’s instead inventing new faces that revert to the input data.

This sort of work has been theoretically possible for a few years now, but, as is often the case in the AI world, it reached a larger audience when an easy-to-run version of the code was shared online this weekend. That’s when the racial disparities started to leap out.

PULSE’s creators say the trend is clear: when using the algorithm to scale up pixelated images, the algorithm more often generates faces with Caucasian

features.

## “THIS BIAS IS LIKELY INHERITED FROM THE DATASET”

“It does appear that PULSE is producing white faces much more frequently than faces of people of color,” wrote the algorithm’s creators on Github. “This bias is likely inherited from the dataset StyleGAN was trained on [...] though there could be other factors that we are unaware of.”

In other words, because of the data StyleGAN was trained on, when it’s trying to come up with a face that looks like the pixelated input image, it defaults to white features.

This problem is extremely common in machine learning, and it’s one of the reasons facial recognition algorithms perform worse on non-white and female faces. Data used to train AI is often skewed toward a single demographic, white men, and when a program sees data *not* in that demographic it performs poorly. Not coincidentally, it’s white men who dominate AI research.

But exactly what the Obama example reveals about bias and how the problems it represents might be fixed are complicated questions. Indeed, they’re so complicated that this single image has sparked heated disagreement among AI academics, engineers, and researchers.

On a technical level, some experts aren’t sure this is even an example of dataset bias. The AI artist Mario Klingemann suggests that the PULSE selection algorithm itself, rather than the data, is to blame. Klingemann notes that he was able to use StyleGAN to generate more non-white outputs from the same pixelated Obama image, as shown below:

These faces were generated using “the same concept and the same StyleGAN model” but different search methods to Pulse, says Klingemann, who says we can’t really judge an algorithm from just a few samples. “There are probably millions of possible faces that will all reduce to the same pixel pattern and all of them are equally ‘correct,’” he told *The Verge*.

(Incidentally, this is also the reason why tools like this are unlikely to be of use for surveillance purposes. The faces created by these processes are imaginary and, as the above examples show, have little relation to the ground truth of the input. However, it’s not like huge technical flaws have stopped police from

adopting technology in the past.)

But regardless of the cause, the outputs of the algorithm seem biased — something that the researchers didn't notice before the tool became widely accessible. This speaks to a different and more pervasive sort of bias: one that operates on a social level.

**"PEOPLE OF COLOR ARE NOT OUTLIERS. WE'RE NOT 'EDGE CASES' AUTHORS CAN JUST FORGET."**

Deborah Raji, a researcher in AI accountability, tells *The Verge* that this sort of bias is all too typical in the AI world. "Given the basic existence of people of color, the negligence of not testing for this situation is astounding, and likely reflects the lack of diversity we continue to see with respect to who gets to build such systems," says Raji. "People of color are not outliers. We're not 'edge cases' authors can just forget."

The fact that some researchers seem keen to only address the data side of the bias problem is what sparked larger arguments about the Obama image. Facebook's chief AI scientist Yann LeCun became a flashpoint for these conversations after tweeting a response to the image saying that "ML systems are biased when data is biased," and adding that this sort of bias is a far more serious problem "in a deployed product than in an academic paper." The implication being: let's not worry too much about this particular example.

Many researchers, Raji among them, took issue with LeCun's framing, pointing out that bias in AI is affected by wider social injustices and prejudices, and that simply using "correct" data does not deal with the larger injustices.

## EVEN "UNBIASED" DATA CAN PRODUCE BIASED RESULTS

Others noted that even from the point of view of a purely technical fix, "fair" datasets can often be anything but. For example, a dataset of faces that accurately reflected the demographics of the UK would be predominantly white because the UK is predominantly white. An algorithm trained on this data would perform better on white faces than non-white faces. In other words, "fair" datasets can still create biased systems. (In a later thread on Twitter, LeCun acknowledged there were multiple causes for AI bias.)

Raji tells *The Verge* she was also surprised by LeCun's suggestion that

researchers should worry about bias less than engineers producing commercial systems, and that this reflected a lack of awareness at the very highest levels of the industry.

“Yann LeCun leads an industry lab known for working on many applied research problems that they regularly seek to productize,” says Raji. “I literally cannot understand how someone in that position doesn’t acknowledge the role that research has in setting up norms for engineering deployments.”

When contacted by *The Verge* about these comments, LeCun noted that he’d helped set up a number of groups, inside and outside of Facebook, that focus on AI fairness and safety, including the Partnership on AI. “I absolutely never, ever said or even hinted at the fact that research does not play a role in setting up norms,” he told *The Verge*.

Many commercial AI systems, though, are built directly from research data and algorithms without any adjustment for racial or gender disparities. Failing to address the problem of bias at the research stage just perpetuates existing problems.

In this sense, then, the value of the Obama image isn’t that it exposes a single flaw in a single algorithm; it’s that it communicates, at an intuitive level, the pervasive nature of AI bias. What it *hides*, however, is that the problem of bias goes far deeper than any dataset or algorithm. It’s a pervasive issue that requires much more than technical fixes.

As one researcher, Vidushi Marda, responded on Twitter to the white faces produced by the algorithm: “In case it needed to be said explicitly - This isn’t a call for ‘diversity’ in datasets or ‘improved accuracy’ in performance - it’s a call for a fundamental reconsideration of the institutions and individuals that design, develop, deploy this tech in the first place.”

[原文](#)

[返回目录](#)