



# Human Rights Lawyer: Facial Recognition Is Arsenic In The Water Of Democracy

One critic of Social Engineering and Digital Slavery, aka Technocracy, suggests that “Mass surveillance has a chilling effect that distorts public behaviour.” Indeed, the world has little time left to reverse the trend. □  
TN Editor

Automated facial recognition poses one of the greatest threats to individual freedom and should be banned from use in public spaces, according to the director of the campaign group Liberty.

Martha Spurrier, a human rights lawyer, said the technology had such fundamental problems that, despite police enthusiasm for the equipment, its use on the streets should not be permitted.

She said: “I don’t think it should ever be used. It is one of, if not the, greatest threats to individual freedom, partly because of the intimacy of the information it takes and hands to the state without your consent, and

without even your knowledge, and partly because you don't know what is done with that information."

[Police](#) in England and Wales have used automated facial recognition (AFR) to scan crowds for suspected criminals in trials in city centres, at music festivals, sports events and elsewhere. The events, from a Remembrance Sunday commemoration at the Cenotaph to the Notting Hill festival and the Six Nations rugby, drew combined crowds in the millions.

San Francisco recently became the first US city to [ban police and other agencies from using automated facial recognition](#), following widespread condemnation of China's use of the technology to impose [control over millions of Uighur Muslims](#) in the western region of Xinjiang.

When deployed in public spaces, automated facial recognition units use a camera to record faces in a crowd. The images are then processed to create a biometric map of each person's face, based on measurements of the distance between their eyes, nose, mouth and jaw. Each map is then checked against a "watchlist" containing the facial maps of suspected criminals.

Spurrier said: "I think it's pretty salutary that the world capital of technology has just banned this technology. We should sit up and listen when San Francisco decides that they don't want this on their streets.

"It goes far above and beyond what we already have, such as CCTV and stop-and-search. It takes us into uncharted invasive state surveillance territory where everyone is under surveillance. By its nature it is a mass surveillance tool."

She said a lack of strong governance and oversight could allow the police to roll out live facial recognition by stealth, without a meaningful debate on whether the public wanted it or not. The technology was developing so fast, she said, that government was failing to keep up.

"There is a real sense of technological determinism that is often pushed by the big corporations, but also by law enforcement and by government, that it's inevitable we'll have this, so we should stop talking about why

we shouldn't have it," she said.

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## **In China's Smart Cities, Everyone Is Being Watched**

There is no escape from digital slavery: China now reveals that “most citizens are required to download apps on their phones that let the authorities monitor what they look at and track their movements.” □ TN Editor

Earlier this year, a U.S. congressional committee commissioned a report on China's development of “smart cities,” with a particular focus on whether they were smarter than their American counterparts.

The U.S.-China Economic and Security Review Commission's (USCC) request for submissions was revealing because it showed that, despite the hype, not much is known about the fruits of China's efforts to build such cities. Smart cities are highly digitally connected and use the latest

technology to manage services.

About 500 of the roughly 1,000 smart cities being built worldwide are in China, according to Chinese state media, government figures and estimates from Deloitte. Under a five-year plan to the end of 2020, the Chinese government expects \$74 billion of public and private investment in these cities.

Yet while scattered futuristic pilot examples can be found — from intelligent lighting and power grids to smart traffic management — there is little evidence that this grand vision is dramatically improving the lives of the masses.

Instead, it appears that the bulk of the resources poured into smart city development has gone into improving surveillance of Chinese citizens by the pervasive domestic security services. For nearly a decade, China has spent more on internal security than on its defense budget. Put another way: The Communist Party spends more on monitoring its own people than on guarding against foreign threats.

“It’s very clear that surveillance is a significant element in China’s conception of smart cities,” says Rogier Creemers, an expert in Chinese law and technology at Leiden University in the Netherlands. “This involves across-the-board surveillance that is partly political and partly about mechanizing ordinary street-level policing.”

The security apparatus uses a vast network of cameras, facial and even gait recognition along with artificial intelligence and cloud computing to identify and track many of China’s 1.34 billion people.

Domestic companies such as camera maker Hikvision, e-commerce group Alibaba and telecoms equipment maker Huawei have become big suppliers to China’s security services. In the process, they take business from Western companies such as IBM and Cisco that previously provided much of the equipment.

Nowhere is this vision of a technologically enabled police state more advanced than in the restive western region of Xinjiang, where every facet of the predominantly Muslim minority society is watched and

tightly controlled.

Apart from the ubiquitous cameras, most citizens are required to download apps on their phones that let the authorities monitor what they look at and track their movements. Viewing content that the Communist Party deems inappropriate can land someone in one of the gulags that have sprung up in recent years, which now hold as many as 2 million Muslims, according to estimates from the U.S. State Department.

With some of the most sophisticated surveillance and control technology in the world, Chinese suppliers are increasingly exporting it — not only to authoritarian states but also even to some advanced democracies, particularly in Europe.

Domestically, at least outside of Xinjiang, the picture is confused because some of the surveillance technology deployed can also be used in more benign ways that help improve people's lives. For example, the cameras that capture license plates and drivers' faces on all Chinese highways can now be networked to provide real-time data on traffic conditions, allowing authorities to better manage congestion.

Huawei claims that a surveillance system it built in the eastern city of Nanjing is used not only by the police but also to deploy electrical workers and doctors when their services are required.

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# 6G Will Combine AI With Real-Time Speeds Of 1 Terabyte/Sec.

If 5G is just a stepping stone to 6G, then hold on to your seat. AI plus instantaneous connections will enable ad-hoc networks of things and people to achieve unheard-of outcomes. □ TN Editor

Mobile-phone technology has changed the way humans understand and interact with the world and with each other. It's hard to think of a technology that has more strongly shaped 21st-century living.

The latest technology—[the fifth generation of mobile standards, or 5G](#)—is currently being deployed in select locations around the world. And that raises an obvious question. What factors will drive the development of the sixth generation of mobile technology? How will 6G differ from 5G, and what kinds of interactions and activity will it allow that won't be possible with 5G?

Today, we get an answer of sorts, thanks to the work of Razvan-Andrei Stoica and Giuseppe Abreu at Jacobs University Bremen in Germany. These guys have mapped out the limitations of 5G and the factors they

think will drive the development of 6G. Their conclusion is that artificial intelligence will be the main driver of mobile technology and that 6G will be the enabling force behind an entirely new generation of applications for machine intelligence.

First some background. By any criteria, [5G is a significant advance](#) on the previous 4G standards. The first 5G networks already offer download speeds of up to 600 megabits per second and have the potential to get significantly faster. By contrast, 4G generally operates at up to 28 Mbits/s—and most mobile-phone users will have experienced that rate grinding to zero from time to time, for reasons that aren't always clear.

5G is obviously better in this respect and could even replace many landline connections.

But the most significant benefits go beyond these headline figures. 5G base stations, for example, are designed to handle up to a million connections, versus the 4,000 that 4G base stations can cope with. That should make a difference to communication at major gatherings such as sporting events, demonstrations, and so on, and it could enable all kinds of applications for the internet of things.

Then there is latency—the time it takes for signals to travel across the network. 5G is designed to have a latency of just a single millisecond, compared with 50 milliseconds or more on 4G. Any gamer will tell you how important that is, because it makes the remote control of gaming characters more responsive. But various telecoms operators have demonstrated how the same advantage makes it possible to control drones more accurately, and even to perform telesurgery using a mobile connection.

All this should be possible with lower power requirements to boot, and current claims suggest that 5G devices should have 10 times the battery lives of 4G devices.

So how can 6G be better than that? 6G will, of course, offer even faster download speeds—the current thinking is that they could approach 1 terabit per second.

But what kind of transformative improvements could it offer? The answer, according to Stoica and Abreu, is that it will enable rapidly changing collaborations on vast scales between intelligent agents solving intricate challenges on the fly and negotiating solutions to complex problems.

Take the problem of coordinating self-driving vehicles through a major city. That's a significant challenge, given that some 2.7 million vehicles enter a city like New York every day.

The self-driving vehicles of the future will need to be aware of their location, their environment and how it is changing, and other road users such as cyclists, pedestrians, and other self-driving vehicles. They will need to negotiate passage through junctions and optimize their route in a way that minimizes journey times.

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