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The End of Freedom

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It can be found [here](#).*

The whole of humanity is only 20 years or so from meekly surrendering the one thing most of us have craved, sought and fought for throughout our history. Our freedom.

By the 2050s every person on the planet will be under surveillance, 24/7, for the whole of their lives, their every word and act automatically recorded, stored and searchable by whomever has the power to do it. Nothing you do or say will go unnoticed by the vast banks of artificial intelligence that will be used to keep you in line – or make you a compliant victim of consumer culture.

The key instruments of oppression will be quantum computers – devices so powerful, fast, capacious and searchable they will be able to store and retrieve all the data, collected on any individual in milliseconds.

The scientists working on quantum computers sing their praises – all the wonderful things these amazing machines will be able to do for us. But so too did the first nuclear scientists in the 1920s and 30s, before they built a device that could end human existence. Quantum computing has exactly the same flaw: misused, it can eliminate human freedom as we know it, forever.

Quantum computing is far advanced, and the first devices are already with us. The University of NSW [New South Wales] say they have cleared the final hurdle to build a superfast quantum computer using low-cost silicon. Google and NASA claim to have built the most powerful computer ever – the D-Wave 2X – heralding a major advance in artificial intelligence. Round the world, Wall Street and banks like Goldman Sachs are racing into quantum computing in a bid to turn atomic particles into fast cash. Airbus is using them to design jets of the future. IBM and the US intelligence research agency IARPA are building the most powerful spying machine in history.

According to IBM research director Arvind Krishna, “Quantum computing promises to deliver exponentially more speed and power not achievable by today’s most powerful computers...” but what he and other advocates of this disruptive new technology seldom mention is its sheer, blinding capacity – and how this can be deployed against society.

What gives the quantum computer its power is the qubit. Whereas a standard computer bit can exist only in one of two states – a 0 or 1 – qubits can exist in up to 8 superimposed states, yielding exponential increases in capacity and speed. Put simply, what that means for you or me, is that every bit of data ever gathered on us can be recorded, stored, mined, sorted and retrieved by anyone with access and a ‘Qputer’.

Take CCTV [closed-circuit television] as an example. In Britain there is one security camera for every 11 people – almost 6 million in all, according to British Security Industry Authority (BSIA). Sloppily, Australia does not record numbers but if the ratio is similar we would now have about 2.4 million. The big shortcoming of CCTV is that you need a million police constables to scan all its output for a handful of potential suspects – a monumental task, even with facial recognition software. Storages are wiped and re-recorded. Qputers will change all that: they will make everyone a suspect, automatically. All your vision will be permanently stored, because the capacity to do so will exist. Artificial intelligence will scan this data constantly for patterns that might identify you as a ‘subject of interest’ – whether to police, intelligence services or even,

heaven help us, to marketers. It will recognise, search for and follow your unique facial and other identifying features wherever you go, whatever you do.

Then there is your electronic trail – everywhere you went with your smart phone, satnav vehicle or tablet. Every email, text, tweet, Facebook entry, computer document or key stroke you ever made will be documented, and its content can be retrieved. Your smart TV or phone will eavesdrop on conversations in your own home. Your devices will steal the addresses, contacts and personal details of friends, family and people you correspond with or speak to – often for commercial purposes. Your bank, supermarket, stores, online marketers, credit ratings agency, travel agent, medical centre, parking meter, sporting club, fly-buys, the tax office and a swarm of others, will document almost every purchase and financial transaction you make. At work your computer will observe you for signs of laziness, discontent or inattention. To be sure, these things are already happening – but the data is currently far too voluminous to store and analyse for every individual. That will take a qputer.

If humanity has any freedoms left at the end of the 21st Century, it may be significantly down to one person, Edward Snowden, who witnessed the secretive age of universal espionage in the act of its birth – and blew the whistle. In an interview with the ABC in May 2015, Snowden said the ability to search our content and metadata is “incredibly empowering for governments, incredibly disempowering for civil society” leading to what he terms a ‘turnkey tyranny’ in which governments claim to follow due process but secretly increase their level of intrusion into private lives without our knowing it. “They are collecting information about everyone, in every place, regardless of whether they have done anything wrong,” he warns.

Snowden was speaking of the current age of computing, not the looming age of qputing – which will vastly aggrandise the turnkey tyrants, through its speed and immense data storage and automated AI search and retrieval capacity. Defenders of the loss of public freedoms sometimes argue “As long as you do nothing wrong, you’ve nothing to be afraid of”. With qputers, the argument is void. Everyone is subject to complete, 360-degree, lifelong AI surveillance, whether or not they have committed or planned a crime, criticised a government – or merely shown a disposition to buy certain sorts of goods.

Our data is already there, amassing round the clock in tens of thousands of private and government databases.

Unlike the Orwellian nightmare, there is no one, central ‘Big Brother’ – but rather a host of smaller databases (public, government, international and privately-owned) which can, with the

right access, be fused and interrogated to create universal, 24/7, mass surveillance or any individual, group or family.

While this applies chiefly to the 3.4 billion humans on the internet today, the power is rapidly disseminating throughout the world with the spread of the internet and mobile devices and will be nearly universal by the 2030s – around the same time the first quputers come on line. These are nothing less than the enabling technologies for a global police state. It is the dawn of the ‘nanocracy’ (or rule via the very small subatomic particles used in quputers).

The assumption that governments, especially in democracies like Australia, will always be benign and ‘do the right thing’ by their citizens in respect of privacy or freedom is, at best, naïve if not downright foolish. We have recently experienced a regime with strong prejudices, a disposition to distort the truth, a tendency to advantage its supporters, a desire to curtail freedoms and a taste for never-ending war. It can easily happen again.

Imagine this power in the hands of religious, political or economic fanatics, not even from your own country.

Another difference from the Orwellian nightmare is that, in *1984*, individuals were betrayed by their friends, family and colleagues. Under the nanocracy everyone will be betrayed by *themselves*, via their own words, thoughts and deeds. What the quputer confers is the power to scrutinise every individual life and force that person to comply with whatever those who control it desire. To obey them, vote for them, or buy their products. History’s crude tools of imprisonment and torture are no longer necessary: individuals can be brought to heel by the more refined technique of blackmail or threatening to expose aspects of our past lives. And whose life is ever beyond reproach or free from deliberate misinterpretation?

Having such power available, which government, organisation or corporation will refuse it? The greatest risk is that society not only loses its old freedoms – of speech, action, law, even of thought – but that humans evolve into a different animal. One that cannot question, and therefore survive, its own mistakes.

Historically, reformers, critics, revolutionaries and dissidents from Socrates and Jesus to Galileo, Martin Luther King and Mandela paid a high personal price. Under the nanocracy they won’t stand a chance. They will be quietly identified by AI, swept up and hushed before they can cause trouble.

A race deprived of its radicals, visionaries, thinkers, explorers and innovators will be a poor sort of humanity. A stunted, lobotomised species, more like a termite mound than a society. One devoid of the ability to self-criticise and thus escape the disastrous consequences of its own mistakes – such as climate change, global poisoning, ecological collapse or nuclear conflict. A species condemned to extinction because no-one dare question those in power.

We will become a world-wide North Korea, where dissidence of any sort is a ‘crime against the state’.

The core issue here is that, as with the atomic bomb, with quantum computers we have done the science – but have failed to do the ethics. On the assurances of their inventors, we have blithely assumed they will always be used for good – when, like nuclear technology, it is likely they will also be used for evil. And there are no checks and balances on that evil.

We have not asked the hard questions about how civil society can oversee and limit the power of the nanocracy before it has silently eaten away our freedoms.

The question we must now ask is: is it already too late?

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