

Thank you for inviting me. As a science fiction writer, I'm more used to imagining and writing about people like you than speaking to them, which puts me in what for an author is the awkward position of talking to people who might be my characters.

One of the side jobs I've had was as writer in residence at a small sociological institution, the ESRC Genomics Policy and Research Forum at Edinburgh University. While there I was able to hang out with social scientists, and cure myself of the habit of saying 'social scientists and, uh, actual scientists.' I learned two very useful concepts which are relevant to what I'm about to say.

The first was 'the political economy of promise', the process by which a mountain of hype eventually gives birth to a genetically modified mouse. The mountain of hype is part of the production process, because it draws in interest and funding and enthusiasm without which the eventual outcome, usually much less exciting, would not come about at all. And I realised that as a science fiction writer I was part of this process.

Which brings me to the second useful concept I took away from the social scientists: reflexivity. Social scientists spend a surprising amount of time thinking about what effects their investigation will have, on the wider world and especially on the subjects of their investigation. The argument goes that because the social scientists are part of society, they have to include themselves and their activity in considering what effect their research will have. We can never leave ourselves out of the picture.

And it's in that spirit of reflexivity that I'd like us to consider what we're doing here. Are our enthusiasms for free software and strong encryption and all the rest of it part of and possibly a driver of the process that has got us to the place we're at now, where we've managed to build ourselves a global panopticon prison?

In the same reflexive way I'll begin by looking at my own experience. In the mid-1990s I was a computer programmer and I learned about the Internet and then the World Wide Web basically by word of mouth, and I discovered email lists and then Usenet discussion groups, and I was very excited about this new realm of free expression and discussion. One of the online publications that caught the spirit of that time was the then famous 'Declaration of Independence of Cyberspace', by John Perry Barlow in 1996. It begins:

*Governments of the Industrial World, you weary giants of flesh and steel, I come from Cyberspace, the new home of Mind. On behalf of the future, I ask you of the past to leave us alone. You are not welcome among us. You have no sovereignty where we gather.*

And much more in the same vein. Well, it's only fair to say that Barlow is like all of us older and wiser now. But something that struck me at the time was that when I told people about this new forum for free discussion they saw it as dangerous. I remember telling a very intelligent and free-thinking woman about Usenet and she said: 'But then extremists could say whatever they liked!'

And I think the same goes for our enthusiasms over privacy and strong encryption today. Most people see them as enabling terrorists and child pornographers and other criminals to hide, even though strong encryption is what allows online commerce. We have to ask why this response is so common. I think the answer is insecurity. By the early 1990s and to an ever greater extent since, most people even in places like this, in the relatively safe and comfortable parts of the world, have experienced increasing insecurity. The fundamental reason for that is what is called, sometimes glibly I'll admit, neoliberalism. Leaving as much as possible to the market has made most people, even as I say in the better-off parts of the world, as debt-laden wage slaves. Nobody can feel free or safe when they can at any moment be reduced to penury by an economic downturn or a shift in market conditions.

A second wave of digital utopian enthusiasm was for uprisings organised through social media. We all know how Twitter and Facebook were used in the Arab uprisings, and particularly in Egypt. I well remember following events in Tahrir Square on Twitter, almost moment by moment, and sitting up late re-tweeting some of them in the hope that it might just make a difference. Since then social media have become indispensable to any such movement, but we've also learned the hard way that strong enough states can defeat uprisings if they still have reliable armed forces. I vividly remember that picture of the troops deployed across the road to Cairo University and recognising that this was a coup. It wasn't some new stage in the revolution, it was the end of it.

States have also moved very fast to use social media themselves, by employing armies of fake online identities to reinforce official narratives, to sow disinformation, and to discredit opponents. I imagined some of this in my novel *The Execution Channel* (2007) which has Homeland Security employing fake bloggers, but the reality has far outstripped it. And of course some opposition movements do similar things. By now, we all live in a wilderness of mirrors like the spies in John Le Carré's novels.

Meanwhile in everyday life we all have to make a trade-off between privacy and self-exposure, and we do it every time we make payments online and so on. I found my way here this morning using the Google Maps app, which presumably reveals to some system my exact location. By doing all this we rely on computer security, and computer security is fundamentally unreliable in ways that gives IT security professionals a cold sweat every time they think about it. Indeed, as the US journalist Quinn Norton has put it in an article on this topic, 'Everything is Broken'. Not just in terms of IT, but of the reliability of our social and political interactions. It's trust issues all the way down.

In this context, then, I really don't think we can rely on strong crypto to evade the intelligence and surveillance apparatuses, or on reining them in with laws. As long as people are insecure they will be in favour of strong state security. They will also be wary of many social freedoms. We need to bring about cultural changes to encourage people to be or to aspire to be self-confident individuals. And it's really hard to be self-confident individuals who can trust each other when we're debt-laden wage slaves.

So that means, I would suggest, that we need to change the political economy. We need economic stability and security and growth in a sustainable way. And here I'm going to be really provocative and mention the dragon in the room. The dragon in the room is China. Now China is a very repressive state in lots of ways, and in terms of social media it is adept not only in censorship and surveillance but in mobilising

people online to defend its repressive activities as well as its serious accomplishments. One of these is that it has managed to do something no one else has done, and that is thirty years of continuous economic growth. The rate of growth sometimes dips – to a level that would be considered a boom over here -- but so far it has had three decades where it hasn't once gone negative. Now this may all end in a big crash, I don't know, but so far there have been lots of predictions about the end of Chinese growth and they've all been turned out to be false.

At the very least, this shows us that there are alternatives to neoliberalism. It is possible to control the banks and the corporations and sustain a growing economy. Which of course brings its own problems, but also the means of solving them. Now China got to that point through a horrendous process of wars and revolutions and internal upheavals which no one sane would want to emulate, but it does pose the challenge of whether we, in much richer and more comfortable societies, could do something like that but better.

I don't mean in any way to disparage China in saying we could do better. They were civilised long before us – here I am, a Scot talking to Scandinavians, you know what I'm talking about. And we in Northern Europe got from our earlier barbarism to where we are today because we took and learned from the advances of other and older civilisations to the south, and we combined these with the free institutions that we took with us out of the forests or wherever it is we came from.

And yes, I am talking about democratic and libertarian socialism, and I would end on another reflexive point, which is that in striving to achieve that we can become again self-confident individuals who can rely on themselves and each other, which is what we need to be.