There are two approaches to dealing with mass state surveillance: the laws of physics and the laws of man. One is to use the laws of physics by actually building devices that prevent interception. The other is to enact democratic controls through the law to make sure people must have warrants and so on and to try to get some regulatory accountability. But strategic interception cannot be part of that, cannot meaningfully constrained by regulation. Strategic interception is about intercepting everyone regardless of whether they are innocent or guilty. We must remember that it is the core of the Establishment carrying such surveillance. There will always be a lack of political will to expose state spying. And the technology is inherently so complex, and its use in practice so secret that there cannot be meaningful democratic oversight.

Except for very small countries like Iceland, unless there are revolutionary conditions, it is simply not possible to control mass interception with legislation and policy. It is just not going to happen. It is too cheap and too easy to get around political accountability and actually perform interception. And that's the case for most of the countries – there is bulk interception occuring, and when there is a legislative proposal it is to protect the ass of those who are doing it.

The technology is very complex and the problem is getting worse because complexity and secrecy are a toxic mix. Hidden by complexity. Hidden by secrecy. Unaccountability is built-in. It is a feature. It is dangerous by design.

The debate might be around whether or not mass surveillance technologies should be considered as war. In weapons system it's the technology that is regulated and not the use that it is made of. It's interesting that cryptography is regulated, you cannot export encryption technology, which helps to protect against surveillance technology, to those countries declared evil or for whatever reason, problematic. But if you are dealing surveillance technology you can sell that internationally. There are no export restriction on that.

Slowly we will end up in a global totalitarian surveillance society – by totalitarian I mean total surveillance – and that perhaps there will be just the last free living people, thews who understand how to use this cryptography to defend against this complete, total surveillance, and some people who are completely off-grid, neo-Luddites that have gone into the cave, or traditional tribes people who have none of the efficiency of modern economy and so their ability to act is very small. Of course anyone can stay off the Internet, but then it's hard for them to have any influence.

The only effective defense against the coming surveillance dystopia is one where you take steps yourself to safeguard your privacy, because there is no incentive for self-restrain by the people that have the capacity to intercept everything. So historical analogy could be how people learned to wash their hands. That required the germ theory of disease to be established and then popularized, and for paranoia to be installed about the spread of disease via invisible stuff on your hands that you can't see, just as you can't see mass interception. Once there was enough understanding, soap manufacturers produced products that people consumed to relieve their fear and the germs.

So people will have to think about it. The only question is in which way they will think about it? They will either think "I need to be careful about what I say, I need to conform", the whole time, in every interaction. Or will they think "I need to master little components of this technology and install things that protect me so I'm able to express myself my thoughts freely and communicate freely with my friends and people I care about." If people don't take that second choice then we we'll have a universal political correctness, because even if people are communicating with their closest friends they will be self-censors and will remove themselves as political actors from the world.

How the best and the worst case scenario might look like? The most positive trajectory for the future world would be based on self-knowledge, diversity, and networks of self-determination. A highly educated global population – I do not mean formal education, but highly educated in their understanding of how human civilization works at the political, industrial, scientific and psychological levels – as a result of the free exchange of communication, also stimulating vibrant new cultures and

the maximal diversification of individual thought, increased regional self-determination, and the self-determination of interest groups that are able to network quickly and exchange value rapidly over geographic boundaries.

This positive trajectory would entail the self knowing of human civilization because the past cannot be detroyed. It would mean the inability of neo-totalitarian states to arise in practice because of the free movement of information, the ability for people to speak to each other privately and conspire against such tendencies, and the ability for micro-capital to move without control away from such places which are inhospitable to human beings.

From those underpinnings you can build a wide variety of political systems. Utopia to me would be a dystopia if there was just one. I think Utopian ideals must mean the diversity of systems and models of interaction. If you look at the churning development of new cultural products and even language drift, and sub-cultures forming their own mechanism of interaction potentiated by the internet, then yes I can say that that does open this positive path.

But I think in all probability tendencies to homogenization, universality, the whole of human civilization being turned into one market, then you have normal market forces at play which massive language standardization in order to make these rapid interchanges efficient. So I think the pessimistic scenario is also quite probable, which is a transnational surveillance state, drone-riddled, the network of neo-feudalism of the transnational elite – not in a classical sense, but a complex multy-party interaction that has come about as a result of various elites in their own national countries lifting up together, off their respective population bases, and merging. All communication will be surveilled, permanently recorded, permanently tracked, each individual in all their interactions permanently identified as that individual to this new Establishment, from birth to death. That's a major shift from even ten years ago and we're practically there. I think that can produce only a very controlling atmosphere. If all data collected was made public that might rebalance the power dynamics and let us, as a global civilization, shape our destiny. But without dramatic change it will not. Mass surveillance applies disproportionately to most of us, transferring power to those in on the scheme who nonetheless, I think, will not enjoy this brave new world much either. This system will also coincide with a drones arms race that will eliminate clearly defined borders as we know them, since such borders are produced by the contestation of physical lines, resulting in perpetual state of war as the winning influence-networks start to shake down the world for concessions. And alongside this people are going to just be buried under the impossible math of bureaucracy.

How can a normal person be free within that system? They simply cannot, it's impossible. Not that anyone can ever be completely free, within any system, but the freedoms that we have biologically evolved for, and the freedoms that we have become culturally accustomed to, will be almost entirely eliminated. So I think the only people who will be able to keep the freedom that we had, say twenty years ago – because the surveillance state has already eliminated quite a lot of that, we just don't realize it yet – are those who are highly educated in the internals of this system – the high-tech rebel elite.