

are horrified by its panopticon-like power?

Because technology can be used for both good and evil. There is a dark lining to every cloud. We need to be careful to use technology to uplift humanity rather than hold it back.

You talk about vigilance. Policymakers and institutions have to catch up to what's happening in technology.

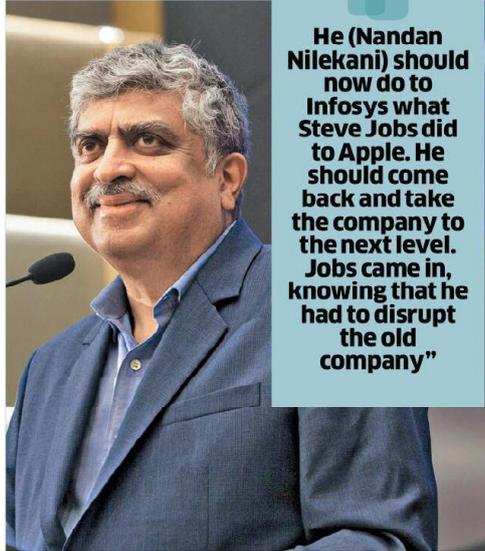
I heard Finance Minister Arun Jaitley at a conference and I was blown away by his vision of technology. Here was an Indian minister articulating his vision about technology more intelligently than any government official in Washington, DC. The government has good advisors but can it do something? People will have to make it happen. This country's entrepreneurs are a cut above the rest of the world. A company I am associated with is HealthCube (which provides a host of diagnostic solutions in a box and is particularly useful for last-mile delivery); its units are going to Mexico, to Bangladesh where it is used for Rohingya refugees, to Angola and Peru. Within a couple of years, the goal is to have 100 million people outside India using this technology. This is a made-in-India technology. In India, despite all of the problems, there are countervailing forces and entrepreneurs are solving problems that no one else can.

How many years will you give India before it realises Star Trek?

In the next 20 years or so, if we do it right, we can build Star Trek. These 20 years will be amazing and scary at the same time.

Aadhaar has created quite a controversy: on whether we should have a mandatory, biometric-based identification.

I have been following Aadhaar since its inception. Aadhaar is badly needed. But you also need checks and balances. The security risks are high. Those need to be and can be fixed. Aadhaar is the most successful IT project in world history. Indians are very negative about everything Indian, so it is easy to attack Aadhaar. Indians need to understand that what they have is monumental. Now a billion people have identity. And with it became possible UPI (Unified Payments Interface) and India-Stack (a set of APIs that allows governments, businesses, startups and developers to utilise Aadhaar-based digital infrastructure for paperless and cashless service delivery), which are equally monumental. In Silicon Valley, where I live, there is an obsession with bitcoin and blockchain. Bitcoin is fraud: it might double or triple in price but it is going



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to implode, it is going to be worth zero. But they are obsessed with blockchain: they are trying to build a digital currency that requires a massive infrastructure. Meanwhile, India, which is famous for jugaad, says, look, to get digital currency, all you have to do is transfer money from your bank account to my bank account. Why do you need to have this blockchain infrastructure and mining? If everyone has a bank account, an identification number and a mobile number, all you have to do is send a message from one mobile to another to transfer the money. It happens instantaneously.

The worry is because Aadhaar happened and then we started thinking about privacy laws.

That needs to be worried about. As with every technology, it can be used for evil. I worry about the risks of hacking and have concerns over privacy. India must develop strong regulations to control the use of data and to ensure the safety and privacy of its citizens. All of the applications that are built on top of Aadhaar and the data that is gathered must be secure and citizens must be able to control how their data is used. There are technology solutions to all this.

That is a point you make about tech companies: that users should be given control over how much privacy they can give away and for what purpose.

This device (pointing to an iPhone) is the most powerful spying device ever made. It follows you everywhere you go. Apple, Facebook, Google – these tech companies have gained so much information and so much power that they can rig elections. Who are you more worried about: companies that are selling you and lying to you at the same time, or governments that are trying to operate for its population? This is why I am less worried about Aadhaar than I am about Facebook. Facebook is a bigger threat to privacy than is Aadhaar. Both need to have very tight security. Mark Zuckerberg tried to pull a fast one in India with his Free Basics. Thank god, the government stopped it. People who are using smartphones for the first time would have believed that Facebook and everything Facebook teaches is internet. Look at what happened in America: Facebook facilitated Russians hacking the US elections and it made a lot of money out of it. Imagine if they are taking control of Indian elections.

Internet companies should be more transparent.

Exactly, which is why India needs to control the Facebooks and the Amazons and even the Ubers. India was stupid enough to let the British in. The East India Company was able to trick Indians. The same thing is happening all over again. We are welcoming these companies with open arms. East India Company is now Silicon Valley. You have seen the damage Silicon Valley can do.

It lacks ethics, morals and is obsessed with making money.

How can India control Silicon Valley?

India should put restrictions as regulations on Facebook, Google and others. Put up barriers. Regulate the heck out of Amazon. Have a policy to support local startups. India has to build its own ecosystem. It has the technology and the skill to do that. It doesn't need Western companies. It has to learn from China, which walled off the Western companies and built their own. It will be good for the ecosystem. Earlier these companies had intellectual property. Now Indians are building innovations in Silicon Valley. Let them come home and bring the best ideas with them. It may sound anti-competitive. But that is what China has done and look at how far they have come.

Just as people could think Facebook is internet, there are people who think that Facebook equals democracy and free speech, and that a clampdown on the company is a clampdown on freedom of expression.

Facebook is not democracy. It is restricting democracy. It is rigging elections. It is limiting choices. It is spouting fake news. My next book, by the way, is titled *How Happiness Got Hacked*. The theme of the book is how the technology industry is taking our choices away. That it is so obsessed with selling to us that it is making us addicted to it.

After the scandal over the US elections, there is a very valid argument that Facebook and others should disclose the source of funding of their political advertisements.

Forget about disclosures, there are no rules or regulations in the tech industry. They want to get away with whatever they can get away with. This is the group think in Silicon Valley: they think they are gods over there, and everything they do is perfect. They don't even understand the damage they are causing. Zuckerberg is genuinely deluded about what he is doing: he did not believe that he is impacting the elections. These are a bunch of kids who don't have the experience and are building these nuclear weapons-like technologies without understanding their implications. This is why India needs to do it on its own and not depend on Silicon Valley.

Sexual harassment in the entertainment industry has spilled over. What about the tech world?

Tech world is as bad as the entertainment industry. Tech industry should be ashamed of itself for its sexist ways. And it is equally bad in India. The tech industry here is chauvinist, male and leaves women out.

You have been critical about the Indian tech industry for not foreseeing the near future.

I have been critical about the industry because they were trying to catch up to yesterday – like cloud computing and SAP. There has been a lot of speculation over who should take over Infosys. I think Nandan Nilekani should take over. Out of Infosys, he built Aadhaar and guided IndiaStack. He should now do to Infosys what Steve Jobs did to Apple. He should come back and take the company to the next level. Jobs came in, knowing that he had to disrupt the old company. He was always obsoleting his own products: iPhone put iPod out of business. What Nandan needs to do is obsolete his own company and rethink it. He has the experience, skills, vision and power. He can then save not only Infosys but also Indian IT.

There is the domino effect. The IT sector is getting affected, they have reduced hiring, which means students are not keen on engineering courses. And many of these colleges have not moved with the times, into a post-IT world.

The situation is dire. We should be teaching AI, robotics, sensors, nano-technology, gene editing. Engineering colleges were able to quickly react to the requirements for IT. What stops them now from responding to newer technologies and the magic that can be done with them? ■



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