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Transcript

The Limits of Technology in an Imperfect World

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Geoff White:

Good afternoon. On behalf of Chatham House, welcome. My name is Geoff White. I'm the technology producer for Channel 4 News. There's sometimes a bit of confusion about what a TV news producer actually does, so I thought I'd try and clarify that. We don't appear on camera. We don't do voice-overs. We do everything else. Everything else is our job, and as such we're usually at the sharp end of the story. We're inevitably trying to find out what's going on in the ever-decreasing hours before we actually go on air.

The truth unfortunately often comes out in hindsight, and it's quite rare as journalists that we get the chance to take a longer view on what's happening in our industry. That's why it's a pleasure to introduce Evgeny Morozov, somebody for whom the long view seems to be the default position. His first book, *The Net Delusion*, challenged the orthodoxy that networked technology would inevitably and naturally spread freedom and democracy around the world.

What was interesting for me about that book was it arrived on my desk along with various other books, all of which seemed to be going toe-to-toe with the kind of gushing rhetoric that was coming out of a lot of US companies particularly, that the internet was an inevitable good, injecting a note of much needed realism into that.

His new book, which I'll read the title of in case I forget it, *To Save Everything, Click Here: Technology, Solutionism and the Urge to Fix Problems that Don't Exist*. Clearly he doesn't have the same problems with word count that I do. That would be considered a lengthy title at Channel 4 News. In fact, the average Channel 4 News package is about three minutes long, so this is potentially one of the longest scripts I've ever written in my job there.

Evgeny is tackling something in that book, which again, he's taken a helicopter view on something which, for technology journalists, we're down on the ground trying to hack our way through, and that's the idea that's being touted that with enough data and enough processing power, we can solve many of the ills that affect us. We can solve crime, illness, poverty, and so on.

For me, this emerges as a sort of steady trickle of emails into my inbox about big data: the idea that if we have enough databases, we have enough computing grunt, we can actually predict the future. It's a very seductive argument, and I know for politicians it must seem a very seductive argument as well. But what's interesting for me is that within that is a really critical, vital question, which is: to what extent do those who predict the future actually end

up then controlling that future? And you may notice what I've done there is a classic TV news journalism trick – I've tried to sound impressive by asking a question without actually answering it.

But luckily, I know a man who can. I'll introduce him in a second. Or might be able to, and therefore I've predicted what he's going to talk about. I hope you don't tear up your speech.

Without further ado, Evgeny Morozov.

Evgeny Morozov:

Thank you so much. I will do my best to provoke. I do hope we'll have a good debate, a lot of questions afterwards.

I was actually very serious with that title and subtitle, even though it's not very Twitter-friendly. I agree with you there, it will not fit in 140 characters easily. So I do mean to talk about problems that may not necessarily exist. So when you mentioned poverty, for example, in the introduction, it does seem like a problem that does exist and that is worth solving. A lot of people from the very beginning misunderstand my argument when they think that all I'm saying is that there are a lot of big problems there and that technological fixes are not going to help us solve them.

This is not what I'm saying. I'm not arguing about the inapplicability of technological fixes to complex social problems. I spoke about that in my first book. I wrote about authoritarianism and the lack of freedom in authoritarian states and how hard it is to solve that problem with technology. That problem to me seemed quite real. It seemed that, yes, there are genuine issues with freedom and democracy in places like Russia, places like China, places like Iran. And those problems are genuinely worth tackling.

What I tried to do with this new book was to do something different. I tried to see what are some of the issues and problems that are very tempting for policy-makers but also for Silicon Valley to get into, and what are some of the problems that they are tempted to solve that may not necessarily be worth solving? Or may be worth solving somewhat differently?

This is how I arrived at this label of 'solutionism', which for me is an ideology which recognizes problems as problems, based mostly on the availability of cheap and easy technological fixes.

I'll give you a few examples. Suddenly, for example, we can go and record everything ever said and authored by our politicians and we can go and

compare their remarks across the years. So suddenly the availability to go and compare what they said today to what they said 15 years ago makes hypocrisy in politics a worthwhile target, simply because we have the tools to compare and record and analyse everything.

We have the tools to go and record everything about our own lives and to remind us of how inconsistent we have been in treating our friends or our colleagues. So suddenly, forgetting becomes a problem that is worth solving simply because we have the means to record everything.

You can think about how such logic applies to other fields in politics for example. We can now suddenly bypass the rigid institutions like political parties and allow people to directly organize in groups. So we suddenly start seeing partisanship as a big problem that we can avoid by allowing people to self-organize.

What I tried to do in the book was to go and systematically trace this solutionist temptation in many different walks of life and try to show, first of all, where it comes from, why it's happening now, but I also try to show what might be some of the consequences when it comes to getting rid of crime or building environments where crime becomes impossible. I hope I'll have time to get into that today. But let me, before we sort of get into the solutionism bit of the problem, let me say a few words as to why I think Silicon Valley technology companies are positioned to play a growing role in solving some of the world's problems.

First of all, Silicon Valley itself positions itself as being in this business. If you trace the speeches made by Eric Schmidt of Google or Mark Zuckerberg of Facebook, they actually explicitly and directly say that they want to tackle some of the world's greatest problems. You might think that this is just PR and partly it is. I mean, it's PR that works both for internal and external audiences.

For external audiences it's of course a matter of convincing the outside world that as long as Facebook or Google can help us solve some of the social problems, perhaps we should not regulate them too tightly and we should not tie their hands if they are in fact in a position to help us deal with problems of crime or literacy or you name it.

But there is also a great argument that they make for internal consumption, and that's basically positioning themselves as being a good place to work for, unlike Wall Street. The argument that Silicon Valley often makes is that – because they are competing for the same talent as Wall Street, the argument that they often make is that: well if you come work for Google or you come

work for Facebook, you will actually help us improve the world and if you go work for Wall Street, you'll do the exact opposite.

There are all sorts of reasons why Silicon Valley companies make those arguments, but I also want to understand what has changed in the technological environment that has made them so much more relevant to many of these new debates about problem-solving.

What has changed is that virtually everything these days has or is poised to have a sensor. We are moving increasingly towards a world of smart technologies and smart environments. You can see it in the news media coverage of smart shoes which monitor how long you've been wearing them and they eventually tell you that they're about to get worn out. Smart umbrellas which can check the weather and tell you that it's going to rain so you might need to fetch the umbrella before you leave the house. We have smart pens which now can actually inform you as you use them that you've made a spelling mistake and eventually perhaps even force your hand to autocorrect, which will be the dystopian dream. Or utopian dream for some.

But the idea I'm driving at is that now environments and products have sensors, and those sensors can understand how it is that you are using this given object and they also understand what it is that you do with them. So the umbrella knows that it's supposed to be used for protecting you against rain. So it can check online and see whether it is going to rain or not. The proliferation of sensors is one aspect.

Another aspect is the fact that almost anything these days can be made social. Social is a buzzword that a lot of people in Silicon Valley use, but what it means is that now almost any decision that you make, it can be made with somehow all of your friends in the background. So your friends can see what it is that you do, and that can provide new forms of peer pressure. You can poll your friends immediately about what it is that is worth doing.

There is a start-up called Seesaw, just to give an example in Silicon Valley, which allows you to poll all of your Facebook friends in real time about any decision or any choice that you need to make. So you cannot decide which dress to buy, you cannot decide on what latte drink to buy or you cannot decide on what politician to vote for, you can just immediately poll your friends through a smartphone. You'll get immediate feedback; you would be able to receive an answer. If that answer satisfies you, you go for it. If not, you decide on your own.

But that's the kind of immediate feedback from your entire social circle that was not easily available before. And that creates new types of behavioural

interventions that might, through peer pressure, get you to do things that you may not have done otherwise. For those two trends, sensors and this new social, new types of problem-solving become possible.

To give you an example where those two trends come together, last year I stumbled upon a project designed by designers here in Britain and in Germany, something called a smart trash bin. A smart trash bin basically looks like your usual trash bin, but on its upper lid, it has a smartphone that is built into it. That smartphone, what it does is that it snaps a photo of whatever it is that you throw away after you open and close the lid. So it's programmed to take a picture of the stuff that you have just thrown away.

That picture is then being uploaded to a service run by Amazon called Mechanical Turk. Mechanical Turk is a platform where freelancers and anyone who needs to earn money are paid to perform simple tasks that computers cannot handle yet. In the case of the smart trash bin, what's happening is that that photo of what you have just thrown away is being uploaded and is being analysed by people as to whether you engage in environmentally friendly recycling behaviour.

If they approve that you have recycled your items correctly, you're being assigned points and those points, along with the photo, are being uploaded to a Facebook profile where your friends can see it and where you can compete based on the points you earn against other participating households.

You might think that this is a completely insane idea where essentially someone is spying on your trash bin and rewarding you points for good behaviour, but for many people in Silicon Valley, this passes as a viable social intervention, in part because again it taps into the idea of sensors, that trash bins now can actually recognize what it is that's being thrown in them, which was not an option before. And it can actually motivate you to engage in the socially appropriate recycling behaviour because all your friends are watching.

Those are the two big ideas that I would argue were unavailable before. By the way, the assignment of points is part of a broader trend in Silicon Valley known as gamification. The idea there is that we can get people to do things that you couldn't get them to do before if we turn social encounters into a game. People are collecting points, or people are collecting some kind of virtual awards or badges.

That's an idea that, again, has become possible as we are carrying our mobile phones everywhere. Since you are carrying your mobile phone everywhere and your Facebook identity is with you everywhere, virtually

every interaction with the social environment can now be 'gamified', in the Silicon Valley speak. There are entire books and strategies written on how you can tap into the logic of gamification to get people to do things that you couldn't get them to do before.

There was even a proposal from one of the most serious theorists in this field of gamification that was discussed last November during the presidential elections, and his proposal was that we can significantly increase civic participation and turnout in America if we would only reward people with points and some kind of virtual currencies for checking in with their mobile phones at the voting booth.

This is the level of sophistication that we get in debates about gamification. But again, you should get the basic idea here. The basic idea is that now we might get more efficiency and we might actually get people to do things like vote in ways that we couldn't get before, simply by relying on these new social infrastructures, relying on sensors.

The idea that I'm trying to get at here with this close reading of a few examples is that we do have the means through sensors and social technologies to get the kinds of outcomes that we couldn't get at before. And it might as well be true that by rewarding people with points and virtual awards and badges and all sorts of other fancy virtual points and currencies, we might actually get them to recycle more and to recycle better and more effectively.

Then the question becomes: is efficiency here all that matters? If you can reward people with points for showing up at the voting booth, is efficiency of turnout all that matters? If you think about it long enough, you probably would say no. It also depends on what kind of incentives we build into the system. Some people would say that we shouldn't just get people to do the right thing. We should get people to do the right thing for the right reason.

Then we really have to find the right balance between communicating those incentives through the language of politics, the language of morality, which is how appeals were made before. You were not asked to recycle because it would impress your friends or earn you another virtual toy. You were asked to recycle because it was essentially a political act. It was a moral act. It was you doing something because you saw it was the right thing to do. It was the same thing with voting. Not everyone did it, but you did it for reasons that had nothing to do with impressing your friends or earning points that you can then redeem into an MP3 song or something of that kind.

So something has happened at the real language in which appeals to us are made. They're no longer made to us as citizens. They are made to us as consumers and there is a lot that we can unpack in that statement alone.

But my bigger point is that as our environment becomes more and more heavily technologically mediated, it will become possible to all sorts of other interventions that rely on similar incentives to fix all sorts of things. Imagine with Google glasses [*sic*], which now everyone in Silicon Valley is extremely excited about.

With Google glasses, if Google really wants to be in the business of solving the world's greatest problems, just think about how it might go about tackling obesity. So you shop at a restaurant wearing Google glasses, Google glasses are already tracking everything that you've been doing and eating for days and weeks on end. You end up with Google glasses at the restaurant and you look at the menu, then Google if it wants to – nothing prevents it from making certain items on the menu more visible or less visible, or highlighting items that have more fat or less fat.

You might think that this is crazy or they're not going to do it. But the infrastructure for those kinds of interventions is there. So if Google suddenly decides to enter an alliance with policy-makers, that's one way in which you can actually go and start tackling a problem like obesity, because the infrastructure for 'nudging' – one of those exciting words that in this country especially you hear a lot – that infrastructure is run by Google. It's run by Facebook. The information infrastructures through which you can incorporate and enable all of those notifications that will nudge you as a consumer, as citizens, to engage in one behaviour and not another, all that infrastructure is run by Silicon Valley.

Here we really need to be critical as to what kind of politics we might be embracing, willingly or unwillingly, as we also embrace some of those technological fixes. Again, as I said, the book is very long and very complex, so at some point I do go into discussing issues that I think are real problems. And I do think that a problem like the obesity epidemic is a real problem. It does need to be solved.

But devices and self-tracking devices manufactured by Google and manufactured by others, they do not just solve that problem in the same way as policy would solve it. They solve it essentially by putting the onus on the citizen to adjust their behaviour within the system that is given as fixed. So again, to explain what I mean here, I'll give you another example from Google, a very recent one.

There is a service that Google runs called Google Now. Google Now's premise is that Google will analyse everything that you do with its services. Google Mail, Google Calendar, Google Books and others. If, for example, you have a ticket reservation in your inbox for a flight, Google Now knows that you have that ticket reservation. So it will automatically check you into your flight. It will automatically check the weather at your destination. It will tell you that it's going to rain so you'd better take an umbrella. And it will also automatically check the traffic on the way to the airport and will inform you that the traffic is bad, so you might want to leave an hour earlier than usual.

All of that happens automatically in the background without you ever asking Google for anything. This is the sort of bright future that Google is trying to paint. Their rhetoric is that, 'well, we will be silently analysing everything that you do and making your life easier'. But what they also tried to do recently was to do something else. They also track silently how much time you spent walking and they track how much you walk. And at the end of each month, they give you a silent nudge and they just tell you, 'well this month you've been walking more than the last months; here are the real stats'.

They give you the stats, they show you the graphs. It's a very particular kind of intervention. The intervention here, the idea is that you have to start walking more, you have to start working less. If you think about Google glasses, they can do the same thing with calories. They can tell you that for the last month, you've been eating too many fatty products. You've been eating too few vegetables.

But if we think about this as a solution to, say, the obesity problem, it certainly comes with a lot of limitations. The limitation here is that we're not really thinking about deep structural reform of the system that has created the obesity epidemic. We're not thinking about whether you actually have access to healthy food. We're not thinking about its cost. We're not thinking about the infrastructure that you need to travel to the farmers market. We're not thinking about how to regulate junk food companies and how they rely on the internet to appeal to children. There are all sorts of structural issues that we would need to get fixed if we are really serious about tackling that problem.

With things like self-tracking and with things like nudging, what's happening is that we are being given the current system as fixed and all we can do is optimize our behaviour within the system, without altering its existing constraints.

This is what scares me a lot about delegating so much authority for problem-solving to Silicon Valley, because it seeks to codify and preserve much of the

existing system in place without forcing us to think about what are the factors that are responsible for some of the problems. This is where I worry a lot, when I see people like Cass Sunstein, who is the father of the nudging theory and who has spent a lot of time in the Obama administration, get very excited about personalization of information defaults and collection of information and delegating some of these tasks to technology companies, because in reality, those solutions don't just come without costs. They do come with huge costs and very often they will only be perpetuating the problems by delegating and actually shifting and offloading much of the responsibility for adjusting behaviour to the citizen and the consumer.

So I think I've given you enough provocation for now. I think I'll say a few more words and then we can open for Q&A.

I think the basic question that I think we'll need to answer in the months and years to come is: given how easy technology makes it to fix things, how easy technology makes it to tap into the new kinds of incentives, the new kinds of social behaviours, how easy technology makes it to build environments that are smart and that will make decisions for us and that will supposedly result in more efficiency and will result in a more frictionless existence, the big question facing us is what are the kind of things that we would like to leave unautomated? That we would like to leave inefficient?

I think this is a very big challenge that again, for reasons that have to do with technology, we didn't have to ask before. We just didn't have the options to go and monitor everything that has ever been said by politicians. We didn't have an option to bypass political parties and have citizens form groups on their own. We didn't have an option to rely on big data to predict crime. We didn't have an option to build our physical environment in a way that would prevent people from committing crime because environments can now also become very plastic. You can actually ban people from entering before they even committed anything suspicious.

We just didn't have that option. So we have assumed that perhaps reducing imperfection and inefficiency of the system would always be a good thing. Now we do have the option to eliminate a lot of these frictions. We do have an option to eliminate a lot of these inefficiencies. And then the real question becomes: so where do we stop? How much ambiguity do we want to leave in the design of our political, legal and other environments for some deliberation to occur?

In debates on philosophy of law – I'll just finish with this – there is a very interesting debate happening right now about rules versus standards. Rules

tend to be very specific, highly specific postulates of what needs to be done in a particular situation. They try to spell out everything in detail.

Standards tend to leave some ambiguity. They tell you that in this situation, a reasonable person is supposed to behave in a manner that is expected of a reasonable person, but they don't spell out everything in much detail. So there is space for interpretation. There is space for people to come together and deliberate over what it means for certain behaviour to count as reasonable. There is space in which you can actually still go and revise many of the underlying norms because the standards are not deliberately well-specified because they're standards and not rules.

I think what we are seeing with delegation of a lot of these decisions to technology is that since they need to be reduced to algorithms, we're seeing a rule-based society instead of a standard-based society emerge. And we are seeing fewer and fewer opportunities where we can actually come together and deliberate over the meaning of some of those norms because we kind of inherently delegate them to the algorithms where the risks become embedded and stay like they once were forever. They're not subject for constant revision.

This is what bothers me the most. I think I'll stop here because we want to have Q&A. I'd be happy to give you a bit more specific examples on that last point. I think this distinction between the ambiguity of standards and the precision of rules... Once you apply this logic to the algorithmic society and the code-based society that we are likely to move into, I think it's a very important distinction that we should keep in mind. Especially as we think through the limits of seeking perfection and efficiency in the legal, political, technological systems around us. Thank you so much.