

DEBATE

Jim HOAGLAND

I would now like to take some questions from the audience. If you would, give us your name and if you have any particular association that would be important for us to know, for example if you have a question for Holger about Airbus and you happen to be working for Boeing, please tell us that, and I will start right here.

Mathilde PAK

Mathilde Pak, I am an economist at the OECD working on the Korea/Sweden desk. I have a question for Mr Barrault regarding his comment on knowledge availability on the Internet. I completely agree with you. When I compare my very first presentation when I was a young student and right now, there is a big gap. But this requires to have digital skills. For that, we have a big gap between the young generation and the elderly. In the case of Korea, which is a really high-technology society, we have the young generation which has almost no problem with basic skills, while the elderly do. What would you suggest so that the whole population can make the most of technology changes, while also being aware of the dangers that Mrs Liautaud raised? What would you recommend? I know that in that matter we often recommend lifelong learning. In that case, how should it be done? Should the government centralise and take care of lifelong learning, or should it be taken care of at the level of firms? If so, how would firms get the right incentive to promote this life learning? Thank you.

François BARRAULT

Thank you. It is a very good and interesting question. One of the obsessions right now regarding the proliferation of data is what I call digital inclusion. As you will remember, a few years ago, you had access to limited data. Now, it is huge. Data without correlation or no meaning, has zero effect. Now, technology can help as well. Imagine you are on vacation with 25 people in a big group in the South of France, and every morning you have a room full of socks, pants, trousers and whatever. That is the data, okay? If somebody who has no knowledge of how to put things together in a house, like me as an example, I would be totally lost. Now, the new algorithm will put information together, socks with socks, with age, with family and whatever. Therefore, the next generation algorithms are correcting correlation with data that means something to the person, think about all the clothes in a room. Most of the leaders in digital technology again have an obsession, which is to make data relevant to people, or to communities, and the next generation algorithm does that.

There is a huge effort right now in countries, cities, to bring technology to people, because before, you had to go to technology. I am very confident that it will help the older generation to have access to these fantastic tools.

Jim HOAGLAND

Well said François. The next hand I saw was over here. Wait for the mic please.

Stanislas Cozon

My name is Stanislas Cozon, Capgemini. The question to you Holger, I was intrigued by this question of security versus freedom, and the example you gave of crossing roads and autonomous vehicles and the behaviour of people, I thought this was a profound situation. I mean it is Stalin. My question to you would be what is the role of education in helping people learn how to behave as free citizens in our civilization in the new world of new technologies?

Holger MEY



Well, education is of course the key, and I wish everybody would be well-educated, has good manners, behaves nicely, but of course human beings often do not. This is the question, how we then deal with those who do not. Because, you know, we usually say, well, for instance at the end of the day, the computers need to be controlled by the human being. But by whom? "By Mr Hitler, by Mr Stalin, by Mr Mao, by Mr Pol Pot? No, no, only by good guys!" But who is that? Who defines that? That is the problem

Of course, if we say, well, this is something how human beings should interact, well, if you look at the social structure of street gangs in Los Angeles or Mexico City, you would see this is different behaviour than we all have here.

Yes, education, it would be great, if this works, and if we have only good people, you know, so to speak? But there are bad guys out there for whatever reason, and we have to somehow deal with this, or with people who misbehave and all that. A state that comes up with rules, but does not care about rule enforcement, or law enforcement, undermines the respect for law, which is a problem. I want the local communities, if you wish, to discuss, 'Well, should we have a speed limit of 30 kilometres per hour in front of the school?', and if the people say, by a huge majority, 'Yes, that is a good idea to protect our children', then I do not want people to speed there. Therefore, either you may come up with a rule there, and then you have radar checks, and you make sure that people behave, or you do not care, and undermine the whole respect for law. I wish everybody would respect 30 anyway, but we know how few people do if you do not have checks.

Jim HOAGLAND

Susan, you had one finger-

Susan LIAUTAUD

No, I just wanted to address this very important question as well. There is a lot that we do not know about behaviour. Therefore, for example, if you have a bot babysitter, is it okay to be insulting in front of your child to the bot? I mean after all it is a machine. Are we going to be educating children to be disrespectful to Siri, or Amazon Alexa, even though we tell them that they should be respectful to adults? These blurred boundaries of behaviour with machines are quite complicated, and as was just said, who gets to decide in terms of the programming of these machines? There was an incident, many of you may have seen a couple of years ago with a Microsoft bot called Tay that was put out a bit too early and started spouting incredibly racist and anti-Semitic remarks, and Satya Nadella, the CEO of Microsoft promptly withdrew Tay and fixed the problem. However, the reality is that many stakeholders have a say in behaviour these days in ways that are unprecedented, and I think we need to watch that very carefully.

Jim HOAGLAND

How scary is that? We now have about 15 minutes left, so I would encourage most speakers and the questioners in the audience to be very succinct. We will come down here, the next hand I saw was here.

Mohamed LAICHOUBI

Merci, Monsieur Laichoubi, ancien ministre, politologue. Je voudrais suggérer l'élargissement du spectre du débat avec une question essentielle liée au rapport entre science et éthique. Nous avons eu deux grandes phases : la première phase avec Newton, Laplace, Maxwell. Se chauffer, se soigner, voyager, communiquer. Puis dans les années 1930, on a eu une poussée exponentielle des technologies, avec des dérives : le plutonium, Bhopal, le sang contaminé, Tchernobyl...des grandes désillusions. Et puis on peut additionner, vous l'avez évoqué, les grandes compétitions géopolitiques, où les uns et les autres considèrent que les nouvelles technologies leur assurent la prééminence. Soixante académies des sciences européennes réunies à la commémoration des 350 ans de l'Académie des Sciences française, ont estimé qu'il y a un risque de rupture entre la science et la société. On revient donc à la question de l'éthique : quelle stratégie de recherche adopter quand on sait que les Japonais ont décidé d'inverser totalement leur recherche pour la mettre à la disposition du besoin social. Est-ce que nous sommes tous concernés par certains types – un angle géopolitique exacerbé... Est-ce que cela nous concerne, la suprématie d'un tel sur l'autre ? Est-ce que l'humanité n'a pas besoin d'un autre débat ? Merci.

**Jim HOAGLAND**

François, will you take a crack at that?

François BARRAULT

Je vais répondre en français à Monsieur le Ministre. J'en ai un peu parlé, dans le cadre de projets technologiques, il y a deux types de progrès. D'une part, le progrès encadré : vous avez cité toutes les révolutions industrielles avec des cycles de Schumpeter très longs. La science cadrée a mis en place un *process*, un *framework*, qui permettait de faire progresser l'humanité. Et puis un jour, internet est arrivé, avec le smartphone, etc. et on a transféré cette puissance de feu à l'individu. Je l'ai dit plusieurs fois hier, internet a été la plus grosse révolution industrielle en termes de création de valeur, sans aucune gouvernance. Au début, internet était un outil de communication entre A et B, les universités, et puis il est devenu un outil de communication entre les personnes. Au début, les SMS étaient un 911, c'est-à-dire un numéro d'urgence au Japon, qui a été détourné par les adolescents japonais, qui sont très timides, et ils ont utilisé ces 300 caractères pour une sorte de jeu de séduction, etc. Là où le bât blesse, ce qui est à la fois inquiétant et fascinant, c'est que quand vous donnez un outil que vous ne contrôlez pas à des individus, on ne sait pas où cela conduit. Les Printemps Arabes, les gilets jaunes, qui sont des nouvelles formes de démocratie, et je n'en discute pas le bien fondé, mais cela a complètement échappé au système organisé régalién qui encadre. Par rapport à ce que vous dites, il y a donc une ambivalence : soit on continue à cadrer le progrès, ce qui a toujours été fait dans les machines, soit on donne aux citoyens des outils pour qu'ils se développent et communiquent, et là finalement on ne sait pas comment ça va puisqu'il n'y a pas de gouvernance pour internet. Que vous gagniez 100 millions de dollars sur une transaction, demandez-leur, on ne réinjecte pas la création de valeur là-dedans. C'est pour cela qu'il y a des dérives, absolument, et qu'il convient de les encadrer, mais chaque fois que l'on encadre quelque chose qui ne l'était pas, on se fait traiter de rétrograde ou de conservateur.

Jim HOAGLAND

John Sawers has a chip shot on this.

John SAWERS

Yes, I just wanted to come in on this point because I did not mention much about Europe's role on this. There is certainly some very interesting and important technology development taking place in Europe, although we are falling behind both the United States and China in terms of both basic research and how we exploit that at the corporate level. However, I think the European Union has an important regulatory role here. I implied a reference to the general data privacy, GDPR regulation that Europe pushed through a couple of years ago, which is now a global standard. We are seeing now the work of the European Commission on the taxation of global corporates in the technology sector, and I think this will also become a global standard, even though Washington is kicking and screaming about it.

There is a certain role here in terms of regulating this rather wild world where Europe can play a role, but I think in order to have that influence we will also need to invest more in basic research, in building up our corporates, enabling the areas where Europe does have an edge, and aerospace and so on is certainly one of those, in the years to come.

Therefore, in many ways the biggest challenge that regulators will face over the coming generation is how we transfer the rule of law we have in the physical world into the virtual world, and I think there is an important leadership role that Europe can take in those.

Jim HOAGLAND

Kicking and screaming is the order of the day in Washington now John. Jean-Yves, you had a brief, brief remark.

Jean-Yves LE GALL



Yes, but I agree, because when we heard that the US and China are the first, and that Europe is behind them, I do not agree because there are numerous fields where Europe is number one, and what is really of interest is that we have less money, it's obvious and we also have a real capability to organise and to cooperate, because when Europe works, in Brussels or in other intergovernmental agencies, you have 20, 25 countries working together, and in my opinion it is a real asset. Afterwards, for instance in space, when I see my Chinese counterpart, he asks me, 'How many are you in CNES? We are 2,500'. He laughs, and I ask him, 'How many are you in China? 110,000', but okay, we are 67 million in France, and 1.6 billion in China, but in spite of that, on many fields we are in the same position as in China.

Therefore, we do not have to be shy, because today Europe is at the forefront of research and technology.

Jim HOAGLAND

I have a series of hands in the front row.

Holger MEY

If I could just add one point?

Jim HOAGLAND

Yes, please.

Holger MEY

I mean of course Russia sometimes is geopolitically a difficult partner to handle through Europe, but the true competitors are indeed China and the US, of course. However, you know Europe can do something. You see, if I may, with my own company, in the 60s, nobody would have believed that Airbus could ever compete with Boeing, and see where we are now. Therefore, if Europe wants to get its act together, it can do so.

Jim HOAGLAND

Okay, we will go to Karl Kaiser in the front row, and we will stay in the front row for the next two questions.

Karl KAISER

Karl Kaiser, Harvard Kennedy School. I have a question for John Sawers. John, towards the end you seemed to suggest there is a difference between autocratic regimes and democracies when it comes to cyberthreats. Democracies, for example their banking sector can collapse, or their grid, whereas in autocratic systems, the regime is threatened. However, could you not also argue that democracies also have a regime problem? Some could argue that Putin put their man into the White House, destabilising the United States, indeed, the western liberal order. Therefore, democracies are also threatened as regimes through cyber. Is there any difference here?

John SAWERS

Well, I think there is a difference because there are more checks and balances in democratic systems than there are in autocratic systems. I think one of the driving concerns of President Putin is that the Russian system has totally collapsed twice in recent historical memory, in 1917 and in 1991. The reason he is so fearful of things like the coloured revolutions and what happened in Ukraine in 2014 is that he fears a third collapse of the Russian system and will do everything he can to prevent it, and so far quite skilfully and ruthlessly.

I think in the west, we do have more checks and balances than that. The American system and the British system in different ways are both going through a populous moment, a period of crisis, but our fundamental structures of the system are not in jeopardy, we are not about to collapse as a society. One of the reassuring aspects, and we will talk about Trump on a panel tomorrow, one the reassuring aspects about America's response to a character like Donald Trump in the White House is that the system, by and large, is holding up, despite the strains and the cracks within it.



I mean I do think it is interesting that the most aggressive users of cyber in a state to state level have been countries like Russia against the former Soviet Union countries, Israel against Iran, and Iran in retaliation, and to some extent, North Korea as a way of sort of trying to get some money, some rent seeking out of the international system.

It is striking that although China has used cyber very extensively for intellectual property theft, and of course the famous stealing of the office of personnel management records in the United States, using it as a weapon of war, both China and the United States, and the European powers have been very reserved about how you use that, because in part because of the threat of retaliation and vulnerability, which I think as I say, all powers face. However, I think I would still say autocratic countries have that much extra vulnerability because they do not have any checks and balances, they basically do not have broad systems of consent, so the stakes are even higher for autocracies than they are for democracies.

Jim HOAGLAND

John, in this phase, the system is not only standing up in Washington, it is fighting back, but more about that tomorrow.

I saw a prime ministerial hand down here. No? All right. Yes.

Daniel DĂIANU Daniel Dăianu, Romanian Central Bank. Checks and balances, they are essential for democracies, and we see quite clearly not only was it in the case of Nixon, but now in this case. Let me ask you, checks and balances are not sufficient if the political establishment is estranged from the ordinary citizen. Then we get into trouble. This is a big, big issue in liberal democracies.

Now secondly, it seems like, and you have not alluded to it, but it is clear that we are moving into a block-based global system. I should not call it a system. It is not a system, and this is very unnerving. What kind of an order, geopolitics, security concerns, clearly the US versus China. There are global public goods which have to be provided. It is about climate change, dealing with machines, some of them maybe turning into very obnoxious beings [inaudible]. Therefore, there should be a global war, and what should be done? What should be done? At the end of the day, it may have, the United States may have to strike a deal with China. I mean however, let us say, unpalatable it may look like, I am asking you because you...

John SAWERS

Well, I am not sure this much to do with the topic of the panel. We can talk about this in other sessions. I would just make two points. First of all, the populist moment that Europe, Continental Europe, Britain and America is currently going through is partly a correction of elites having become out of touch with ordinary sentiment. It is a violent correction, and it is having some very unwelcome consequences, not least for my country, but nonetheless there is a sense of ordinary citizens reasserting themselves, and the conventional leaderships of the elite are having to make corrections, both in terms of wealth distribution, in terms of power, in terms of responding to the concerns of people who feel excluded from democracies, and that is what we are seeing now. It is painful, and some of it is very negative, but nonetheless, I think that is basically what is happening.

At a global level, I entirely agree with you that we need some global commons, we need some means to develop global public goods, and that was the triumph of the post-1945 world, was that under American leadership, with strong European support, we created a system which did deliver on that. It is now really struggling, and I think your reference to climate change is exactly right. The capacity to address climate change problems has sharply reduced because the United States and China, in separate ways, have both distanced themselves from the Paris goals and are going in their own direction. We will have to rebuild this. I am frankly not optimistic that things are going to change in a year's time, but we will discuss that tomorrow.

Jim HOAGLAND

I have just gotten the hook from Thierry de Montbrial, meaning we are out of time, and I dare not risk his wrath. Therefore, we will wind up here, with thanks to you, a very well-informed and timely audience. Thanks so much, and to the panel.