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FALK AUDITORIUM

DIGITAL TECHNOLOGY IN THE AGE OF ARTIFICIAL INTELLIGENCE:
A COMPARATIVE PERSPECTIVE

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PARTICIPANTS:

Introduction:

TED PICCONE
Senior Fellow and Charles Robinson Chair, Foreign Policy
The Brookings Institution

SASKIA BRUINES
Deputy Mayor
The Hague, The Netherlands

Keynote Remarks:

JEROEN VAN DEN HOVEN
Professor of Ethics and Technology
Delft University of Technology

Panel:

MODERATOR: NICOL TURNER LEE
Fellow, Governance Studies
The Brookings Institution

CAMERON KERRY
Distinguished Visiting Fellow, Governance Studies
The Brookings Institution

BILYANA PETKOVA
Fellow-in-Residence
Electronic Privacy Information Center

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ANDERSON COURT REPORTING
1800 Diagonal Road, Suite 600
Alexandria, VA 22314
Phone (703) 519-7180 Fax (703) 519-7190

P R O C E E D I N G S

MR. PICCONE: Good morning, everyone. Am I on? Can you hear me okay? Great. My name is Ted Piccone, and I'm a senior fellow in the Foreign Policy Program. I work on international order and strategy issues, among other things, and a warm welcome to everyone here, and to all those who are watching us via our live webcast online, for our sixth annual Justice Stephen Breyer Lecture on International Law. This series of Trans-Atlantic dialogues tackles cutting edge issues at the intersection of international law, security, and, increasingly, technology. Over the last few years, we've used this occasion to examine such issues as cross-border data sharing for law enforcement and the role of international law in governing new tools of warfare, such as autonomous weapons, and all of that material is on our website.

We want to thank, first of all, the Municipality of The Hague, and the Embassy of the Netherlands for their steadfast supportive partnership for this work, and to Justice Breyer, for his steady and thoughtful leadership on matters of international and comparative Law. He is occupied with court business today.

For this year's lecture, we've chosen to examine an issue that really lacks an international normative standard or a multi-lateral process, and that is the protection of one's data and privacy online, an issue that directly affects anyone with an email account, a Facebook profile, or a smart phone. The timing for this discussion could not be better. The European Union is coming upon the one-year anniversary of its General Data Protection Regulation, otherwise known as GDPR.

This new rule requires any organization that holds or controls the personal data of E.U. residents to obtain clear customer consent, and to build privacy by design, as the default option for their organizations, and companies face large penalties for any serious breaches, and we'll hear a lot more about how GDPR implementation is going, this morning.

On the U.S. side, we are hearing much greater public discussion and congressional debate over the adoption of privacy and data protection legislation. These include proposals to grant greater authority to the Federal Trade Commission to protect consumers from unfair or deceptive practices, which, of course, include upholding their promises to protect our personal information. As these debates, and we've seen a number of big data breaches in the past couple of years, as these continue, some states in the U.S. are not waiting for Federal action.

California, for example, has adopted a Consumer Privacy Act that gives residents the right to know what personal data is collected, how it is handled, and to say no to its sale to others. Of course, this is a big issue elsewhere, outside the United States. Other countries, such as Brazil, Australia, India, Russia, and China are considering their own protocols for data protection, many of which will not be so friendly to U.S. interests and our values in freedom of expression, the right to access information, and protection of National Security.

Meanwhile, technology doesn't sleep. Companies and researchers are racing ahead with the development of artificial intelligence and machine learning, the internet of things, for example, that is already opening new frontiers in the way our personal data is collected and marketed to others. So, one of the key questions we hope to consider, today, is how society should proactively govern the onslaught of these new digital technologies, as they collect and process and repurpose our personal data, and whether this can and should be done at the international level, or be left the national authorities to sort out their own choices and, of course, we might end up with a very smorgasbord of options that start conflicting and clashing with one another.

To help us understand these complex and fast-moving developments, we've invited a top-notch panel of European and American experts from the world of ethics, law,

international relations, and sociology for today's discussion. Our key note lecture will be given by Professor Jeroen van den Hoven, from the Netherlands. Dr. van den Hoven is a university professor of Ethics and Technology at Delft University of Technology, and Editor In-Chief of the Journal Ethics and Information Technology. Among his many titles and awards, Professor van den Hoven was the Program Chair of the Dutch Research Program on responsible innovation, and is currently a permanent member of The Ethics and New Technology Advisory Group for the President of The European Commission. After his remarks, he will be joined for a panel discussion with three leading experts to share a comparative prospective on different U.S. and European approaches to data protection and privacy.

Cameron Kerry, a distinguished fellow, here, at the Brookings Governance Program, is the former General Counsel and Acting Secretary of the U.S. Department of Commerce.

Bilyana Petkova is a visiting fellow at the Electronic Privacy Information Center, here in Washington, and Assistant Professor with the Department of International and European Law at Maastricht University, in the Netherlands, and our Moderator, Dr. Nicol Turner Lee, is a fellow in the Governance Studies Program, here, Center for Technology Innovation, and a leading voice in promoting equal opportunity and civil rights in the digital technology and telecommunications industries.

You have more information from their impressive bios in your hand out. We encourage you to tweet your own thoughts, using the hashtag Breyer Lecture, and look forward to your questions to the panel, later in the program.

Before we hear from Jeroen, I would like to invite Saskia Bruines, the Deputy Mayor of The Hague, to make some introductory remarks. After many years as Deputy Mayor for Culture and Information Technology in Amsterdam, she now leads the City

of The Hague's work on education, the knowledge economy, and international affairs.

Saskia, thank you.

MS. BRUINES: Good morning, ladies and gentlemen. It's great to be here. Thank you very well -- thank you very much for, well, for inviting me to be here, and it's my pleasure to welcome you all, so on behalf of the city of The Hague. You may be familiar with The Hague as the city of peace and justice, and I am delighted to represent our city, here, today, and share our ideas on a vitally important subject.

Let me -- let me use a short quote to explain why this is so important. It's a quote from 2017, and it is by a very famous state leader, and he said, "Artificial intelligence is the future for all mankind. Whoever becomes the leader in this sphere will become the ruler of the world." His name: Vladimir Putin, president of the Russian Federation.

This world leadership, to which Putin referred, is, obviously, an extremely appealing prospect, not just for us, yeah, but equally for China and the United States, for example, and besides this geopolitical game, we have to reckon with the enormous influence from companies, like Huawei, Cisco, Facebook, and many others, companies that are able to launch brilliant innovations on the markets, but which also have daily access to privacy-sensitive information. Using this information, companies can influence the lives of their customers and governments can influence the lives of their residents, every day.

Then, the question we face is whether the rights of all those customers and citizens are properly protected. Isn't it time for fair global, ethical, and legal rules, regarding the use of data and AI, rules that allow us to protect individual rights and freedoms, and that allow us to, more effectively, apply AI for the greater good? For example, in achieving the global sustainable development goals, or in smart city programs to provide better services to citizens in growing cities, like in Washington, DC and The Hague, or applying data analysis to provide emergency aid more effectively and cheaply, and thus reach even more people in

the wake of natural disasters, and by making the source of violent conflicts visible through the use of data, thus promoting peace and justice worldwide.

You might wonder why the city of The Hague is addressing such issues. This is because The Hague has embraced the development of international law for over a hundred years. Our Peace Palace is a wonderful icon in that respect. In a way, it is the very heart of our city and, of course, there are many, many more cities that contribute, daily, to creating a better world, but we'd like to use our position, as a city of peace and justice, to stimulate the further development of law, so that, together, we can work towards creating equal rights and equal opportunities, also online.

In my own country, the National Government will present a comprehensive strategy for the use of data and AI, later this year, and the European Union is also focusing on this, also thanks to the efforts of committed, tough leaders, like Jeroen van den Hoven. In the wake of these developments, the Netherlands aims to become the European hotspot for AI development in Europe. As a result, more and more parties are beginning -- are being attracted to our city. For example, for many years we have been home to NATO's Communication and Information Agency. The U.N. Interregional Crime and Justice Research Institute made a conscious choice to base its Center for Artificial Intelligence of Robotics, called CARE, in The Hague, and I am happy to announce that, here, that the umbrella organization of over 7,000 European AI researchers, called CLARE, will soon be basing its head office in our city. As a city of peace and justice, we see a role, for ourselves, as an honest broker, a city where many people work together to develop the law and encourage the peaceful, responsible use of data, AI, and robotics.

In our city, The Hague, more than 2,000 institutes, universities, think tanks, NGOs, and companies work together, from market leader to startups, and through data science initiative, for example, we combine tough issues facing organizations with the smart

knowledge of startups and -- which always produce applicable answers. The Hague, therefore, welcomes you, and everyone who was working on this topic, with open arms, to join us in further developing the law, and working towards fair, just, and peaceful societies. Thank you very much.

DR. VAN DEN HOVEN: Good morning. It's great pleasure to be here, and to be able to address you with some introductory remarks on global governance and ethics of artificial intelligence, and it's great to be part of that wonderful operation in The Hague, and I shuffle back and forth between The Hague, and Delft is in the middle, and then to Brussels, and I am the permanent member of this committee, advises the European Commission on innovation and new technologies, and we've produced this report, but I will be speaking as a private person, as an academic, not as a member of that group, today.

So, I will need some 25 minutes, and I hope that the Chairman grants me those 25 minutes. I think we're all on the same page, whether this is from the corporate world, or from the public world. So, the Commission has said, the stakes couldn't be higher, we -- the way we approach AI will define the world we live in, and I think that's in a very important theme to bear in mind, that we are going to use this technology to express our ideals, and express our values, and that will come back to shape us, again, and I will come back to that topic, but you know when something really special is happening, when Henry Kissinger is actually thinking about these things, and even from an ethical and philosophical perspective, he said, "Philosophically, intellectually, in every way, human society is unprepared for the rise of artificial intelligence" in a paper called "How the Enlightenment Ends".

Well, how does AI accomplish all of that? First, we started out, in the '50s and then '70s, the -- to think that the expertise, and thinking, and understanding, and cognition was in rules. So, we started to make explicit, and write down all the rules of all the

medical experts, and the chemical experts. You see an example, there, and this is an example from healthcare, from medicine, only to find out that even -- it's not located in 100, not even 1,000 rules. It's somewhere else. It's an evanescent quality, and if we talk about AI, now, we talk about these kind of architectures, completely different architectures, not rule based, not following logic. It's sub-symbolic. It's not put in concepts, neat concepts, and in logical rules, but it's in something like our brain, all right, and it learns like our brain. It adjusts itself on the basis of inputs to produce particular outputs, and we can train it up, as we train up a baby, right?

The interesting thing to notice, here, these things are very complex, and they're even so complex -- and I will come back to that, because it has ethical consequences -- so complex that the people who craft them, that make them, don't understand them, actually. So, this is all wonderful. You can do great things with it. You know, it can help you to distinguish your dog from a muffin. So, that's wonderful. It can also help you to become a Go World Champion. That's a formidable, and very impressive experience. Google DeepMind has done that.

So, what is at stake with this extremely powerful technology that gobbles up and uses all the data to learn about pattern structures, to optimize, to make processes more sufficient? It can do that with satellite images, with medical images, it can do it in an industry context, it can do it in a hospital context, it can do it -- look for vulnerabilities in cyber security systems, et cetera. So, it's -- it's quite a generic technology.

What's at stake? Well, as the Deputy Mayor already pointed out, some people have started to appreciate this in -- not always in ways that we appreciate, but, I mean, I will leave that to you, or the panel discussion.

This is what's happening, and we know that there is a battle going on between China, Russia and the United States, and I will come back to others as well, and

we know what China is doing. It's applying all of this stuff to do better face recognition, to have more efficient and effective surveillance technologies. It's using citizen scores to keep tabs on their populations, and it's also doing the same thing in the new digital scramble for Africa. It's rolling out software, there, and it also sucking up a lot of data, there.

We know what the Americans have been doing, with you, and we have all been doing, and we have, in Europe, been benefiting from, also to a certain extent, and there is not only a big tech development, there is also a little bit of a tech, a big tech lash, you know? So, we're now starting to criticize and question all the data that we have freely given to those big companies to serve us for all kinds of wonderful conveniences that we were very happy to buy, but now, you know, we have some second thoughts about that. I will come back to this.

So, the big question is, where is Europe going in all of this? It's clear with the Chinese picture, it's clear with the U.S. picture, it's clear what Russian picture is. I don't know how to qualify that, or -- but, in any case, the question is, "What is Europe doing?" Is Europe going to be the museum of the world, as sometime it suggested, or is it, perhaps, the cradle of a new enlightenment? An Enlightenment 2.0? It's interesting to look at what was said in a press release of this European plan. It's the biggest plan, also an investment plan. For the EU, it's not so much a question of winning or losing a race between the U.S.A. and China, but of finding the way of embracing the opportunities offered by AI in a way that human centered, ethical, secure, and true to our core values.

So, it seems that there is a third way, all right, is it not; Chinese way, there's a U.S. American way, which is driven by Silicon Valley, but also by the Pentagon, so it's working on two cylinders, right, and there could be a third way, and McCraw has already experimented with this, two years ago, when he released his big plan with a couple of billion of euros, real money. He's putting money where his mouth is. It was -- it was spearheaded

by a top mathematician, Fields winner, Cedric Villani, and he referred to it as AI for humanity. So, the third way could be AI for humanity, but it's interesting to bear in mind that images of men and models of society get expressed in your AI technology and, again, once that has been done, it will come back and shape us again, and we know that pattern, and this is a very interesting book. It's about -- it's Oriental Despotism by -- and a comparative study of total power, Karl Wittfogel, '57, 1957, and he shows how civil engineering and water management were the basis of the power of many of many of the ancient Oriental Empires, and it dictated and suggested how their society should be run; namely top down, centralistic. Otherwise, you could never do this. You would have large scale forced labor, et cetera. So, that's a very interesting way. It's now not longer about hydraulic empires, it's about digital empire, building.

You could do it in very simple ways. You know, this is more efficient if you don't want people to sleep on those benches in the park. It's more efficient to do it this way than to have a hundred people running around and chasing people away, but there is also the more, you know, digital version of this, and this is algorithms. Algorithms shape our behavior, as the steel rods on the benches in the parks do. It's very true, and I have already said it in a couple of ways, we shape our buildings and, thereafter, our buildings shape us. We shape our digital societies, and then our digital societies start to shape us.

So, in the case of China, what gets expressed? It's called socialism with Chinese characteristics, it's autocracy and party rule, it's ubiquitous surveillance filtering in firewalls, instead of investing in deliberative tools of deliberative democracy, privacy enhancing technology. It's working with citizen scores, it's working with the idea of social harmony, instead of the human rights discourse, and, already in the Human Rights Council, there are attempts to replace those terms -- those terms of human rights by the idea, conveniently vague as it is, of social harmony.

So, the muddle of man that is lying underneath that is a, kind of, a strange mixture of behaviorism, you know, sticks and carrots, and keeping tabs on what people do, by means of debt -- big data and machine learning and, actually, punishing and rewarding people, in order to make them behave in the right way. So, that's AI for control. In U.S.A., it's Silicon Valley in the driver's seat, innovate in the gray zone, move fast, break things first, apologize later. Regulatory -- regulatory aloofness, when it comes to the governance of technology, Chicago School of Economics, austere individualism libertarian values, and the model of man is homo-economicus, right?

AI for a profit, and then we have Europe, which takes its start from the European Charter of Fundamental Rights and the European Convention of Human Rights, open liberal democracies and rule of law, multilateralism and the focus on international and legal order and global justice, opportunities for AI to reach the U.N. Sustainable Development Goals, Rhineland Model of Corporate Governance, strong regulations by competition law and data protection, the model of man being a Kantian enlightenment conception of the moral of the -- of the person and homo-socialis.

AI for Humanity. We still have a couple of seats in Europe available. So, if you are interested, you can join us, but a recent document in the E.U., External Action Service, referred to China as a systemic rival whose engagement with the world of norms, rules, and multilateral organizations is selective at best, but bear in mind that we're all systemic rivals in this sense. We are using comprehensive ideas of what the good life is, for our citizens. What is it -- what is -- what is the best way to arrange our -- our societies, and expressing it in digital technologies, and AI is functioning as this huge systems integrator? It's making a lot of those ambitions possible.

Think of, in the case of China, the Global Financial System, and think of the renminbi as the reserve currency, or the new silk route, or military buildup, or the science

and technology programs, or the industrial program, Made in China 25, and then, this final piece, replacing human rights discourse by the idea of social harmony. You could get nowhere with these large ambitions, if you wouldn't have top-notch digital technology with AI. You could simply not do that. So, it looks as if we're moving to a multipolar interregnum, where we have competing conceptions of what the good life is, what a society should look like, what man is, and work from that.

So, what is that -- what are the building blocks for this third way, from this European perspective, and I -- I'm going to share some -- some thoughts that I have, also as a result of being a lot in Brussels, and talking to people of the Commission. Again, I'm not representing the Commission, but I'm -- I'm just sharing those thoughts with you. The first building block is this Ethics by Design. That is -- it is becoming more and more important. It's no longer getting a book from the shelf in your library, and read Comte and Aristotle and John Stuart Mill. It is looking at the technology and expressing your ideas and your values in it.

The top legal advisor of the European Commissions said, "In order to protect and strengthen Western Liberal Democracies in the age of AI, and the core Trinitarian idea of human rights, rule of law and democracy, we need, I quote, 'a new culture of technology and business development', which we call Human Rights Rule of Law and Democracy by Design." He is the singlehandedly responsible or at least has a -- has had a major influence in the drafting of the GDPR. Same for Buttarelli, who is the European Data Protection Supervisor, recently organized the mother of all privacy conferences in the European Parliament, in Brussels, again putting center stage, Digital Ethics by Design.

So, we will have to deal with a lot of this, right, a lot of technologies on the left-hand side, a lot of values on the right-hand side, and we have to bring those together. We would have to be able to think, in quite some detail, about deep learning and human

dignity, about blockchain and sustainability, right, and it's -- so, we have to bring together those world of the -- worlds of the social sciences, the humanities and engineering. These are the examples. So, this is the key problem of what we call Value Sensitive Design. On the left-hand side, we have all of those values that we think are very important, and on the right-hand side we have the world of engineering and technology, and we want to express our ideas in those technologies and be able to explain why that was a good idea and that we did a good job.

So, McCraw also said this, in his famous Wired magazine, "If you don't want to block innovation, it is better to frame it by design within ethical and philosophical boundaries." So that's a bridge that a second building block of that European third way, and that's responsible innovation. This is the principle, and the leading idea, and the European Commission has invested 500 million under its last R&D Program, Horizon 2020, and it's going to invest a lot of money again, in the new program, Horizon Europe, which will be a hundred billion euros.

If you can change the world by innovation, today, so that you can satisfy more of your obligations tomorrow, you have a moral obligation to innovate today, right? So, we are looking at all of those values, all of those things that we need to do for future generations, for our children, for our neighbors, for people who are hungry and poor, and -- but we are overburdened. There is so much to do. So, innovation is the idea. Perhaps we could cheat -- could tweak the world in such a way that we could do more of the things that we need to do. So, innovation becomes a moral concept and not just about the iPhone 7.0, 8.0, 9.0, marginal increases in functionality. Smart fusions of conflicting values in design, and the best example is Privacy by Design.

Privacy by Design is the simple idea that if you want to count the number of people here, right, and you don't want to disclose their identities, you could do this, right, and

this is what is called technically course graining the data, and it's a simple idea in which you could have your way. You use the functionality technology without the violations of privacy. That is the pattern. That is the idea of responsible innovation. Think along those lines, and it has given rise to a whole industry and innovation ecosystems that do this thing, exactly this thing, because they will not give up on privacy, but they will also not want to give up on the incredible benefits that the technology can offer.

With respect to AI, for example, we can do machine learning on homomorphic encrypted data, right? So, we can use big data, and use machine learning, and, at the same time, respect privacy. Now, the third building block in Europe is that we never shy away from up front, going back and tapping into our fundamental principles, fundamental rights, and human rights. So, our foundations are the charter of fundamental rights of the European Union and European Convention of Human Rights.

In the paper that I referred to, the statement on artificial intelligence, we go through a number of problems, and so we identify them. The paper is online. So, safety and risk, and safety risk and security precaution is a famous European principle. Be very careful before you put things out there. Moral responsibility, I will come back to that, privacy, democratic decision-making, the optimization of social complex processes by means of scores, citizen scores or credit scores, and the lack or the work that needs to be done on institutional and mechanism design, to help ourselves to a safe environment for these new technologies, and we identify a number of principles that are -- can be found in these European charters, and the Convention for Human Rights.

I don't have the time to go into them, but important is, too, that this statement was published a year ago, and now the High-Level Expert Group has been tasked with detailing these principles, and it's actually doing this. It has accomplished this, and it will be presented next week, in Brussels, a full-fledged report on the ethical guidelines for

trustworthy AI, and so I'm -- I -- I was an -- and I've served as an independent observer on behalf of the Commission of -- in this work of the High-Level Group, Expert group, and so they think of trustworthy AI as having three dimensions. First of all, it needs to be in compliant -- compliance with the excellent U.E. Law. Secondly, it needs to be ethically sound, and it needs to be -- and that means that it adheres to a number of principles that overlap with the principles of the EGE Report, and it needs to be technically robust. It needs to deliver on the things it's promised, and it needs to be, you know, in line with the requirements and specs.

The fourth building block is just that we identify the ethical problems, and I think there is a -- there's a way to lump them together, or to classify them, because there seems to be a little bit of a preoccupation in Europe with the ethical problems that are tied to a particular conception of the person. So, they are very -- so, it's not only about damage or harm to people, or risk safety, and security risks, but it's something to do with the person, and you can see that if we go through a number of the problems that are related to artificial intelligence, that, at the same time, chip away at the conditions of being a responsible autonomous agent, right?

So, what are the conditions for being a full-fledged autonomous, responsible agent? Knowledge, you have to know what you're doing. You have to be in control of what you're doing. You have to have a choice, right, and you have to think of yourself as an integral person. So, those four conditions are all threatened by artificial intelligence and big data. So, that is the -- and this is the reason why we -- the two worlds come together.

First of all, knowledge transparency and explain ability have already referred to this. So, we have a problem keeping -- keeping track of what's happening inside of those neural nets. There are -- very powerful, they produce wonderful results that we can benefit from, the same time we do not understand their black boxes. So, we have weight -- made

the world a very complex place, even before the advent of AI, but now they've become, as explained, a little bit more obscure, and I think this is a very good -- these are very good contributions. Both books are wonderful to read. The Blackbox Society, Frank Pasquale and Weapons of Math Destruction, Kathy O'Neill, and there is a very good example. I like it a lot, and I will explain it, and you bring out the problem immediately.

So, you train up an AI System, or a neural net, to make the distinction between wolves and huskies, right? So, you give it a lot of examples of not muffins and little dogs in this case but, huskies and wolves. It turned out, and it's doing its job greatly, wonderful, but it turned out that it was looking just for snow in the background. So, all the wolves were photographed in the snow and the huskies were photographed against a green background in the garden, and so it hadn't learned anything about the difference between huskies and wolves. It -- just looking for snow in the background. So, this can happen, and you can find out by accident that this has happened, but if you start to apply that in a human context, a HR Context, or a criminal justice context, that is a problem.

This is also an interesting problem. You know, the system has 57% confidence that that is a panda bear, and then you add some random noise to the photograph, which is undetectable to the human eye, and then suddenly the system has 99% confidence that it's a gibbon, right, and we don't know how it gets to that answer. So, that is, of course, then you're open to a lot of spoof -- spoof and adversarial attacks, because you could fool, you know, defense systems easily by just throwing in a little bit of random noise that is undetectable.

So, data, blackbox, and results, and if you apply this as is done, also here in the United States, this, to a criminal justice context, where a judge is using such a system to decide about parole, then you have a problem because it's undermotivated and, with success, that could be appealed. So, the -- the holy grail is explainable AI. Again,

responsible innovation of AI would suggest that you would try to get all the benefits of this powerful technology, but without the drawbacks. So, make it transparent, as transparent as we can, and with the first legislation that we have, is already in the GDPR. It was referred to in -- it states that, "Persons may not be subjected solely to automated decision procedures with far reaching results and, if it's used, meaningful information about the logic of the process needs to be provided." All right?

So, that is a little bit of problem, and there's a lot of technical work being done now. This is just an example of producing heat maps where you can just see a little bit where this neural network has been going for. What has it been looking at in the pictures? So, it's producing those kind of heat maps. So, a lot if technical work is being done, all to prevent this, what Joe Weizenbaum already wrote in the 70s. He said, "modern technological rationalizations in war, politics, commerce have an even more insidious effect. Decisionmakers have abdicated their decision-making responsibility to a technology they do not understand, long before deep learning. Responsibility all together has evaporated, they cannot help but base their judgement on what the computer says."

So, that's something that we'd like to prevent. The second is control, a condition for responsibility. I didn't have control over the -- over the cup, because my hands were slippery, right? So, if you don't have control, you cannot be held responsible, you cannot take responsible, and people cannot make you responsible. So, but we know that the application of AI produces a lot of control issues, right? In self-driving cars, and in lethal autonomous weapons systems, which use the same software as Amazon recommender systems. If you go to the website, you've read this book, you may also be interested in that book.

If these machines use that logic, that same software, you get things like, okay, you like this target, you may also like that target, especially recommended for you,

right? It could happen. It's the same logic, it's the same software, and we know it's very tragic that there is this man-machine fight to regain control of our systems that are completely gone haywire, right, or not haywire. I mean, it's the logic that they just consistently impose upon the human context.

So, we need to think about meaningful human control, meaningful human control. We've written some things about it, but it's a discussion that is also in Geneva, on lethal autonomous weapons systems is going on. Then, freedom and choice. If you are forced, if you have no options, if you couldn't think otherwise, then your actions and your responsibility is compromised, of course, you know? You were -- I'm sorry. I had a gun to my head. I -- it was nothing for me to -- I couldn't think differently, and that's, of course, happening with these recommender systems with the digital environment online, that suggests all kinds of things on the basis of our past performance online, and our history, search histories, and, you know, locks us up in filters bubbles and echo chambers, and we don't get exposed to different opinions anymore.

So, we don't have the chance to listen to critique. That is a problem. We will all be reading the daily me, and this is the Cass Sunstein, The Nudging Pope, former advisor to Obama, and so he said, "So, we are using those big data and machine learning to get a better grip on people and to understand how we could change their behavior, and it's becoming very, very, very effective," right, and he even said, in this book, Why Nudge, "It is possible that companies that provide clear, simple products would do poorly in the marketplace because they are not taking advantage of people's propensity to blunder." All right, and so there is -- there are some things to be exploited there, and we are exploited there and we are studying this by, you know, collecting the big data of what people do online and using machine learning to get a better understanding of it, and then change their behavior, or affect their behavior, and we know it's been used in politics, and we know, not

to what extent, we're still looking into this, but micro-targeting is a real problem and it's done on the basis of AI, and it's done on the basis of big data, and so, we have what I've called a Bermuda Triangle of advanced behavioral science in nudging, big data, and artificial intelligence that are reinforcing mutually -- we're reinforcing each other, and those people who have access and can afford to buy access to that triangle or triad have a lot of power to wield. So, we need to design for democracy. Democracy will not just happen because there are forces there, outside, that we have set -- ourselves created, that -- that work against democracy. So, we need to do that.

Privacy and Data Protection, finally. It's surprising to see that people who are working in data protection often find it very difficult to ex -- to be very clear and precise about why privacy so important, right? So, they often say, "Well, it's scary, you know?" The people know all of this stuff, but there are some very, very good reasons to do data protection. In order to prevent harm to people, exploitation, discrimination, manipulation, stigmatization, limitation of choice and freedom, limitation of their autonomy, failure to respect them as human beings and their dignity and, therefore, the data protection GDPR has these principles there. This is the reason why we have that. Whether it's the right way to protect it, we can discuss in the Panel. I think what is coming is a paradigm shift.

I think we will do it on a completely different way, without giving up on the importance of protecting individuals. It's interesting to see that the latest economist sang the praise of the European approach, you know, ruling by ethics, the determinators, and it's helped. It's a, kind of, a two-pronged approach by competition law because Vestager is now onto this, big time, because the access to the data, and to the technology, and to the platforms gives, you know, the big tech such an incredible power that the only way to take that back is to bring in antitrust and, at the same time, insist on con -- giving control back to people, with respect to their data, and there are a number of initiatives that are very, very

interesting that go in this direction.

Tim Berners-Lee, you know, the father of the worldwide web, is busy with re-decentralizing the web because it started as a decentral infrastructure and, gradually, it became, you know, the place where people grab the power and it centralizes the power. So, he is going to re-decentralize the web by giving control back to people, over their data. Self-sovereign identity with distributed ledger experiments. Also, the Dutch Government and Member States of the E.U. are experimenting with these blockchain, distributed ledgers, in order to give control back, to give everyone a digital locker that you control, right, and now the companies have to come to you, and ask for your data, and you enter into a contract. So, and also Estonia, and some other initiatives are there that are, you know, experimenting with this. As I said, I think the new head of the Federal Trade Commission has also some sympathy. At least, I've -- I've seen some -- some sympathetic remarks about the European third way. Some last remarks, three more.

The future of global governance and ethics in this space of AI. First of all, we need to realize, whatever we do in this space of global governance and ethics of AI, big data, privacy, et cetera, we have to realize it is a deeply human affair. This is about Dr. Frankenstein. It's not about the monster, all right? It's about us. We create this. We design it. We sell it to people who use it to fool other people or to do good things for other people. That is what needs to be assessed. That is what needs to be evaluated, and there are some scary applications, right? We, now, can -- and this is remarkable, you know? We can predict the death of people who are admitted to hospital and who are wired to a lot of measuring devices.

So, FDA approved crisis prediction algorithm to save hospital from early death, but it's also used in the context of terminal care, where we can say, "Well, we need to cut 40% of the cost." Well, let's not spend more time on these people, if we go by what the

algorithm says, and a very important development. This is the MIT moral machine. You can play this game, the Trolley Dilemma, right? So, shoot the self-driving car. Hit those, you know, this group or that group. Should it run over the old lady, or should it hit the boy with the dog, or whatever, you know? So, endless variations, but millions of people have played this, and it's in the database of -- this time it's MIT.

Now, if we are thinking about doing the software for self-driving cars, then we should -- probably are tempted to look into the database of MIT and say, "Well, what did a million people think should be done?" right, and let's program the car along these lines. What we are doing now is we are, you know, implementing the ethics of what a million people say, but we have some very nasty examples from history, where a million people were absolutely wrong, all right? Huh?

So, this is changing the normative direction of fit, and it's a classical fallacy, where you declare "is" to be "ought", all right, and "is" to imply "ought", and that cannot be done. It doesn't imply that these are not data points, that what a million people think about these things should not be part of your considerations in your analysis, but it should not be the final word on this.

So, Ethics by Design and it -- this is related to this, you know? It's, you know, the poor guy at the switch. He can't -- has to make this choice, but we have to, you know, should the train, you know, run over one person or over five persons? Should you shift it to hit that one person? If you don't do anything, it will hit those five people. We know it. You know it. It's in the popular press and -- but what's never, never observed is that this guy has a moral problem because of the design of the infrastructure. If the lever would be, at the same time, designed to be a brake, he wouldn't have a problem, but it wasn't designed as a brake.

So, the engineering students in Delft tell you this is bad design. The

philosophers don't buy this, by the way, of course, but I -- the other thing is -- so, think design, all right? That's -- so, it's about people. It's not about -- and be careful of agency laundering, a beautiful term a colleague, Alan Rubel, has introduced; agency laundering, where you look at the technical system as "Oh, where are the humans?" Look for the humans because they have decided things. They have overlooked things. They have neglected their duties, et cetera. That's where you need it.

Think Design, and the other thing is Think Systems, you know? If we think about nuclear safety, our first reaction is to look for the concrete walls. How thick are the concrete walls? How -- what's the temperature of the cooling water? That's not what it's about.

So, now we jump to algorithms because that's a sexy term. We look at the algorithm. The algorithms sit in IT infrastructure in a data ecosystem. That's what you need to look at. It's much about the training of the security guards, the safety of the nuclear power installation, than it's about the inner workings of it.

Also, you have to differentiate AI and Big Data, and where it's working in different cases. Safety for these types of ships is different from how you use it and where it's used, under which conditions. You cannot take that boat on the left upper corner to -- from Rotterdam to New York. You can't do that with that thing. You're not insured and you're criminally liable as you -- if you do that. So, AI can be used under certain conditions, with certain specifications, in the operating theatre room, et cetera. So, institutional mechanisms, also very important. We only think that food is safe because we rely on an elaborate system of institutions, and we lack that in the case of AI. So, we need to help ourselves to those institutionum.

Finally, we live in a very hyperconnected and interdependent world. Our fates, humanity's fate, is very connected, where it -- something goes wrong here, it has

consequences over there, and we need to appreciate that. That's what we appreciate in The Hague, and, therefore, it's a great pleasure to do all of this research and this work in The Hague, and so I'm looking forward to the discussion. Not 25 minutes, probably.

DR. TURNER LEE: As everyone is getting mic'ed, all I can say is, "Wow, what a presentation." We want to, again, welcome everybody to Brookings, as we jump into a panel discussion and reaction, I think, to what we heard in the presentation. As it was mentioned, I am Dr. Nicol Turner Lee. I am a fellow in the Center for Technology Innovation, here, and someone who has actually visited this great city of The Hague, and very happy to have everybody here, with us, in the States. So, thank you for being here.

I just want to unpack everything that you said, but I can't do that in this period of time because I got company, and so what I would like to do is to start, Cam, with you, to, sort of, react to what you've heard in the lecture, and, as we react to that, thinking about, I think, the heart of this discussion -

MR. KERRY: Mm-hmm.

DR. TURNER LEE: -- which is how do we balance U.S. and E.U. interest, or will there be points of divergence, right, as it was indicated in the presentation.

MR. KERRY: Mm-hmm.

DR. TURNER LEE: So, why don't you give us some short reaction?

MR. KERRY: Okay. Well, thanks, and you're -- thank you for that very impressive and wide-ranging and thoughtful presentation. I guess that to respond, Nicol, I think I'm, you know what, less pessimistic about AI than, I think, some of the precautionary principle posits, or than, let's say, Henry Kissinger, as in his reflections on it. I think -- I think some of what Jeroen has outlined about the limitations of AI demonstrate that there are so many respects in which human beings are more capable than machines, and that, you know, whatever the predictions are about the abilities of AI, they are far -- much further off

than, you know, many of those predictions, dire or optimistic, often posit.

That said, I think -- and, you know, I think that leads into some of the differences in approach. I think, you know, there are, I think, are fewer difference, frankly, than I think you suggest, you know, and I think a lot of the differences that we see, with respect to AI or to GDPR, in -- come to -- from differences in our approach to our legal and regulatory systems, and, you know, I believe that, sort of, a lot of the arguments about this really are results of cognitive dissonance that come from differences between, you know, a civil law system -

DR. TURNER LEE: Right.

MR. KERRY: -- and a common law system and thinking that results from that. So, when you look at E.U. approach, in general, GDPR, some of what Jeroen has described for AI, it is comprehensive.

DR. TURNER LEE: Mm-hmm.

MR. KERRY: It flows down from central organizing principles. It's a, sort of, Cartesian Logically-ordered universe. Versus common law is a much more ad hoc, much more iterative approach and, you know, that is also how technology works. So, it, you know, that's some of the analogies in our system and Silicon Valley. If I were using slides, I'd put up a slide of -- that on one side, the Gardens of Versailles, you know, this, sort of, beautiful geometrically ordered landscape versus the Gardens of Frederick Law Olmsted, near where I live in Boston, organic, no obvious order, and that's, sort of, the common law, and we see this GDPR. It's one law, comprehensive.

We have 56 different Federal privacy laws and state laws, and in a little bit, the same playing out in AI. So, Europeans, I think, look at that and think it's the Wild West. I've certainly heard Europeans say Americans have no, and I've seen it in print, Americans have no laws on privacy, but, you know, we do have lots of laws, and I think Americans and,

you know, tend to look at GDPR and, you know, what's this? You have to have lawful grounds for processing. It's, you know, it's -- but I got to say, "Mother, may I?" and this is interfering with my permission-less innovation, and I think we see, sort of, the same things in AI, in the commission process -

DR. TURNER LEE: Right. Right.

MR. KERRY: -- that Jeroen has described, but -- and, you know, I've had heard a European say, "You know, we must have rules to define this area." and I think, in contrast, you know, we've recently had a Presidential Executive Order. I think it frames a lot of the same issues. We want U.S. leadership. We want investment. We want training for our workforces, but then it, sort of, says, you know, each Federal agency, you go off and you figure out how to deal with AI in your sectors.

Some of that, I think, is appropriate. The issues for streetcars or autonomous vehicles are different -

DR. TURNER LEE: Mm-hmm.

MR. KERRY: -- than, you know, AI in medicine, different from AI for autonomous weapons systems. So, we need some of this. I think, though, frankly, some of having an Executive Order is also that it could be implemented with, you know, the only engagement from a President, who seems to have an aversion to anything associated with the word intelligence, is to put his signature on it, and I think this does contrast with, you know, some of the engagement. The Obama Administration did a White House report on artificial intelligence. You know, we are, I think, seeding leadership in lots of areas of digital policy to Europe. I think, you know, you know, striking -

DR. TURNER LEE: Mm-hmm.

MR. KERRY: -- that Europe has a Vice President and a Commissioner, you know, for the digital economy -

DR. TURNER LEE: Mm-hmm.

MR. KERRY: -- and, you know, we have -- we are not thinking systematically enough on this -

DR. TURNER LEE: Right.

MR. KERRY: -- but I think we have issues in common. Techlash is Trans-Atlantic -

DR. TURNER LEE: Mm-hmm.

MR. KERRY: -- and so I am hopeful. Maybe we can explore this further -

DR. TURNER LEE: Yes. Yes.

MR. KERRY: -- that there are opportunities, sort of, to work together. I think, you know, we have different systems. We are going to work in different ways, but I think common -

DR. TURNER LEE: Mm-hmm.

MR. KERRY: -- common values.

DR. TURNER LEE: Yeah. So, Bilyana, I want to actually go to you because I think what -- Cam's remarks and what we've heard from Jeroen's remarks is really this conversation around framing, right, and what I think Cam has, sort of, interjected is this conversation around jurisdiction and authority, and there seems to be, I think, some differences in approach when we look at State versus Federal. So, why don't you remark on that, and then, again, we'll dig into some questions that, sort of, unpack what we've heard today?

MS. PETKOVA: Great. Well, thanks very much to the organizers for having me. It's great to be here amongst so many distinguished speakers, and what I want to do, today, is just use up my short intro to say a little bit about regulatory theory and federalism, comparing the E.U. with the U.S. context.

So, both the federalist and the regulatory angle, I believe, are relevant to our discussion on digital technology in the age of AI, and these dovetails with this debate about -

DR. TURNER LEE: Right.

MS. PETKOVA: -- framing, as the issue is Techlash or as responsible innovation. I've just finished teaching a small course in the U.S., here at Georgetown, on the General Data Protection Regulation, and I was happy to see that -

MR. KERRY: Mm-hmm.

MS. PETKOVA: -- actually, the majority of my students were Americans. They weren't Europeans who are doing LL.M. at Georgetown. So, I think, to go back to Cam's point, there is hope.

So, let me start with federalism. First of all, what do we understand by federalism? This is not a term explicitly enshrined in the U.S. Constitution. I'll bet it is a concept that has had a tremendous doctrinal impact. As such, federalism remains a disputed notion. While it was associated with centralization, when the U.S. Federation was still young, more recently, federalism comes to be understood in the U.S. as preserving, or even enhancing, local autonomy. Conversely, in the context of the European Union, federalism tends to be used synonymously with directing more power to the U.S. -- sorry -- to the E.U. institutions, and, now, of course, with looming Brexit, the vote is happening as we speak, it is not a term of art preferred on the other side of the pond.

Despite the fact that the E.U. system functions with its own charter of fundamental rights, supremacy and direct effect for E.U. law, as a quasi-federation in nobody name. There is one approach to federalism, however, that bridges these two divergent interpretations, and this is the understanding that the U.S. Justice Brandeis has adopted on the states as laboratories of democracy, and current Yale Law School Dean, Heather Gerken, impacts this approach in her take on federalism, as a process of

continuous local and state experimentalism, until some ideas crystallize enough to get adopted as Federal Benchmarks.

So, in the data privacy field, we see how this dynamic has played out a role in the E.U., where the first data privacy statute was adopted in the German locality of Hessen, to be taken up on the level of the German Federation in the 1970s, and later followed by French and Swedish data protection laws, to serve as a canvas for the first global comprehensive data privacy, started to be adopted in the 1990s, the European Data Protection Directive.

So, the rationale for Europeanizing the high level of data protection espoused at the time by these states was the fear that the rest of E.U. members, including newcomers, will lower the bar, and thus place at a comparative disadvantage German, French businesses, whatever.

So, in my academic writings, a couple of years back, I've argued that, given its tradition in privacy regulation, through a number of soft law initiatives and sectoral privacy protected legislation, California is well-placed to play a similarly leading role in the U.S. Today, the California Consumer Privacy Act is a reality, and the new law will enter into force in 2020. So, it seems fair to say that any attempt for a comprehensive federal consumer privacy started in the U.S. will take the CCPA as a starting point, something that clearly transpired from the testimonies of Alastair Mactaggart, the main force behind the CCPA, in various committees before Congress, states, and I want to -- localities, as recently, we see in the U.S., not only the State Attorney Generals, but also the City Attorney Generals entering the fray of privacy enforcement. So, they matter, as conduits, for national or E.U. policies.

Looking into the state and, now, the local level is important, first and foremost, from a democratic point of view, but it is also important from the point of view of

experimentalism and ideas generation. So, global cities, like New York, Amsterdam, and, indeed, Washington, DC become, sort of, test beds for tech companies. When trying to understand the effects of new business models fueled by data, and the effects of regulation that is trying to harness technology for societal benefits, our cities become the next frontier.

All right, so, let's pause here. Federalism, the role of localities and states, on the national level, and very briefly, I want to make a second point about regulatory theory. Ever since political scientist David Vogel coined the term "California effect" in the 1990s, many have asked themselves, including Vogel, to what extent policy convergence toward a more stringent regulatory standard is really possible on a global scale?

Vogel's theory of a race to the top, the "California effect", based on California's first mover, high environmental standards for car manufacturers, is based on the premise that trade liberalization triggers stricter standards, developed in jurisdictions with a large market share, to force private companies in other jurisdictions, with weaker standards, either to meet the higher standard, or sacrifice a large portion of their exports.

Of course, California is one such large market for tech companies, but the E.U. another. So, fast forward to 2015, when a Columbia Law professor, Anu Bradford, introduced another buzzword for academics, the Brussels Effect. In the field of data privacy, it became attractive to think of the newly enacted GDPR, enforced since May 2018, as becoming a de facto gold standard for most companies, in an example of the Brussels Effect.

Vogel's theory that rules move to a higher level is based, primarily, on the assumption that export-oriented firms do not want to have different rules in their home market, since complying with different rules can drive up costs, visibility, domestic competitors. The assumption is also that companies want to work with one gold standard, for convenience. Whereas that might prove true in many areas, it cannot necessarily be true

in others. So, think about the implementation on a global scale of the right to be forgotten. So, Google has pushed back against that quite a lot. There is, however, an important case pending before the Court of Justice.

So, as technology gives the possibility to lower the cost of diversifying products and services offered in different markets, again, think of the advent of geo-blocking. The whole sale application of Vogel's theory becomes somewhat disputed. So, I think, by and large, I'm out of time.

DR. TURNER LEE: So, this is -- yeah. No, no, no. This is actually interesting. So, I want to bring Jeroen into this conversation, right? So, what we've heard from Bilyana is this whole conversation around this conflict between, you know, what the U.S. is trying to do, in terms of Federal Legislation, right now, which, if I go back to the presentation, is -

DR. VAN DEN HOVEN: Mm-hmm.

DR. TURNER LEE: -- probably rooted in this need for marketplace certainty, right?

DR. VAN DEN HOVEN: Uh huh.

DR. TURNER LEE: So, a lot of U.S. privacy concerns are really based on whether, you know, companies have certainty, in terms of innovation, and if you counter that against what we're seeing in the GDPR, which tends to look at some more normative frameworks around that, it's apparent that there may be this, sort of, disparate implementation of rules, internationally.

DR. VAN DEN HOVEN: Mm-hmm.

DR. TURNER LEE: So, I want to start there, first -

DR. VAN DEN HOVEN: Mm-hmm.

DR. TURNER LEE: -- because if there is this, somewhat, disparate implementation of rules around privacy -- let's start there before we go into AI. Are we

balkanizing the internet, in many respects -?

DR. VAN DEN HOVEN: Uh huh.

DR. TURNER LEE: -- and so that's part A, and then, Cam, I want to come back to you, in terms of -

DR. VAN DEN HOVEN: Mm-hmm.

DR. TURNER LEE: -- what that effect, then, has in the U.S., right, when we begin to look at -- and I think that it was, sort of, indicated in the remarks, a national framework versus State of California, which is actually putting in their own rules to be adopted January 1st of next year. So, let's just start there. I mean, are we seeing, in these conversations, these layers of privacy that are really going to lead to disparate rules, disparate impacts, potentially more manipulation, and controls on freedom of expression, you know -

DR. VAN DEN HOVEN: Uh huh.

DR. TURNER LEE: -- just because of the nature of the ecology, which we are creating.

DR. VAN DEN HOVEN: Mm-hmm.

DR. TURNER LEE: I'll start with you, Jeroen.

DR. VAN DEN HOVEN: Yeah. I think we're already seeing a little bit of that, and -- but the first question that you're -- I mean, although we have also, kind of, some serious concerns about our internal market -

DR. TURNER LEE: Right.

DR. VAN DEN HOVEN: -- and the same kind of effect, so you -- we want to have level playing field, and we want to have the same rules for all the Member States, so that we have certainty for, you know?

DR. TURNER LEE: Right.

DR. VAN DEN HOVEN: So, that's also -- it's a concern that we recognize. It's not alien to us.

DR. TURNER LEE: Right. Right.

DR. VAN DEN HOVEN: The other thing that I think Brussels is always asking, you know, what should be apart from the whole trade argument is -- what do we want to achieve together? You know, there's always the bigger picture. It's always, like, you know, is there a, kind of, a real Trans-Atlantic -?

DR. TURNER LEE: Right.

DR. VAN DEN HOVEN: -- deeper, kind of, thing going on, and if we want to, and then we are willing to look for solutions, as we've done, you know, all of these decades of passenger lists, you know, at the early stages of, you know? So, people coming, coming to Europe and said -- talking about which databases could be used by which kind of -- you know? So, I think that the -- coming back to the geopolitics of it is what I see now, is that there are new arguments -

DR. TURNER LEE: Mm-hmm.

DR. VAN DEN HOVEN: -- to look for a deeper, kind of, Trans-Atlantic -

DR. TURNER LEE: Mm-hmm.

DR. VAN DEN HOVEN: -- relationship, on the basis of which we can become a little bit more pragmatic -

DR. TURNER LEE: Yes, yes.

DR. VAN DEN HOVEN: -- about, you know, the nitty gritty details of how we deal with these things because we -- it turns out we have, perhaps, more in common than we have disagreements. Although, the disagreements are real -

DR. TURNER LEE: Mm-hmm.

DR. VAN DEN HOVEN: -- but there is, perhaps, a higher purpose, right,

and mutatis mutandis that could apply, actually, for everyone -

DR. TURNER LEE: Right.

DR. VAN DEN HOVEN: -- on the globe, but you know? So, we could, perhaps, start here.

DR. TURNER LEE: Mm-hmm.

DR. VAN DEN HOVEN: So, that -- that's one thing I would say, and I've always found the people, the Hume, Montaigne of the European Data Protection Supervisor very, you know, very reasonable -

DR. TURNER LEE: Mm-hmm.

DR. VAN DEN HOVEN: -- in this respect, and open to debates, also, with the U.S., and don't forget they are really thinking about the next move after the GDPR, and so this -

DR. TURNER LEE: Right.

DR. VAN DEN HOVEN: -- conference they had in the European Parliament, this -- just the mother of all privacy conferences, was already thinking about digital ethics, you know, because the ink is hardly dry on the GDPR, and they're already thinking about, "Okay, what's wrong with it? How could we improve it?" and I think we will see a paradigm shift in the -- in the long run -

DR. TURNER LEE: Mm-hmm.

DR. VAN DEN HOVEN: -- where we have to give up on some of the core concepts in the GDPR, my private opinion, but it's -- for example, you know, informed consent, purpose specification, use limitation, and yet, even the notion of a person -- personal data, you know? All of these, kind of, the key concepts -

DR. TURNER LEE: Mm-hmm.

DR. VAN DEN HOVEN: -- may -- may be the wrong way, and not be

sustainable for the rest of remainder of the 21st century. So, we have to, without giving up on the protection of -

DR. TURNER LEE: Right.

DR. VAN DEN HOVEN: -- individuals. That remains a big concern. So, the other thing that I wanted to say, in response to you, was that -- actually, I very much like this idea, your suggestion that there is a lot of democratic local experimentation going on -

DR. TURNER LEE: Right. Right.

DR. VAN DEN HOVEN: -- as a source of innovation, and so we have people, here, trying to come to grips with a particular problem. They do it in their own way. They draw upon resources that are not accessible to others -

DR. TURNER LEE: Right.

DR. VAN DEN HOVEN: -- and they may come up with really interesting suggestions that could be leveraged and used on a Federal or on a higher level. So, that is something that you don't want to lose, I would say. That's a very interesting, you know, set of resources that you -- that a system may have.

DR. TURNER LEE: Right. So, Cam, I want to just -

MR. KERRY: Mm-hmm.

DR. TURNER LEE: -- real quick, just jump to you, though, on that concept because the U.S. is, actually, trying to develop a Federal -

MR. KERRY: Mm-hmm.

DR. TURNER LEE: -- umbrella, and if we look at the state of California as an experiment, there is a conversation on whether or not that experiment should impact what Federal Legislation looks like, or vice versa, right, and so the question I have for you is, you know, are we going to see, you know, what is the effect of states, like California, implementing their own privacy legislation? There's already 50 states that have it, but speak

to us in the context of the U.S.

MR. KERRY: Sure. Well, I think both GDPR and the California law -

DR. TURNER LEE: Yes.

MR. KERRY: -- are, sort of, powerful drivers for Federal Legislation, for, I think, frankly, a variety of reasons. I mean, certainly, the drive to have Federal Preemption, a single standard, as the E.U. did with the GDPR, and to make, you know, a single market out of the U.S. is certainly there, but I think -- I think of the things that go beyond that is really a recognition that there's a trust gap -

DR. TURNER LEE: Mm-hmm.

MR. KERRY: -- that needs to be addressed and, you know, having a set of standards that, sort of, level the playing field, in terms of individual expectations would be a, kind of, a seal of approval -

DR. TURNER LEE: Right.

MR. KERRY: -- on company practices in handling data -

DR. TURNER LEE: Mm-hmm.

MR. KERRY: -- and I think, you know, as well as, sort of, for the U.S., you know, we -- right now, we have no answer to the GDPR, and I think there's a recognition that, you know, we can't, sort of, go out into the discussion in the world and, you know, without a horse to ride, so to speak -

DR. TURNER LEE: Right.

MR. KERRY: -- and I think, you know, also a recognition alongside this, that, you know, we do need to engage more. I mean, it's unfortunate that TTIP, the Trans-Atlantic Trade and Investment Partnership, fell by the wayside because that was a vehicle to address, I think, a lot of the common digital economy issues and some of the regulatory barriers that could present balkanization threats. Unfortunately, you know, we see some of

that. I think the new, you know, the copyright directive -

DR. TURNER LEE: Mm-hmm.

MR. KERRY: -- may have some impacts towards that. We've seen some people make the decision that, you know, whatever business they had in the E.U. was not worth the regulatory costs of GDPR compliance. So, they've pulled out, but, you know, we can, I think, get to common standards -

DR. TURNER LEE: Right.

MR. KERRY: -- and, you know, I think that that is part of the drive in Federal Legislation and, you know, Bilyana quote Heather Gerken talking about, sort of, state experimentation arriving at a point where it can be adopted as a national standard. Maybe California is that point.

DR. TURNER LEE: Yeah. Right. Right. So, Bilyana, I want to go back to you, just as we wrap up this part of it, and, in a few minutes, I'm actually going to take Q and A from the audience. We'll have time for one or two questions. Again, remember to tweet. If we don't get to your question, put it out there in the Twitterverse. We'll try to answer it. So, looking ahead, and looking globally, given that these are out there, are there opportunities to do this sort of multilateral harmonization of these rules, in your view? Is this a conversation -- we've heard some starting points? You know, maybe there's something to be gleaned from GDPR, as well as what the state of California -- but is there something else we should be looking to, to get to that harmonization?

MS. PETKOVA: Right. Well, certainly, at first sight on the global level, one can observe a certain convergence of data privacy standards.

DR. TURNER LEE: Mm-hmm.

MS. PETKOVA: To go back to Jeroen's point, also, about bridging these two worlds, the E.U. and the U.S., and what Cam was saying. So, this is triggered by the

adequacy requirement in the preexisting E.U. directive and, now, also in the GDPR. An Australian scholar, Graham Greenleaf, has found that there are 120 countries, right now, that have enacted E.U. style data privacy laws, and 30 more are considering such bills. So, as -- also, Ted was mentioning, more recently, Brazil enacted a statute called the General Data Protection Regulation, and a comprehensive privacy statute that has looked for inspiration at the E.U. model is well underway, through the logistic process, in India, after two court decisions, there, challenging massive national biometric identification system.

So, also, Japan, recently, signed an adequacy decision on data protection with the E.U. Commission, in an almost one-year long negotiation process. So, finally, also, we see, also, some privacy protections, for the private sector, in that country. So, on the one hand, we see this convergence. However, the table is in the detail, and it seems that there remain a lot of divergencies, and the concrete measures to be taken by the different countries that use the GDPR as a starting point, but, still, they're not replicating it.

DR. TURNER LEE: Mm-hmm.

MS. PETKOVA: Each country is coming up with its own model. So, I think aspirations for a global single standard will still face a lot of curdles.

DR. TURNER LEE: Mm-hmm.

MS. PETKOVA: Essentially, someone needs to make it their lifelong project

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DR. TURNER LEE: Right.

MS. PETKOVA: -- to work on that kind of standard. So, what are we left with, in the immediate future? So, one way forward could be that we see an attempt to extend the inter-variability standard of what the privacy shield is, this framework for data exchanges between the E.U. and the U.S., an example of voluntary adherence to principles by companies and governments, on a larger scale. At the same time, we might also see

some attempts for concretizing the inter-variability and existing legal frameworks, through joint enforcement actions.

DR. TURNER LEE: Right.

MS. PETKOVA: So, the GDPR, for example, explicitly favors this approach by giving what is known as the European Data Protection Board this body that is comprised of the data protection authorities of the astute 28 Member States, with the task of promoting exchange of knowledge and documentation with supervisory authorities worldwide. So, that might be also one venue, and then, in addition, we see, in the field of AI, for example, the OECD, the Organizations for Economic -

MR. KERRY: Uh huh.

MS. PETKOVA: -- Cooperation and Development, based in Paris, that will come up in May, or with guidelines on AI. So, EPIC, for example, has been heavily involved in that soft law effort, which is important, as it can serve for canvassing national legislation, so civil society groups, like the Electronic Information Privacy Center, has also -- have weighed in, in that process.

DR. TURNER LEE: Yeah. So, this so tough for me because those of you who know I moderate, I want more time cause I think we have to really go into enforcement, but before I open up to, again, one or two questions. I do have to, sort of, end my part of moderator privilege on this discussion of AI and emerging technologies, right?

So, we, sort of, talked about the framing of privacy, how we could, potentially, get to some level of harmonization, what are some starting points, where do we differ, but AI seems to be a different animal, right, because you're looking at this combination of risk based assessments combined with some harms based approaches because, at the center of it, I love the way that you frame it, are humans.

DR. VAN DEN HOVEN: Mm-hmm.

DR. TURNER LEE: The work that I do -- we have a paper coming out on algorithmic bias. These are real concerns that are going to, I think, affect the way that we see the evolution of technology and, sort of, get into that gray area where there are human ethical concerns. What does a framework look like under those cases?

DR. VAN DEN HOVEN: Mm-hmm.

DR. TURNER LEE: You've pointed out differences. You're in around countries.

DR. VAN DEN HOVEN: Mm-hmm.

DR. TURNER LEE: Are we going to find our self in this same debate, in terms of, you know, multilateral agreements around this, use cases? How do we ensure that these technologies are not weaponized?

DR. VAN DEN HOVEN: Hey, you know, very hard questions, very relevant questions.

DR. TURNER LEE: I know, and we only have a few more minutes before Q and A, but, please, take your time.

DR. VAN DEN HOVEN: It's -- so, what do you see if you look at the landscape of all these, kind of, wide papers, and all these manifestos, and all these lists of principles that are produced? There is a lot of convergence. If you look at the IEEE, for example, here, based here in the U.S., this is ethically aligned design.

DR. TURNER LEE: Mm-hmm.

DR. VAN DEN HOVEN: So, they came and visited in Delft, and we had conversations, and we are, you know, providing input to their sets of principles, you know, the Asilomar principles, and so everyone seems to be identifying all of those concerns, and also making those kind of distinctions that you were making, and I was, and I think that people also realize that we've had this difficult trajectory -

DR. TURNER LEE: Mm-hmm.

DR. VAN DEN HOVEN: -- and that it is very similar -

DR. TURNER LEE: Yes.

DR. VAN DEN HOVEN: -- to it and, of course, it is related because there is so much, kind of overlaps.

DR. TURNER LEE: Mm-hmm.

DR. VAN DEN HOVEN: So, and everyone is realizing that there are great benefits to be had from this technology. So, I'm fairly optimistic. I'm receiving treatment for that, but it's -- that's -- okay. I think the -- we have a little bit of a chance. For example, the Declare Initiative, that the Deputy Mayor mentioned, that is setting up its headquarters in The Hague, that is 7,000 AI researchers, in Europe, received -- just yesterday, I talked to the one whose heading this up, from Stanford -

DR. TURNER LEE: Yeah, yeah.

DR. VAN DEN HOVEN: -- to have a collaboration going. So, the same initiative that Henry Kissinger attended, I think it was last week, is going to -- it'll launch with a kick of a huge initiative. I think these things -- and we need to foster that, of course.

DR. TURNER LEE: I agree.

DR. VAN DEN HOVEN: I mean, you don't leave these people to their own devices, but, you know, foster those kind of debates and dialogues. That would be, I think, the wise thing to do -

DR. TURNER LEE: Yeah.

DR. VAN DEN HOVEN: -- and there's no better way to predict where the world is going than just to create it and make it -

DR. TURNER LEE: That's right. That's right.

DR. VAN DEN HOVEN: -- and invent it, huh?

DR. TURNER LEE: And will -- Cam, will privacy legislation address the concerns of AI?

MR. KERRY: I'm -- no. I think only in small ways.

DR. TURNER LEE: Mm-hmm.

MR. KERRY: A lot of the issues are different. I mean, I think they certainly address some of the ways that personal data is used in AI, but I don't think that privacy legislation can or should try to address some of the fundamental cost-cutting issues that have been identified, and I guess I come out a little bit where -- you said a little bit at the end, Jeroen, like you said, let a thousand flowers bloom -

DR. TURNER LEE: Bloom, yeah.

MR. KERRY: -- in terms of developing the codes and approaches. I think that's somewhat my take, but I think the principle that is also -- has been articulated, though, vigilance -

DR. TURNER LEE: Mm-hmm.

MR. KERRY: -- is -- certainly needs to be an important part of the discussion.

DR. TURNER LEE: That's right. When you said, let a flower -- let a thousand flowers bloom, though, I don't want the baby in the carriage to be hit, okay? I just want to be real clear. We got to be careful about that, but let me close with you, Bilyana, in terms of the whole concept, then, of GDPR and AI. Will that framework -- we're coming up upon the one-year anniversary. Will that framework, at least, begin to inform us on what we should be looking at around AI and emerging technologies?

MS. PETKOVA: Right. Well, also tough question. One year is, I think, still not enough to be able to assess properly -

MR. KERRY: Mm-hmm.

MS. PETKOVA: -- the statute, given its complexity and comprehensiveness and, also, European Commission is no -- under no obligation, unlike with the Privacy Shield, to publish these annual assessments that we see for that other framework. So, that's on the formal side of things. Now, I think that gives a lot of space for independent external evaluators to step in. So, hopefully, we'll see that more, in the future. Of course, the GDPR answer to that is through Article 22, which imposes some requirements for explicit consent when the data subject, the individual, is affected either legally or by decisions that significantly affect the individual. So, you can think about political targeting, in that sense, for example, and many other areas, so that there's -- some protection's also there, that the decision can be, also, contested -

DR. TURNER LEE: Mm-hmm.

MS. PETKOVA: -- or can be appealed. Now, how this is going to play out, whether there's going to be always human in the loop, or sometimes we might see, also, that the decision is contested, for example, by -

DR. TURNER LEE: Right.

MS. PETKOVA: -- checking with another algorithm.

DR. TURNER LEE: That's right.

MS. PETKOVA: I think that would also be -

MR. KERRY: Mm-hmm.

MS. PETKOVA: It will vary from area to area.

DR. TURNER LEE: That's right. Support AI, that's with the explained ability issues -- okay -- will come into effect. Okay, so I'm going try something a little different because I'm just going to take five minutes for question and answer. That's all we have. So, I'm going to ask for a question, but I'm going -- if more than two hands raise, I'm going to take two questions at one time, and I'm going to throw it to the panel, as part of their closing.

Is that okay, Ted?

MR. PICCONE: Mm-hmm.

DR. TURNER LEE: Just to make sure we answer a couple questions. So, just if -- raise your hand if you have a question, and I'm going to tell you -- I'm going to pick one from this side and this side, and I'm going to do it the way we do in the U.S. I'm going to close my eyes and put my hand out, and if your hand is the one in the direction of my finger, you're going to have your question to ask and, certainly, let's continue the conversation on Twitter. Okay. So, on this side, I'm going to put my hands on my eyes and I'm going to pick this gentleman, right there, as the first question, and let me do the second question on this side, and I'll ask that you keep your question brief, so that we can actually have the panelist answer, and I will do the young lady with the black on, okay, as the second question. So, let's do one question. Say your name, and if you all can just -

MR. KERRY: Mm-hmm.

DR. TURNER LEE: -- write the exact question down, and I will have them answer both at the same time.

MR. TEODORI: Thank you very much. I'll try to be very brief. Michael Teodori, from the European Parliament Liaison Office. So, how do we balance out your comments about, and calls for, increased harmonization, in terms of global governance for the internet, with the reality of the normative landscape, which, most of the times, is predicated on unilateral extra territorialism? I mean, we've seen that in -- on the U.S. side, for example, with the Cloud Act. We've seen that on the E.U. side, for example, with GDPO. I'm thinking of the Senate scope of Article Three, and also the upcoming, possibly, evidence proposal, and other commissioned proposals. Thank you.

DR. TURNER LEE: Okay. You all have that? Just hold that, just for a moment. That was a hard question that went in there, but -- okay. Now, let's go -- I don't

know if my exercise will work. Okay, and the second question.

MS. FAZEL: Thank you so much. I'm Marina Fazel, an Afghan American journalist, and I would like to ask you to address this on a couple of fronts. One is the international front. I mean, I heard you speak about President Putin being quite a leader in this arena. We are still in the midst of sorting through the results of what sort of meddling was done here. In the length of time that it takes to go through those issues, by the time we know what were the consequences, and the modalities bear results for us to see the Mueller report, et cetera, is there a risk of damage to democracy? How do you view the timeframe that it takes? You're all talking about a longer trajectory of how policies couldn't be formed to affect international entities vis-à-vis to this, but, in the meantime, what do we, global citizens, do when our phones are taken by ghost operators, for example, whether we are journalists, whether we are business executives -?

DR. TURNER LEE: Right.

MS. FAZEL: -- whoever we are? Are there entities being formed already, to deal with these things, to inform the citizens, to cope with the consequences -

DR. TURNER LEE: Right.

MS. FAZEL: -- and do that the best they can?

DR. TURNER LEE: So, okay, good.

MS. FAZEL: Yes.

DR. TURNER LEE: I think I got your question. I wanted to make sure -- oh, we have enough time. Okay. So, there are two questions. You can take both. You can take one. Let's end with her question, and let's go -

MR. KERRY: Okay.

DR. TURNER LEE: -- to this whole question around unilateral concerns, and the fact that there are competing approaches, even in the distribution of power, right,

around some of these areas, if we'd ever get to harmonization.

MR. KERRY: Sure. Well, I think we need to be mindful, in terms of the E.U.-U.S. discussion that, you know, we have some very powerful common interests, economic interests, in what is the world's largest trade relationship, strategic interests, and, you know, I don't believe that, sort of, the AI and technology discussion should be turned into an arms race, but there is that threat, and I think we have common interests, you know, and being on the same side, if that does happen, and in -- certainly, overarching this is, you know, common politic interests, to protect -

DR. TURNER LEE: Right.

MR. KERRY: -- democracy, to ensure that AI and technologies are not turned into the, sort of, the instrument of authoritarianism that Jeroen described, and I think, you know, those are enormously powerful common interests -

MR. TEODORI: Mm-hmm. Mm-hmm.

MR. KERRY: -- and I think it behooves us to work for ways to harmonize. You know, we're not going to -- we are not going to be identical. So, I mean, I was very interested in Jeroen's comments about where things may go with the GDPR, but we need to be having that discussion, be pursuing it actively, at all levels, not just a governmental discussion, but, you know, across all sectors.

DR. TURNER LEE: Mm-hmm. Do you want to go in, Bil -?

MS. PETKOVA: I just jump in, quickly. I, largely, agree with what Cam was saying. So, I think that there are more common interests than divergences. So, also, when both Europeans and Americans are, I think, deeply concerned with the Chinese scoring system, credit scoring system, and the rollout of technologies to -- on that scale. So, we should start with, perhaps, the commonalities, and, here, think of a secret scoring of travelers, of employees, preparatory techniques, also in the criminal law justices, Jeroen

was saying. So, there are common interests there, I think, that we can use as starting points, and it's also where civil society groups -

DR. TURNER LEE: Mm-hmm.

MS. PETKOVA: -- are playing a role on both sides of the Atlantic, for exposing some of these mechanisms to the, sort of, public, and pushing back against them, so.

DR. TURNER LEE: So, I'm going to have you, actually, end up on that last question.

DR. VAN DEN HOVEN: Yeah. Yeah.

DR. TURNER LEE: So, jump in if you want to say something, but end up on that last question.

DR. VAN DEN HOVEN: With both of the (inaudible)

DR. TURNER LEE: Yes.

DR. VAN DEN HOVEN: Yeah. To your question, which a very pertinent, very relevant one -

DR. TURNER LEE: Yes, yes.

DR. VAN DEN HOVEN: -- it's to say that, in Europe, we are thinking about those institutions that could surveil monitors, kind of -

DR. TURNER LEE: Mm-hmm.

DR. VAN DEN HOVEN: -- democracy observatories. For example, McCraw has -

DR. TURNER LEE: Right.

DR. VAN DEN HOVEN: -- has asked, in his letter, which was ridiculed a little bit. So, he wrote to le citroya, or citizens of Europe, calling for a new digital relation, and he drew attention to this also, looking forward to the European elections, and there is a

lot of anxiety around how, you know -

MR. KERRY: Mm-hmm.

DR. VAN DEN HOVEN: -- certain parties will meddle, and will try to influence that, and, indeed, I think your point is very, very relevant. How can we, you know, investigate, look at these things, assure ourselves of the fact that these things have been done properly, and in accordance with the rule of law? So, that is something that we have to create, new institutions. We have to invent that. So, we were thinking, also in the Netherlands, about setting up a unit or an agency that would, you know, oversee elections -

MS. PETKOVA: It's what we do, here, as well.

DR. VAN DEN HOVEN: -- and, especially, this online vigilance of seeing how, you know, like, we're trying to manipulate and influence, unjustifiably, the voters, so.

DR. TURNER LEE: Yes. Yeah. So, if I -- I could say this, as we continue to close. I mean, obviously, this conversation, today, from the beginning to this, now end, really points to the fact that technology continues to outpace policymaking. Whatever front that you're on, that we're going to continue to be in, I think, this race, to ensure that we actually harmonize, you know, not only in distinct approaches, but distribution of power, you know, where civil society fits in, with regards to freedom of expression -

DR. VAN DEN HOVEN: Yeah.

DR. TURNER LEE: -- and I think the most important thing, as we have this race, where people fit into this equation, where they are not hurt -

DR. VAN DEN HOVEN: Mm-hmm.

DR. TURNER LEE: -- in the process of technology's evolution. I just want to say thank you to these panelists. Please join me in thanking them.

MR. KERRY: Thank you.

DR. TURNER LEE: Before we leave, please join me in thanking the Deputy

Mayor for actually addressing us, and I want to say to all of you that you already probably know that Brookings continues to work on these issues in our foreign policy program, as well as our other programs, in which Cam and I are associated. Continue to follow our discussions. Continue the conversation on Twitter and enjoy the rest of your day. Thank you.

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ANDERSON COURT REPORTING
1800 Diagonal Road, Suite 600
Alexandria, VA 22314
Phone (703) 519-7180 Fax (703) 519-7190