

Challenges in Digital Technology Then and Now

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Well, hello, everybody. I'm Jonathan Zittrain, and I am a teacher at Harvard University on internet and law and policy kinds of issues. And it's my pleasure today to welcome Brad Smith from Microsoft to have a chat for a while between us, and then to welcome some questions from the audience using the various interfaces that Zoom has.

And in the interest of accessibility, let me emphasize what's on the placard in front of you, if this is working very well. And that is most functions, if you are an attendee, have been disabled, but you are able to submit questions through a Q&A tool with a little button at the bottom of your Zoom instance, at least for most Zoom instances. And if you do submit questions, we'll have a chance to go through them, while Brad and I are chatting, and see if we can put some forward.

We are recording this, so anything you say-- [CHUCKLES] it's sort of the Miranda Warning here-- can if, not will be, used against you, and I guess that applies both to me and Brad as well. And this is the extent of our sponsored advertising for ourselves. You're welcome to follow the Berkman Klein Center for Internet and Society at Harvard Law School and at Harvard University on Twitter @bkcharvard.

And with that, we should jump straight to welcoming Brad for this conversation. I should say Brad joined Microsoft in 1993, which may be several eras ago in internet history. He took up legal affairs in Europe for Microsoft, when he first started, and then took a path that led him through being general counsel of Microsoft, later president, chief legal officer, chief compliance officer-- some simultaneously concurrent, rather than consecutive sentences, as it were-- and is somebody who has, during that entire time period, not just done all of those jobs, with respect to the company and its both internal operations and external-facing ambassadorial roles, but has been thinking a lot about the evolution of technology.

I first encountered Brad at one of several propeller-hatted legal and tech conferences, where Brad would be presenting a paper, along with everyone else, and joining the debate as fulsomely as everyone else. And I think he's considered these days, indeed, a sort of dean of the US tech sector. And very pleased to have a chance to talk to you today, so thank you, Brad, for joining.

Well, thank you, Jonathan. You and I have had the chance to, as you mentioned, interact so many times, usually in person. It's great to see you today, and I look forward to the day when we can be in the same room at the same time, at Harvard or somewhere else.

Indeed. Well, thank you. So just to start off, I want to go back to that sweep that I mentioned in your bio for how long you've been thinking about these issues and kind of in the midst of them. And I can't help on the academic side but think of it almost as bookended by a 2001 article you

wrote on the third Industrial Revolution, "Policy-Making for the Internet." I don't know if Klaus Schwab or the World Economic Forum just wanted to one up you with the fourth Industrial Revolution. I assume at some point you'll have the fifth.

But looking at that article and your most recent book on tools and weapons as bookends to this, I'm wondering if there's anything you would want to tell your former self back in 2001, or even 1993, with all of the benefit of hindsight from today. And I say that as somebody who, in kind of looking over those bookends, there's a lot that's consistent between the two of them, including both a desire for an effective self-regulation, and failing that, a willingness, even an encouragement, to governments to actually play a role. But I'm wondering what you'd want to tell your former self that maybe you figure you wouldn't have known then.

Yeah, I think the thing that is interesting to consider is just how the issues that you've been working on, that others at Harvard and people like me have been working on in the tech sector, have just gotten bigger and more impactful and more an issue abroad public attention each and every year. I think you captured the phrase well when you and I first crossed paths. Let's just say it was a narrower and more geeky crowd.

And we intersected with two sets of geeks, technology geeks and legal geeks, or legal and policy geeks. That 2001 article that you referenced came out of a set of lectures I gave at the Hague Academy of International Law in the year 2000. And at that point it was a rare day that you would see something around tech policy in The New York Times, or say something like Time or Newsweek, the major weekly publications of the day. If there was something in that space, it was a big antitrust case against a company like Microsoft.

And what has been so interesting is to see two things evolve over the course of, say, 20 years. The first is these issues become so part of the popular public conversation for the simple reason that they impact everybody so broadly. And so, yeah, I would have given myself advice 20 years ago to think even earlier about how to make these ideas approachable for other people and not just interesting for the deep conversations that, say, technology geeks or academics need, really, to have.

But the second thing that I think is interesting is, to go back in time, so to speak, I remember in the late 1990s, there was no such thing as a privacy lawyer, for the simple reason that there was barely any such thing as privacy law. There was just a European data protection directive that was enacted in 1996. And now you meet people all the time who say, I'm a privacy lawyer.

And I think if you take those thoughts and you put them together, I think the real relevance for, say, students at Harvard Law School or anywhere else today is that we're seeing new fields born, including in the legal field. There clearly will be people 10, 15 years from now who will say, hey, I'm an AI ethics lawyer, an AI human rights lawyer.

And yet I will say the need for a broad perspective, even while these fields continue to proliferate and deepen, will remain. And I think that's what you've always brought in your work. It's what I've tried to bring together with others. You're bringing a bit of a historical perspective, provide that breadth of thinking. And we're just going to see this all continue, I think.

So let me ask specifically around privacy-- perhaps around security, too, of course they are distinct-- if I'm a member of the public, typically reading Newsweek-- I remember Newsweek back in the day, and its equivalents now-- and seeing some of these tech issues occasionally pop into broader consciousness, if I'm looking at that sweep, it's not as if privacy, quote, "got solved." In fact, if anything, it feels like it's gotten more difficult and I'm feeling less secure online, despite the lawyers that have been working on it, that may be cynically would say because of them.

But both from a security and privacy point of view, if we just went by headlines, it would seem as if we're barely holding the line, or maybe even falling behind. And that's despite, for example, in the security front, Microsoft starting a trustworthy computing initiative all those years ago saying, wow, we've really got to rethink these architectures. And I'm curious, is that just a headline-grabbing thing, or how would you characterize? Is it possible to characterize the slope of the curve for privacy for the average consumer today?

Well, the first thing I would say-- again, sort of drawing on a broader perspective-- look, once something becomes important in public life, it very seldom ever really gets solved, which is to say the issue doesn't really go away. Civil rights hasn't been solved. Voting rights haven't been solved. Immigration hasn't been solved. World hunger hasn't been solved. Certainly disease hasn't been solved.

If you were to go back to the year 1900 and look at the questions people were talking about, especially at the dawn of the progressive era, you would find a definite similarity between those questions and the questions people are asking today. The nature of the debate, the advances, of course they've been enormous, but the issues never really, in my view, typically get solved.

Now, having said that, privacy has advanced. I mean, there's more than 100 countries that have privacy laws, and 30 years ago it was you can count them on one hand. So the field has advanced. There are more protections in place. But of course, as technology has become more ubiquitous, I think you could also say that the challenges to privacy, perhaps even the threats to privacy, have actually become more pronounced at the same time. And I think that explains why it hasn't been solved.

Yeah, it's certainly harder these days not to have something recorded and shared than it is to record and share it, and that is a definite flip. And I guess maybe for many consumers, without even maybe having a worked out sense of privacy injury, there's often maybe just privacy surprise when paper of record does a story about location data and how much your location data it turns out as share.

I had no idea of Farmville. I thought it was a virtual farm. Why do they need to know where I am at all times in order to play their game kind of thing? And it conjures up a vision of the ducks serenely going across the pond while underneath, the feet are madly paddling, gathering data, processing it, in what otherwise feels like an organic experience.

And I guess, just tying it back, of course, to the public health topic that looms over all of us at the moment, I'm curious if you have a sense of what it would look like to responsibly repurpose the

commercial infrastructures built around data sharing-- the advertising and targeted and all that kind of stuff-- for which there may be some sense that it's time to trim that back. What would it look like to try to repurpose that for pandemic mitigation efforts of various kinds?

Well, it's been interesting, because I think in the current context, at one level, data has become the most indispensable tool in the world, they might argue, for enabling public health authorities to seek to manage their way through this pandemic. And some of that data absolutely is personal health information. It's personally sensitive.

Yeah, and in some ways, some of the governments that I've seen be the most effective have, frankly, just been really good at managing their hospital capacity, knowing where their ICU beds are, knowing whether they're occupied, knowing how long a patient has been in that bed, knowing what that patient's ailment is, knowing, in particular, whether that patient has COVID-19. I had a conversation with the prime minister of Greece. He can sit in his office at his home, look at a laptop, and see a dashboard that has data, real-time, on all the ICU beds in the nation of Greece.

So that's one example. There are other examples where you're seeing mobility data. You have just aggregated and used, in really important ways, by governors in the United States, by mayors, to try to know, are there social distancing measures working? In other words, are people staying home? And that is a very good indicator.

As we get more into this, we're seeing additional questions emerge, additional tools created, including, obviously, things like apps for tracing and tracking and the like. And that's where you have potential tensions between privacy for people and the protection of public health. That's what led us to publish seven privacy principles. You all have focused very similarly at Harvard and elsewhere.

And I actually think that it's a really good indicator. If you look at both of these issues together and take a principled approach, protection of public health, protection of privacy, you can start to synthesize these two at the outset. For example, you can say, look. If you only want data for public health purposes, then you can only use it for public health purposes, things like that.

And I think you can then rely on the commercial infrastructure to support those kinds of principles. And I think Google and Apple have done a very good job in opening up their platform in this way. And then you'll get other issues where there is real friction or tension, and that's where, I think, public authorities need to decide, based on their local values, how they want to strike the balance between privacy and public health.

And in ensuring privacy, there have been tugs of war over the years, the encryption battles, the classic case of the San Bernardino iPhone, in which Microsoft weighed in on that dispute, largely, if I'm not over simplifying on Apple's side in that debate.

Yeah, we did.

Yeah. And I'm just wondering if you have a sense of the blend of protections for privacy, as against government abuse-- how much of that blend is wise laws and agreements and legal institutional structures versus just making the technology such that it's self-protecting as much as possible, that we've got various forms of technological separation, encryption, data minimization, so that even if a government was of a mind to go beyond whatever it had promised or to disregard whatever international consensus there might be, that government simply can't do it. How do you think about that kind of blend?

Well, I think technology is a powerful tool, including for protecting privacy. But we do live in a world where the rule of law does override the code that people write. Now, ultimately, the laws of physics tend to trump everything, and if it can't be done, it can't be done. But if you look at what Australia did a year ago, for example, they did pass a law that imposed on, say, cloud service providers and others additional legal obligations, in certain circumstances, to decrypt.

And so I think things like encryption have proven to be of fundamental importance. The whole industry shifted rapidly to encryption at rest and encryption in transit for data in 2013 in the wake of the Snowden disclosures, and there has been this debate ever since about whether this was unduly undermining the effectiveness of law enforcement and national security.

But I would just say, at the end of the day, governments do prevail within their territory. And they can set the terms for whether a company can offer a service to the public there, and they can put a company in a position of then just having to decide, do I go there or do I not?

And the same is true for data. We make careful decisions based on elaborate human rights reviews before we decide to put a data center in a new country, before we make decisions about whether to store consumer data in the data center in that country. Because once the data is there, the government's law is going to be applied, if the government so chooses.

One possibly subtle distinction that may be worth briefly making is a sense that the San Bernardino case was really just kind of an appetizer, in the sense that if the government had, using exactly the power and authority as you're talking about, ordered Apple to make efforts to get into that phone, Apple, for that particular phone and technology, was in a position to do it.

Later versions of that phone, and generally there is an evolution of technology, I can discern sometimes attempts by the companies to just design the technology so they're in no particular privileged position to decrypt if they're asked to, that the data is stored encrypted and there's no key held by the company, and there's new technologies to still make it useful, even if the company itself can't get to it.

I imagine the response to that, if a government is feeling like it really wants access, would be what you call technology mandate, saying you're just not allowed to build a service, or even a product, that doesn't keep the keys somewhere in a back pocket at the company making it. And I'm just curious, just in your crystal ball, do you think we'll see those kinds of technology mandates become common?

I think it's a really interesting question, and your thoughts for that matter, as well, because you've been involved in this, obviously, as long as I have. It is so interesting on the encryption debate because it tends to become an issue front and center. You think it's going to come to a head, and then it dissipates. There is never really that much of a successful effort, at least, to even identify whether there is potential common ground. It is an issue that does tend to drive people into their corners.

Yes.

Basically, the privacy advocates, and typically with the tech companies, explain why were opposed to technology mandates. Law enforcement usually then is quick to parade its parade of horrors, in terms of terrible crimes that are, indeed, heinous, and they may feel that they cannot investigate and prosecute. And then there's a lot of drama and then the chapter ends. The next chapter sort of starts the same way.

I think the real question in some ways is, why have we seen that for a decade without the kinds of forcing functions, or even of some meeting of some common ground? Is it just a case that this issue is so binary that that's impossible, or is there some other aspect? And what do you think?

Well, I think that I find myself sympathetic to having in the blend technological protections that, at the very least, represent a bright line of paint on the side of the road. So everybody's aware if that line is being crossed, maybe with a warrant, maybe not. But you can establish boundaries and code that can reinforce whatever boundaries seem wise in corporate policy, or ultimately in law.

But it's also true that if too much stock is placed in the code as the last refuge of protection, it also then creates a kind of digital divide, that the people who know how to just tweak just so. I mean, bless something like PGP, Pretty Good Privacy, an elderly plug-in, at this point, for securing email and other documents and the end. But an average user trying to get pretty good privacy going, it's hard.

And I think what it would mean is it might be nice to come to an accommodation about what would even be offered by default so you don't have to be a rocket scientist in order to enjoy the hypothetical protections you could, if only you knew how to configure the technology. I'm mindful of our mutual colleague Bruce Schneier, who, at one point, security expert, decided he wanted to set up a definitively secure laptop and ended up in the same place all of us have been, with customer support and drivers that don't work, and all of that kind of stuff, and that's a cross-platform kind of issue. Yeah.

I actually think that observation is important because I think it does explain why this issue doesn't come to a head. I think you do see more tech companies create strong privacy protection features, but they're not necessarily turned on by default.

Yes.

And I think it turns out that criminals are not the smartest people on the planet. And so I think on many days, law enforcement is able to get what it actually needs to get, because the user who is committing a criminal act didn't turn on the privacy protection.

Yeah. A strange analog counterpart to that in the American constitutional context is the famed Miranda Warning that says, anything you say can and will be used against you, from the '60s Warren Court and known to watchers of Law and Order worldwide. Is an important right. You've gotta say those magic words to a person under arrest or anything they later say maybe can't be used against them.

At the same time, while that is a right, as you say, many criminals talk anyway. You can imagine a station house lawyer, whose only job is to sit in the police station, and as the people arrested are brought in says, hi, I'm willing to be your lawyer. And here's my only piece of advice-- I'll put it on a card-- don't say anything.

And that would probably have a material impact on what the police could elicit from the people they arrest. And my guess is civil libertarians, who among us feel very supportive of Miranda, all right, we've got to think through additionally whether we would really want it to work that well, understanding, though, that we fight for it as a right. It's a similar thing about defaults and that sort of thing.

Yeah, that's a good point.

Now, there's another area just worth bringing up, that if it had been, if we were in 2001, would probably be the first one, and that's copyright and the open code, intellectual property, which maybe over the years has receded, even though, as you've pointed out, it's not like it was ever definitively settled.

And there's such a provocative, interesting quote from Tools and Weapons, in which you say Microsoft had been on the wrong side of history. And what a just fascinating observation, kind of reflection to make. And I'm just curious, looking at things now, how to think through the role of copyright, or even later, patent.

I remember once at a conference, it was surprising to me at the time, you said, yeah, we're not thinking so much about copyright for code. But patent, that's kind of interesting. And I'm just curious, as you think about the development of intellectual property law, with respect to code, and maybe for data protection, if you want to unpack a little bit more how your thinking has evolved.

Yeah. The first thing I would say is one of the interesting things about intellectual property is that it has four distinct fields, patents, copyrights, trademarks, and trade secrets. And it, for many, works. It's very clear what your field is. You write a book, I write a book, it's called copyright.

And yet as software code was created, interestingly, actually all four fields became relevant to software. Copyright the copy to protect against literal copying. Patents to protect, obviously, the

novelty and utility of certain inventions. Trademark is and remains important to fight counterfeiting. And frankly, if all three fail, you tend to keep your codes secret through trade secret protection.

What we've seen over time is a little bit of a battle almost, if you will, between the importance of copyright and the importance of patents. And as you'll remember in the 1980s and 1990s, people first thought, oh, everybody's going to use copyright. They're going to protect not only against the copying literally of code, but of the essential expression in it. And then the Supreme Court was less than enthusiastic about that and people shifted the patents.

When I started at Microsoft in 1993, there were probably only two patent lawyers. It wasn't just because we were a smaller company, it's because patents were not thought to be as important. And then the early 2000s saw an explosion of patent law. And then slowly, but surely, the power of patent protection for code was whittled back through a combination of judicial action and congressional reform.

That's a zone in which Microsoft is both the hunter and the hunted, right? I mean, Microsoft could just as easily find itself defending against a patent infringement suit as making one.

Well, one of the things I've always really liked about working at Microsoft is because our business is so diversified, on any one of these issues, we have a foot in each shoe. And that forces us to think about it from both sides. It definitely doesn't mean we get it right, but it's a really positive thing they have to do.

The specific reference I made in our book was that we were on the wrong side of history, and I personally was definitely on the wrong side of history. It was really a reference to open source. And Microsoft as a company in the early 2000s leaned in on patent protection, specifically to protect what we saw as the valuable features in Windows, in terms of what it meant to see something like Linux.

And ultimately, we ended up concluding that it wasn't just about getting on the right side of history, it was getting it right. And getting it right basically meant becoming part of the open source community, even if it didn't mean that all of our code is open source. But like any big tech company, not all of its code is open source. But we now contribute more code to more projects that are open source than any company on the planet.

And I think as you look at data in this whole next trend, in terms of where technology is going, we're now advocates for an open data movement. We launched a campaign a week ago. We call it the Open Data Campaign. We published open data principles. We've committed ourselves to 20 open data collaborations in the next two years.

And I would say, broadly speaking, success and technology these days is about innovation, meaning moving faster. It means about building an ecosystem, and that means collaborating more broadly. All of this is much more likely to influence success than the ability to lock up, so to speak, your inventions. Doesn't mean that it's not important to have patent protection in a variety of spaces or fields, but I just think the indicators of success have really changed.

Let's just talk harmful content for a moment. And again, an evolution from the early days. As best I can tell, it's almost like a couple eras. The first I describe, in American terms, as a rights era, in which often the sensibilities among the technical folks and among some of the companies was we're here to empower the user, and then kind of get out of the way.

We give you an operating system. You want to load Napster on it, that's your business. Maybe we don't approve of it, but the recording industry, don't come to Microsoft expecting Microsoft to shoot down Napster on Windows installations, as if it were malware, because that's not our job.

And maybe starting around 2010, I'd identify a new thread that is now sharing the space with the rights sensibilities, which I'd call, first metaphorically-- and today, it's hard not to be literal about it-- the public health sensibility, which says instead of it being paramount for companies to let their users just do what they want, have encrypted conversations with the people they want to talk to, run the software they want to run, collect the data they want to collect, now it's, gosh, these companies, they shouldn't be abdicating. They need to be taking a moral stance about the behaviors they facilitate and should do something.

And as you say, Microsoft has so many different services and areas in which it operates. Maybe the one most clearly amenable to feeling the sharpness of that debate would be in a search engine, like Bing. And I'm curious how you think about what role the company's own sensibilities should have on good content, bad content, misinformation, not, versus just being a vessel for Window onto the web and what people find is their own business.

Well, I think there's two broad themes that are worth reflecting on. The first is that not all technology is the same, and the second is that even the same technology should perhaps be treated differently as technology evolves in different moments in time. When I think about technology today and the obligations, either informally or legally under the law, a technology supplier should assume, I do tend to think of three distinct categories.

One is platform, space. Second is, especially when you're talking about content, communities, really social media. And the third is search. And we're in all three spaces, not with equal success, but we're in all three spaces. We have Windows and Azure as hugely important platforms. LinkedIn and GitHub are both really popular community-oriented spaces, as is something like Xbox Live. So we have a number of places where people share comments and even content with each other. And then, of course, we've got Bing with the search engine space.

Then if you put this in the context of time, in the 1990s, the sense was, look. Let's give all technology pretty much a pass. That's what Section 230 of the Communications Decency Act did. And I think it did it for good reason at that time. These technologies were young. Nobody really had a model for how to impose any kind of balanced regulation on them. There was a real danger that regulation would choke them off before they had the chance to grow.

Certainly in 2000, you saw the pendulum start to shift. I would say 2019 was a watershed year. It was a watershed year, I think, for two reasons. First and most importantly, in the wake of the Christchurch terrorist attack, the Australian government, and then others, really move forward

with much more aggressive regulation, so much so that if you don't get extremist violent content off of your service expeditiously under Australian law, your executives risk three years of imprisonment and your company risks paying a fine equal to 10% of its revenue, worldwide, potentially. So that gets people's attention.

And then second, I think really led by, frankly, good reporting by The New York Times, there is more scrutiny of the tech sector, including Microsoft, asking whether we were really doing a good enough job to combat child exploitation. And the answer was no. We needed to do more. We continue to do more and we continue to need to do even more.

So I do think search, in particular, has certain sensitivities. Because I think if you can't find something on the web, you're almost denied your place in the public square, and I think that counsels, I think, for a less restrictive public policy for search. I do think that in the social media space, and we saw it after Christchurch, whether it was for Twitter or YouTube, the two biggest platforms, but also for those like LinkedIn, we did recognize that there were certain places where we needed to impose the ability to interrupt live streaming, exercise some more control over the nature of live streaming. And yet, I think we've also wisely decided that it probably doesn't make sense to impose the same granularity of obligations on the platforms because then you have two people trying to police the exact same thing.

So I actually think there's been some interesting progress. There's been new ideas emerging, some new consensus. The Christchurch Call for Action has more than 50 governments on board, as well as really the whole big tech sector, at least in the big tech companies. And it's not a Section 230 model. It's a model that says, we do have certain responsibilities and we're going to follow through on them.

What's been interesting to me is to see-- maybe a company in the era of rights and public health-- is an emerging third era I'd call-- it doesn't have the best name-- process or legitimacy, which says that as companies say, all right, we've got to maybe be more involved here and we've got to apply principles, and those are inherently value-laden, what are some of the external sources, the compasses we can turn to so that not every value-laden decision is treated as a customer service issue internal to the company?

And I think of Facebook's still standing up external review board for its content decisions as a first effort in that area of seeing how it still might be a decision effectuated by the company, but one very much more porous to outside decision-making, in this case literally taking some of the authority Facebook would otherwise have and having an outside group populated to make it. So I don't know if there's anything in your

I think that's an interesting insight. I think what it really suggests is we're on a path towards greater regulation. If you're going to surrender your decision-making responsibility to a group of unelected officials, does it make ultimately more sense to have elected officials, or at least people who are appointed by government officials who, in turn, are elected to reflect the public well, obviously, and especially in democratic societies?

Yes.

Because these are, ultimately, I would say timeless values.

And something like that review board is an interesting way of trying to run down the middle and say, well, maybe it won't be a government body doing it. And of course the kind of speech restrictions that private companies might impose on social media, at least in the American context, would be nonstarters under the First Amendment, if the government did it, but still, again, having it both be external to the company but not an artifact of the government. And I don't know if that's the best or the worst of both worlds.

Well, I think what you're pointing out, and I think it's a good point, is the United States is really unique with the First Amendment. If you take you 200 nations and rank them from left to right, in terms of which is the most protective of free expression and which is the least, yeah, it is one area where the United States is always the most protective of free expression because of the First Amendment. And there's a lot of great things that have come out of that.

But I actually think in the world today, if you're a global tech company-- if the UK and Germany and France and Australia and New Zealand and Japan and Canada all pursue a common path and they all regulate content more than the First Amendment would permit the United States government to do, I think, frankly, most companies are going to snap to a global standard. And you are going to see regulation, and in fact, we are seeing regulation. It's just less likely to be driven by the United States government, especially at the national level.

It calls to mind the observation. I forget if it was John Perry Barlow or John Gilmore who said on the internet the First Amendment is a local ordinance. One last question before we turn to some of the questions that have entered the queue, and that is another comparison between all those years ago and now. And you said there are just a handful of patent lawyers. There were also a handful of government affairs folks at Microsoft, and I think the American West Coast, whether north or further south, had a sense of being apart from all those games in Washington kind of thing.

And I think maybe one of the big milestones in your professional career and in the development of Microsoft as a company, in the wake of the antitrust case, was saying, it's time to make peace. It's time to actually take seriously what's going on with governments, and that's even reflected in many of your reflections today.

And I see, for example-- this is worthy of inclusion in your bio at the outset-- you chair a nonprofit, kids in need of defense, providing pro bono free legal support to unaccompanied immigrant children facing deportation in eight of the largest US seated cities. That is both a clear couldn't be a more classic pro bono activity for a lawyer to undertake. It's also a political act in this environment.

And I juxtapose that with the observation you've made that when acting in the political realm, getting things done means you have to deal with the world of politics, and politics is about pragmatism, not just principle alone. And I'm just wondering how your thinking has evolved in squaring both corporate political activities, donations, looking to be able to be an effective actor

in the company's interests and its values when that might mean supporting politicians that have a very different matrix of commitments and priorities.

And further, you referenced heading up Microsoft as being more dean or provost to the university, rather than CEO of a company, that there is a lot of views under your roof that the employees might have. So I don't know either if there's any thoughts you have on those external relationships with government, and when it's time to act on what you'd view as principal and when it's time to be able to bend not break and be a pragmatist, and what it means to have corporate values, knowing that you've got a university's worth of people underneath that may all have very different sensibilities.

Well, I think you've just captured so many really interesting and important elements. And I guess I would just offer three pieces to it. First, I do think it's just really important in a company today, at least as we aspire to lead it, to have good listening systems and to hear from our employees, as well as groups outside the company, including groups like the Berkman Center, which have been really important and influential, in terms of our thinking over time.

It doesn't mean that you agree with everyone, because you cannot agree with everyone. The diversity of views is so vast. But you wouldn't listen to everyone. Because I think when you do, you come to understand better the problems you need to solve. We tried to go from that understanding to then the articulation of defined principles that will guide our work.

And those principles always mean that we will do some things and we won't do others. And there are always people who disagree with the decisions that we make, and they do it for all the right reasons, out of great sincerity. But I do find even when they disagree with our ultimate decision, they do value the fact that we have sought to articulate principles, and they know in a more transparent way where we're going. So that's the first thing.

The second thing is this blend of principle and pragmatism, I think, has been a really interesting challenge, I'll say, especially during the last four years of American politics, with even a more polarized, public, and electorate. And obviously, leadership in the White House, that is very different from, I'll just say, the opinions that we tend to hold on something like immigration.

And what I've found is the best way, in that particular context, to blend principle and pragmatism, is to get comfortable just saying what we think, not hesitating if it will lead to a disagreement, but frankly, always staying focused on the policy and the merits and not on the people or the personalities. And always to give credit where credit is due, but also be quick to identify where we want to take a different stand.

And so like even over the last month, every time we've gone to the White House in the last month and asked for help to get surgical supplies into the country to expedite an importation process to solve a practical problem, the team at the White House has been quick to respond, effective in its efforts, and we've been quick to say thank you, not just privately, but to acknowledge that publicly.

That might be Monday. But by Thursday, there's the latest immigration proposal, and you just sort of go, oh my gosh. Do we have to do this yet again? And it happened on your green cards over the last couple of weeks, and we were equally quick to say, we don't think this is the right course.

Even, interestingly, on the issue of DACA, we're the one company that has sued the federal government, not just as an amicus, but as a plaintiff. We are a plaintiff, with Princeton university and a Princeton now alumni, in the Supreme Court. And yet we're able to balance those two.

And I just find as people get-- if they know what you're going to do, if you're predictable, and you don't make it personal, you can blend principle and pragmatism. I will say you have this added feature in the United States. As we all know, US politics is based, to some degree, on people writing checks for donations, including from a political action committee, like the one we have as a company.

And the hardest thing there is almost inevitably, almost everyone who helps you on one issue is not someone that will help you on every issue. And so there are some members of Congress, the House, or the Senate with whom we vigorously disagreed on something, like H-1B issues or DACA or the rights of women or marriage equality and the like. I mean, we've had vigorous disagreements, and sometimes continue to do so.

And yet you find that on a particular green card reform bill, where we have thousands of employees in a green card backlog because they're safe from India or China, the same senator is the key senator who is working to advance the legislation on which so many of your employees depend. And so we try to think broadly ourselves. We do focus on values and the like.

But it is a world where we do, frankly, sometimes feel that, hey, look. We've got to work with people, and we've got to use that work over time to nurture a relationship that we hope just might enable us to change people's minds. When we persuaded Washington state to become one of the first states in the country to recognize marriage equality back in 2012, it was because we were able to persuade four Republicans in the state senate.

That was the difference between victory and defeat. They had long been opposed to it. We had worked with them anyway on other issues. And we had trust, and we used that to persuade them to change their views and their votes. So I sometimes just remind myself, remind the people we work with, the view that somebody has today does not necessarily guarantee the views they're going to have two years from now, and we're only going to have an opportunity to change their mind if we actually know them.

Thank you so much. So we should do some Q&A. And knowing that there's a hard stop in approximately, or maybe even exactly, 10 minutes, we'll think of it as a lightning round. And for all but one I'll just read the question, on behalf of vox populi. But for the very first one, our mutual colleague David Wilkins, I think, is able to pop in, kind of surprise cameo, and ask a question himself. Our colleague, professor of the legal profession.

Yeah. I know David well. It'll be great to see or hear him.

David, over to you.

Well, thank you so much. And Brad, it's wonderful to see you. And thank you for your amazing leadership, not just on these issues, but in the profession, in general, and at our center. We're so grateful to have you on our advisory board.

My question really is about the legal profession and what role you see lawyers playing in these sorts of matters. At the Center on the Legal Profession, we've actually been watching a trend that we wonder whether it's going to be accelerated because of the current crises, like so many others. Like everybody else, we're all working virtually. Technology is so important. Again, we have to thank you because we're working on teams, and Microsoft, which has been incredibly important for our team to stay together.

But the trend I want to talk about is lawyers, like you, taking on more capacious responsibilities around these big global challenges, you're kind of a patient number 1. And Jonathan brilliantly talked about your career, but you were the first one to really become not just general counsel, but then chief legal officer, and then president of Microsoft. But if we look around we see Kent Walker, for example, at Google becoming senior vice president of global affairs, or Amy Weaver at Salesforce becoming president and in charge of global security, or Sara Moss, not in the tech industry, but in Estée Lauder, becoming now the vice chair of the company.

And I wonder, why do you think this is happening? What are the skills that lawyers bring to these broader roles? And do you think this is something we may see accelerate in the coming years?

Thank you so much, David. Over to you, Brad, for the lightning round.

Yeah, and I'll try to be brief. But David, first, thanks for everything that you personally have been leading in the center, and I've always been so personally passionate, and Microsoft has been, for your work. I do think it is a trend that has been ongoing that will continue to accelerate. Part of it is call it the rise of the in-house legal department, something you, perhaps more than anyone, better than anyone, has documented. And recessions actually tend to lead, typically, to more work coming in-house because people are looking for new ways to economize.

If you look at the lawyers in the profession in, say, the '60s or '70s, the really influential figures in the world of public affairs were in the great law firms. And the great law firms are still great, but you also see people playing a very broad role in a lot of different other organizations, especially, say, companies and nonprofits.

I absolutely continue to believe that if you want to change the world, go to law school. At least think about it. Because at the end of the day in the democracies of the world, it is the laws of the world that will continue to have the most impact on societies. And as laws and companies intersect, as companies use their voice through the kinds of government affairs efforts that Jonathan was describing, as we do and strive to do in a very transparent way, it does give us the opportunity to think broadly.

Just as people documented outside lawyers in the '60s and '70s who aspired to be not just great lawyers for their clients, but also statesmen, I think the people you're describing are statesmen, they're stateswomen, they're real leaders, and I think it's all about a breadth of perspective. And I think if people can think broadly, think about the public interest, even put the public interest first and forward, yeah, I think it is a powerful way to contribute to the public good. As I always like to say, you can be a public service even if you're not employed in the public sector.

Thank you, David, for that question. And that actually captures a bunch of the questions. Many I think are from law students or others who are law adjacent, asking about the role of the lawyer and the legal profession in this. From a different angle, this is from-- we invoked his name earlier, I did-- Bruce Schneier. He says, I taught your Digital Geneva Convention and your Tech Accord last week in my class at the Kennedy School. Now, a few years later, what's your assessment of the initiative? What's changed today? What would you do differently if you were starting over?

I continue to be a big believer in the need for the international rule of law to govern the actions of nation states when it comes to cybersecurity attacks. I continue to believe that when we are going to need stronger rules and more formalized international laws in the future. I continue to believe that when there are gaps in the legal system today, that we need to fill in. And I think the nation state attacks around this information, including in the COVID-19 pandemic, and especially around threats to democracy, really shine a light on that.

When we started down the path, I gave a speech in 2017 calling for a Digital Geneva Convention, just to put off limits these kinds of nation state attacks on civilians. One of the things I said was this was going to be at least a decade. It will be at least a decade. I think that we understood going into it that it would be complicated, that it would require persistence, that it would be hard on certain days to get people off the sidelines, to actually join the group, the movement that I think is needed to protect people around the world.

Maybe I would have advised myself to be prepared to be even more patient and persistent and pragmatic as well. It goes back to your point, Jonathan. You've got to be principled, you've got to be idealistic, but you've got to be pragmatic.

I'm glad we undertook what we did. We are making some real progress. I think that's good. The Tech Accord is a good example, 120 companies around the world having signed that. We're going to have to be persistent and just keep at this every year, to be honest.

That's certainly a high mountain to climb, but a worthy challenge. I think this will probably be our last question, and then we'll be sure to bundle up all of the questions that came through-- I see just under 60 of them-- so that you can have a look at it and be aware of what people are asking about and thinking about afterwards. And this is, again, from our quite strong student contingent. What's your advice to law students to best prepare themselves for the digital economy, including skillsets and knowledge beyond the traditional JD education? And a bonus question of-- talk about a broad question-- if you had to pick a topic to start a PhD today, what would it be?

I don't know if I'll have the chance to reflect enough to answer that one well, but let me just say generally, of course, take the courses in law school that have always been important in law school. If you have any interest in using digital technology or working in a digital world, and the whole world is becoming digital, I would encourage you to take a course or two that might be outside the law school, or more informally, to acquire some background. Not just in computer science, but increasingly statistics and data science. I think the future is going to be about data as much, or even more, than code.

If I were back in law school, I probably would have found a way to take one or two courses in the business field, just because it doesn't matter what you're going to do. I find that business thinking helps you organize whatever you want to do in life. And I find a lot of classic business school thinking needed right now in governments around the world to manage COVID-19.

I would definitely be a strong voice for the liberal arts. I constantly encourage engineers at Microsoft and elsewhere to think about ethics, to think about history. Because all of these issues need to come together, because we need to ensure that technology actually serves people and is governed ethically. But I'd actually conclude with the phrase that you used, Jonathan, in describing about the Digital Geneva Convention. You said it is a high mountain to climb.

My number one piece of advice, my request, climb high mountains. You have a whole career ahead of you. It's going to start in a valley, the valley of COVID-19, but that valley isn't going to last forever. We'll pull ourselves out of it. You are the people who actually will play such an important role in the decades to come, in not just influencing, but defining the high mountains that we climb as a country and as a world.

And they will be hard to climb. We will often falter or fail, but we will not climb any higher than you aim to accomplish. So have high ambition. That's what I say to our folks every day at Microsoft. It's what we bring together when we recruit people to join us. It's just more fun to climb high mountains than to go through every day with low ambition. And know that if you do it in a smart way, your impact will be felt, and it'll be great for you personally, and I really do believe for the world.

Well, what a great long-term reminder, if we're not medical professionals, in the short-term being told that our best contribution can be simply to stay at home, and what a nice counterpart to that, to be thinking about how we can--

I will just say in closing, I heard someone say this morning, he said, I don't know whether I'm working from home or sleeping in the office.

[LAUGHTER]

We are doing both.

The lines are blurred. Thank you again, Brad, so much for this conversation and for, no doubt, the other interactions that will follow, and to all in the audience who came forward to listen and to suggest your questions. And we will keep climbing mountains.

Great. Thank you. Thanks, Jonathan. Good to see you.

Sure thing. Cheers.

Bye, everybody.