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AI, WORKERS, AND NATIONAL SECURITY IN A CHANGING WORLD: A CONVERSATION WITH SEN. MARK KELLY

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CONVERSATION

THE HON. MARK KELLY (D-Ariz.)
U.S. Senate

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TABASSI: Excellent. Hello and good morning to everyone in the room. Good afternoon, good evening to those that are joining us virtually online. Thanks for joining us for a conversation that's promise us to be insightful, engaging, and exciting. My name is Elham Tabassi. I'm a senior fellow and director of AI and Emerging Tech initiative here at Brookings.

Brookings AI and Emerging Tech, or AIET as we call it bridges the technology and policy awards to study, examine, and address the questions about AI and the questions surrounding artificial intelligence today: who benefits, who is at risk and who decides? And none of them has a easy answer. And Brookings AIET exists to make sure that they at least get a serious one.

We are in a possibly and probably early, but definitely consequential moment in the development of this technology and the conversations that we have today and decisions that are made today and in the next, the course of the next few years are definitely gonna shape the trajectory of the development of this technology but also the impact of the technology on people, on communities, on societies.

Today's conversation sits at the intersection of three important topics or questions in this field. One of them is impact of AI on economic transformation. What does the future of work would look like? How the economy is gonna respond to the changes that AI is is is giving at the infrastructure demand on communities, on power grid, and also the national security implications that are only coming into the focus as as the conversation continues.

We are extremely pleased and honored to have Senator Kelly here today with us. Senator Kelly has been one of the more active voices in Congress across all of these three conversations. Senator Kelly represents Arizona in the United States and serves on the Armed Services and Intelligence committees.

Before his time in public office, he flew to 39 combat missions as a naval aviator during the operation Desert Storm, and later served as a Nassau astronaut logging more than 54 days in space across four missions, including as a commander of space shuttle Endeavour on its final flight. Senator Kelly brings to this conversation a perspective that's genuinely rare in policy discussions in on this topic. Someone who has operated on the edge of consequential technologies, both in cockpit and in orbit, and now is helping shape the the discussions and the frameworks for the next generations and how this technology is gonna shape and shape the society as it's being shaped.

Please join me in welcoming Senator Kelly.

KELLY: Thank you.

TABASSI: Very pleased to have you here. So I wanna start with some of the work that you have done and also slanted towards the AI and AI and workforce. So, senator, you introduced legislations on AI awareness on literacy and released a AI for America roadmap that proposes a fairly ambitious federal role, workforce investment, infrastructure funding, and AI horizon fund.

So it's one of those, I think maybe very rare one that also talks about the problems, suggests solutions, but also how to fund this going, moving forward. So walk us through the core argument and what gap you were trying to to fill. And then, also practically speaking, the current fiscal and regulatory environment creates real headwinds for new federal spending, for regulatory mandates, so what parts of this agenda do you believe that we have a realistic chance for moving forward? And which part of this you're willing to be more patient?

KELLY: Right. That's a long question. Lemme start by saying good morning. Great to be here. It's my first time at the, at Brookings. And this is an issue that I've worked on over the last couple years. I'll tell you, why it took me a couple years in a second.

But before this job, I used to be somebody that operated technology and used technology. I used to fly off of aircraft carriers. Then I was a Navy test pilot after I went to grad school and got a master's in aeronautical engineering. So I was testing new things, new systems, new, new things added to airplanes, not brand new airplanes. But then I flew the space shuttle for about 15 years on four missions. That's leading edge technology. So I've always been on the operator side, not the policy side of this.

Then when I got here, AI wasn't that much of a conversation in 2021. I was sworn in at the end of 2020. But serving on the Armed Services Committee, we started to hear, a lot more about it. Started to come up in committee hearings that this thing is somewhere in the future. And then ChatGPT showed up. And it became a reality for millions of Americans that this technology is actually works and it's something that could transform industry.

So we started having hearings within the Senate. We had a few small ones, and then, I don't know if anybody remembers the hearing we had that had like Sam Altman, Bill Gates, Mark Zuckerberg, Elon Musk and others. It was, probably 20 people in a hearing room. Everybody got to speak for like five minutes and then we went away. Nothing happened. So I started checking in with my staff about this, like, what's going on? Is there gonna be legislation? Because we did all this upfront work and didn't really seem like anything was moving on this. So, within our office, my office, we decided to, do a white paper on this to try to explore some of the issues that the country's gonna be facing as this technology advances. How's this gonna affect work, as you mentioned, how's it gonna affect the, in infrastructure, especially the electrical generation, and how's that gonna affect small businesses than homeowners, consumers, regular people?

And we realized after having these conversations with utility companies and AI companies and universities and people who work on this technology, that we had to have like some kind of comprehensive approach to this because we could find ourselves in a, like we don't wanna be in the situation we wound up in with social media, right? That we get 20 years down the road and nobody really likes where we are on this issue and nobody did anything about it. So I wanted to get ahead of it. So we wrote the white paper, which will now turn into legislation.

But the idea is to make this worker-centric, we have to focus on people. There's a possibility, I don't know if this will come to pass or not, I don't think anybody knows for sure, but there are estimates that by 2030 or maybe a couple years after that, we could wind up with 12 million unemployed people. And unemployment already is going up for younger folks. And when I say we don't know what's gonna happen, part of the reason I say that is historically, whenever we've increased productivity, like worker productivity in the United States, we've grown the economy and we've created more jobs. So I think that's in conflict with this concept that AI is gonna replace all these jobs. And I don't think, if anybody tells you they know for sure, I think they're probably lying, but we have to be prepared, because we can't, we don't wanna find ourselves with millions of more unemployed people. And then we're thinking, well, maybe if we would've gotten ahead of this, we could have done something about it.

So what we wanna do with legislation is focus on worker training. There are organizations that do this pretty well, unions as an example, but they need resources if they're gonna scale up training to find, to help people find new jobs and have the skills that they need to take on

new jobs. Maybe it's at the beginning of their career for, but for many people it might be at their middle of their career.

And there are jobs available today. Semiconductor manufacturing's a good example. In Arizona, we have TSMC and Intel and other semiconductor fabs that are, they're building new factories. And it's a challenge find, finding the workforce right now. I think ultimately we will, and we'll be able to operate these at their full capacity. But there are jobs out there. We just gotta figure out, who wants these jobs and then make sure they have the skills. So that's a piece of this.

The other piece we can talk about more is the energy side of this, and then there's the safety side. Back to like social media, we don't wanna be in this situation where we have this technology harming young people. I recently started asking this question. For people that have young children. I say to them, when your kids are teenagers, what do you think, social media or cigarettes? It's amazing how many people say they'd rather have their kids smoke than use social media. It's like, do this yourself. But when I do this, I, it's about half go with cigarettes for their kids. It's pretty wild. That's how damaging parents feel that social media is to their children or could be as their children grow up.

So, a lot going on this issue. We are, and we can talk about the AI horizon fund, how you pay for this, but we want to be, at the forefront of getting ahead of it. Because what I don't wanna see is 20 years from now, a tremendous amount of regret that we could have done something about the challenges and we just failed to act.

TABASSI: Absolutely. And doing something right now is extremely important and we have to start preparing for future. And we have to, I think consider many different scenarios on how the trajectory of the AI could be. Is it gonna continue as fast as it is? Is it gonna get another, step function innovation happen that that completely changes all of the conversation, or maybe it's stagnant. And also another dimension there is that the jaggedness of the AI, that it's good for some applications, for some use cases, but not for all of the use cases. So, we are very happy that you are thinking about this, other people are thinking about this, and a lot of study going around that.

I want to bring the conversations on the infrastructure and the buildup of the data centers and your roadmap addresses the pressure data center growth is now placing on grids and local communities. Arizona is one of the active data center markets in the country. And which means that it's also living with some of those tensions and questions and challenges on land use, on water, and on energy. So tell us how, what does that buildup look like on the ground in your state, and what does Arizona's experience can tell us about what the federal government can specifically do and address this versus the things that can be left out to states and local communities?

KELLY: Well, before I get to what the federal government can do, let's start with what the AI data center companies can do. 'Cause we've seen, both sides of this story. We've seen in Arizona data center companies come into communities very late. And going to places where, well showing up, and I'll give you an example: just a data center company that says they need 250 megawatts of power and water that is consumed by 50,000 homes every single day. That doesn't go over well in the desert, especially when you don't go in there with a plan for how you're gonna deal with this and you don't have a good story. You don't have, you're not sharing with the community ahead of time how this all works.

So we've seen that happen and in that case, we've had a city council that has voted down a data center. We've seen another one where again, it was like too little information, not great answers, and came too late. There've been like noise in the community that the people that

live next door just didn't wanna have to live with as they opened their front doors. And, listening to, I can't remember what it was, 70, 80 decibels of noise quarter of a mile away from a plant.

But in other places, there are communities in Arizona that are welcoming these data centers, and they do have the power available and the water, and if you build a relationship with them at the data center, companies build a relationship with them early enough, they get approval. And it creates some jobs. And if we want this technology to be successful, and I think we do. I do, because I see the upside in doing this. We need the data centers. So we need them to go somewhere, but they need to go somewhere where we've got the resources.

So how do we get the resources, like the infrastructure? Well, we, the federal government has to, take some steps to make sure you know that, AI companies and data center companies and companies that benefit from AI have some skin in the game here. And it can't be on rate payers, homeowners, and small businesses to pay for the infrastructure for a big business that ultimately is gonna be making billions of dollars on this technology.

So what I'm proposing in this plan, AI for America Plan is a fund called the AI Horizon Fund, where AI companies and data center companies and companies that benefit from AI will contribute to this fund to help build the infrastructure. And a lot of that is electrical infrastructure to be able to provide the electricity without spiking the rates for homeowners, especially people on fixed incomes. In Phoenix every summer we have seniors that die because they turn their air conditioning off 'cause they can't afford to pay for it. That happens every year. And if the rates skyrocket, you'll see more people on fixed incomes in this situation. So that's not an option.

But if we build the infrastructure, because usually the way, reason why rates go up is the utility, has to add distribution and power generation, and they pass that on to everybody. If they pass that on to everybody, the rates go up. So if we have a fund to build that infrastructure, we can mitigate for that. And we have to build a lot. So right now in Maricopa County, which is like greater Phoenix, there are two utilities, APS and SRP right now. Each of them provide about eight gigawatts of power. That's what they have available. They have, each of them has a list of companies that want to come to the area over the next five years. And when you add up all the power demand, future demand, it's another eight gigawatts for each of them. So essentially we have to double the power on the grid in the next five years.

Now, is that possible? Yeah, I think it is actually possible. There was a paper I was reading, article I was reading yesterday that nationwide there is about 1.2 something, 1.26 terawatts of power on the grid in the United States. The amount of additional power that companies are trying to connect to the grid is 2.6 terawatts. So we have the potential, if we could get the permitting done and get the connections done, and also upgrading the grid, you could already, over a relatively reasonable period of time, more than double the power available in the United States.

So the power, and that's a lot. And by the way, 95% of that is solar and wind, not oil and gas, and certainly not coal. Whose bright idea was that? Not coal. Solar, wind, this administration doesn't like wind. I think they're starting to come around to the solar because they're realizing that over the last three years of what we've added to the grid is about 90% of it's been solar, wind, hydroelectric. So we have, if we can get this legislation passed, build this fund, get the money contributed to it, we can be part of the solution here to building the grid so it doesn't, costs don't go up for homeowners.

TABASSI: And what do you see the the chances of this conversation going forward with the headwinds that we are seeing in the Congress for challenges in--

KELLY: This is Washington. I understand, when I was at NASA, well, once I got here, I realized if NASA had the rules of the United States Senate, the rocket ship would never leave the launchpad.

So we are dealing with significant headwinds. It's hard to get stuff through, but we're motivated and we need to do this, and there's bipartisan support for doing this. That's, very helpful.

TABASSI: I wanna talk about, stay on the conversations about infrastructure, but look at looking at it from the security consideration. You've introduced legislation directing the NSA to develop guidance to protect American AI systems from foreign actors. Data center infrastructures represent body strategic asset but also a potential vulnerability, particularly for when they are developed across of the US in certain geographic area, as we're seeing what's happening in the Middle East right now.

So how should the United States approach securing the physical and digital foundation that AI really depends on. And your assessment, what's the single most significant gap in current preparedness that we haven't received, we haven't given it enough attention?

KELLY: Well, the purpose of the, that legislation here is to get the NSA focused on this to be able to protect AI infrastructure at defense companies, at government agencies like the DIA, the NSA, the CIA, DOD. The amount of cyber attacks that we have and intrusions and people trying to gain access to systems and stealing intellectual property and stealing our secrets is something that grows every year. And we should expect countries, nation states, to be stealing our best stuff. And that stuff could be artificial intelligence, that technology. So we've gotta be prepared. So that's what we're, trying to do with that legislation is to make sure the agencies are best equipped to protect all of that.

I think the other issue is just AI being used against us, in our adversaries, weapon systems, to make decisions quickly, make decisions about positioning forces and also employing weapons. And they will use this technology in a way that could help them be more effective in battle in ways that we don't because we decide, and I think, 'cause we wanna have a moral compass and, the ethics to make sure that under the circumstances of conducting a combat operation, we don't have machines making these decisions on their own to kill people and then be part of the kill chain without a human in the loop. So we're trying to deal with that.

Part of the issue with Anthropic and DOD right now is that's, that was part of the issue where, you know, that, that contract with Anthropic and the Department of Defense is now at risk because of some safety concerns that the company had, that this Department of Defense was, thought was, not the right way to be proceeding. So we're gonna integrate this into tech. It's already been integrated into a lot of weapon systems that DOD uses. I think we'll find out a lot later about this war against Iran and how these systems have been used, in some cases effectively, and I imagine in others there's issues that we're gonna have to work out going forward. But it is going to be a big part of our defense ecosystem now and into the future.

TABASSI: Yeah and somebody that has worked in the intersection of AI and cybersecurity, I think it's extremely important for having the right guidelines and guidance on how to actually think about securing AI not as a policy afterthought, but actually building the technology that can can have those security and privacy enhancement in that technology.

You mentioned Anthropic and and the DOD and the dispute among them, so I'll just jump into that. But I wanna ask a sort of a different question. So, I don't think anybody needs a

primer for what's happening with DOD or Anthropic, but for the sake of giving the right context, so there has been this recent dispute between Anthropic and Pentagon and I think it has, it surfaced a lot of things that has been, a lot of conversations that has been theoretical right now into the the forefront for discussions.

So when Anthropic objected to its AI being used for fully autonomous weapon or domestic surveillance, and Pentagon responded by cutting ties with the company, seems to me a couple of things that it was exposed. One was that a commercial AI company's internal saving policy, internal safety policy was functioning as a defacto rule of engagement for military operation.

And then the deeper question in my mind is that, the legal frameworks for governing the military operations were written for human decision maker, that they assume that somebody perceives the context, identified the risk, assess the proportionality, and ultimately can be accountable for that. In this era driven, that might not be the case, as you talked about, human in the loop, bringing the human in the loop, may, it may not always be feasible. Sometimes it's too dangerous. And then also it seems to me that at some point it may negate the use of the AI because of the speed that machines works versus human works.

So, my question is that does the legal frameworks that governing the military operation that was written years before, and then, before knowing the capabilities of the AI today are they adequate when decision making as AI systems or AI augmented systems and is it something that the Congress can or should act on? Or is it we should leave it to the executive branch to figure it out?

KELLY: No, we should act on it. And we're looking into it right now for this next defense authorization, the next NDAA. I'm, I've been working with some of my colleagues already on this.

And how do we address this issue with Anthropic? Obviously, rules of engagement is something every military has. They change over time. Right now where with the current secretary of defense who has, in my opinion disparaged our, the way we talk about warfare and service members in a way that I think is not helpful in not making us stronger and safer as a country. He, recently said, we're not gonna have any stupid rules of engagement. Well, rules of engagement are not only to, meant to protect from unnecessary civilian casualties. It's also to protect the US service members, to make sure that they're conducting operations in a way that they can be successful without putting themselves in unnecessary harm. And we can have the most successful military and continue to do that and be effective.

So, I think that's central to the situation with Anthropic. DOD didn't like that this company, has some boundaries that they don't want their, they don't wanna cross. They don't want, their technology used, to be doing mass surveillance of US citizens and they don't want their technology to be used in a fully autonomous way. And my assumption is when you could have a human in the loop or human monitoring these systems, you should, and I agree with that.

Now as you alluded to, there are some times because of speed that we're gonna have to make exceptions to this. And we do already. And even though it's not artificial intelligence, there's been times, like, I remember even in the first Gulf War, where I flew 39 combat missions, I remember at times we'd have anti radiation missiles, ARM missiles shot off of EA-6Bs or F-18s that came over our heads before the Iraqis turned on their radar, the surface-to-air missile system radar. So is that artificial intelligence that the radar gets kicked on later and then the missile goes and hits that radar? Well, it's a seeker head, it's a system, it's electronics, and then it's making a decision within those electronics to hit that target.

So we've gone down this road already, but what I think we need is, we're the United States of America. I find it incredibly objectionable that, right now, the way that, especially our secretary of defense talks about our military and lethality and killing people, and then gets into this issue where he's got problems with a contractor because they wanna set some ethical and moral boundaries. Well, that's a discussion they should have had upfront, certainly. And, but I think it is a reasonable thing to expect from any contractor that there are things we should and shouldn't be doing within the US military. 'Cause we're not like a, we're not Russia, we're not China or North Korea. We have to have a, we have to have a certain level of standard. And I think those standards actually help us. It helps us with our allies. And at the end of the day I do really think it makes us stronger and more effective as a military.

TABASSI: Yeah, thank you. And I think the questions around security of AI and the human in the loop or AI augmenting the human becomes even more complicated and complex since the new DOD AI strategy emphasis on using the agents and as agents take off and brings all sorts of the security questions and they can act and plan and do these things. So, we will be watching this area very closely.

I wanna make sure that there is enough time for questions from audience. So I'm gonna ask my last question now that, essentially you have navigated consequential technology across very different roles as a naval aviator, astronaut, and now legislator working on this areas. As you reflect on this moment what do you believe that United States most urgently needs to right on AI?

So if you're having this conversation five years from now, what does success look like and what are the things that we gotta make sure that we got it right for workers navigating the economic transformations, for communities managing the infrastructure build out, for our military and our defense systems and US national security?

KELLY: All of that.

TABASSI: All of that. It's an easy question I thought of, right? Starting with the easy question.

KELLY: I, I think it's gotta be worker focused. It's gotta be, we gotta, AI companies, if people don't have jobs, they don't have income, they can't be customers, right? So we've gotta make sure people have jobs and maybe this technology at the end of the day is gonna create more jobs and we'll have a bigger economy, but it also seems like there's gonna be some disruption along the way. So we've gotta smooth out those bumps in the road we're gonna have. And then we've gotta make sure we have the power.

And then AI safety is another big piece of this. Again, we don't wanna be looking back 20 years from now saying, oh, we should have done X, Y, and Z and this is just like social media and it's bad for kids, and we have all these safety concerns and we should have addressed that earlier. So that's what I'm trying to do in my job now as a policy person instead of as a user of technology and operator.

TABASSI: I think you started by asking, by saying that you asked the parents that cigarettes versus social media I don't think we should ever be in the situation to pick between two worse. And what we can do on building technology that's better, more secure, safer, and also use it responsibly.

I'm gonna open up for questions. Yes. Do we have microphones? Yeah, please. One here and then over there, and then I'll go the other side.

AUDIENCE QUESTION: Thank you. Oh, good. Thank you. Good. Senator Kelly, my name is Gary Bowles. I'm chair for the future of work with the global think tank Singularity University. So, forgetting for a moment that there actually is no such thing as AI and that AI actually doesn't take away jobs. It just automates tasks and humans are the ones that give away jobs.

You mentioned with the fund that you want to, I'm not against at all trying to levy against the major AI companies. But you said also companies that benefit from these technologies. So is there, are there any elements that you can bake into the strategy that when companies have the opportunity or think they have the opportunity to AI wash and make jobs go away because they're automated, to change that behavior? Because it's really that behavior. It's not just the tool makers, it's the tool users that are actually the ones that are going to make a lot of jobs go away if they feel that's to the benefit of their shareholders.

KELLY: Well, I've talked to some CEOs that think about this technology differently and don't wanna make jobs go away. They wanna make their company more productive and grow their business and just use this as a tool so their current employees and future employees could just do more work. So, that's a place where you could see, well, okay, this isn't gonna make jobs go away. Maybe in some cases they will even hire more people because they can use the technology to enable additional growth. So that's a real possibility.

And I've spoken to some of these CEOs, but then you also see others that want to, maybe downsize their workforce and use that efficiency to to shed some cost. And I think in, in both of those cases, I think it's, we want this technology to be successful. So, why shouldn't these companies also in some way try to contribute to the success of this new technology?

AUDIENCE QUESTION: Sure. Josh Rudolph German Marshall Fund. Thank you Senator Kelly for being here, for the white paper. There's more and more white papers on this topic. What yours really brings into the conversation is the corporate funding mechanism. Appreciate you even saying here in the white paper, this is the start of a conversation. We need to work together. There's a lot of things to-- So, so, so being here with the research community, what were some of the questions that came up in this that you think should be explored, over the, in the months and years ahead? At GMF we're thinking about the corporate funding mechanism and, should it apply to only the frontier AI model developers, or what about the platform deployers? And, what can we learn from past corporate funding models, whether it's the superfund excise tax or the tobacco settlement? Do you want a threshold so that it doesn't hit the entrepreneurial AI startups? What do you do about companies outside the US that are operating here? So what questions like that or other areas do you think would merit for the research here?

KELLY: Well, we certainly don't wanna find out, find ourselves in the tobacco settlement situation. So we're trying to get ahead of stuff like that.

And those are good questions and how do we, if we're gonna have this fund, how do we, generate the revenue that's gonna go into it? And that's why we're still having conversations with AI companies. Before writing this paper, we talked to frontier AI companies about this, and we talked to businesses that are gonna use the AI technology.

So this is the start of a conversation that will eventually lead to legislation. I like to try to get things right on the, upfront. You'll see members of Congress both in the House and the Senate, just like write a piece of legislation and drop it as a messaging, called a messaging bill, without the intention of ever getting it turned into legislation. That is not this. We actually want to accomplish something, to make sure we get ahead and get the jobs, the infrastructure, the safety, all, all right,

AUDIENCE QUESTION: Oh, thank you. Thank you. Thank you Senator Kelly. Leon Peace, consulting. I have a question. Based upon your experience as a naval aviator, how do you see artificial intelligence as advancing or advantaging our mission to the Moon and Mars?

KELLY: Well, lemme start by saying, I feel very grateful to having been born between Orville and Wilbur Wright and whoever the last pilot is. 'Cause it's just a, historically, it's gonna be a pretty small window. I don't know when the window closes, but that last pilot might be, I dunno, might be alive today. At least the last military pilot. And when you consider going to the moon or Mars, you're gonna see more aviation or more automation and more artificial intelligence built into these systems.

I flew a spaceship that was very user intensive. 2000 switches and circuit breakers in the cockpit of the space shuttle. Multiple displays, like probably more than a hundred within the computer system. In trying to operate it, years of training to be able to just get to the basic part where you could start training for a mission. The checklist of the space shuttle: in an airplane, the checklist might be, like an F-18, the book might be this big. The space shuttle, it stands over six feet high. All the manuals that you carry with you into space and that you use. It's a very complicated machine, so these machines are gonna get simpler over time and more automated. The Dragon spacecraft is mostly automated. That's the one that SpaceX launches on the Falcon rocket that takes crews to the space station. The rendezvous and docking is fully automated. For us on the space shuttle, it was a process that lasted over a day and a half, and the last hour and a half, I would have to manually fly this 200,000 pound spaceship going 17,500 miles an hour and manually fly it within two inches to dock with something that was also going 17,500 miles an hour. Not an easy thing to do. All that's going away and it's all gonna be automated and artificial intelligence.

But it also brings up the question with AI systems. Do we want the person there? Do we need the person there? Because with the person, you need food and you need life support. And if you can do all the exploration without a human being and you can do it cheaper and get the same data, there's an argument to be made there.

Now, I always think, being the guy that used to fly the rocket ship, that we want the person there. It's really about people going across the ocean and going over the next hill and seeing what's there, going to the moon and ultimately going to Mars. So I wanna see AI used to make us more effective, more efficient, better explorers. Not to replace the explorer.

TABASSI: We have time for only one question. So I'm gonna go with the--

KELLY: You've been very, very committed to your question.

AUDIENCE QUESTION: I always have, I always have questions at these events. Dr. Metha Kand, and I'm a physician who works in the health AI space. Thank you so much for your insight, senator.

So very curious to know your thoughts about, so you work on the Senate committee for aging. You've done a lot of work on AI policy. The medicine and health space is really unique. We've got a physician burnout crisis. We have an attack on science, we have an affordability and access issue. I think there's an immense opportunity for AI there, especially to help support the physician workplace or workforce.

Most Americans see their primary care physician once or twice a year. That's 363 or 364 days in between where they're trying to connect the dots themselves. What are some unique considerations specifically for healthcare AI in terms of policy and advocacy?

KELLY: It's almost like you were, somebody planted you here to ask that question for me, because I've been having this conversation with my staff. I, and I think you're onto something here, right? The anti-science thing, but also we're about to kick millions of people off of Medicaid. Some people have been kicked off already. Other people, because of the rate increases for the Affordable Care Act, can't afford insurance anymore, so they dropped their insurance. I have constituents, a lot of 'em that aren't gonna have insurance here this year. Probably not next year, probably not the year after that. And all these people that were on Medicaid don't have an option of going to a doctor because they can't afford it.

So maybe we should take advantage of AI systems to provide these folks with something. Is that possible? Right now I think it might be. Now there are forces out there that would not want this to happen. I also wonder about, and you being a physician, you just, we just booted all these people off of Medicaid. Now, who do they go to get their prescription renewed? They don't have a doctor anymore. Maybe they can't afford that. Maybe we should consider, how we, maybe making changes to the system so they have options. Maybe that those options include some kind of medical version of, specifically made for, people through artificial intelligence. I'm with you. Maybe we can get your card and we can come up. This is Sydney over here.

TABASSI: Great. So there are multiple verticals and use cases that AI can help. I'm glad that was that was brought up. But we are at the end of the time I wanna thank the senator for being so generous with your time, with your expertise, and sharing it here with us and to all of you for your great questions.

I wanna ask everybody to remain in your seats. Next up is gonna be a panel of experts diving deeper in all of the questions that we just start scratching the surface. That will that will be immediately right after this panel, but please stay in your seat as, as the door of the, to the auditorium remain closed as we take the senator to his next meeting.

So thank you very much for all of you and again, thank you very much, Senator Kelly.

KELLY: Sounds like they're locking you guys in. That has nothing to do with me. But thank you very much everybody.

TABASSI: I wanna make sure that the next panel has.

ANDERSON: Thank you everyone bearing with us during that transition. Can you hear me okay? Wonderful. My name is Scott Anderson. I'm a fellow in Governance Studies here at Brookings. I think the senator's remarks we just heard really underscore the incredibly colle complex and interconnected way in which AI in there--,

Oh, that one work better? There we go. Oh, that sounds better. All right.

As I was saying, the senator's remarks really, I think underscore the very complex and interconnected way we are seeing AI and the increasingly central worlds playing in national security among many other areas. The way it's linking so many of our policy concerns as he illustrated, national security relies on developing and deploying better AI, which relies on dramatically upgraded electrical grid and domestic semiconductor production, and a variety of other factors which require congressional engagement and adjustments in public policy, which require political support and democratic support, which requires voters and Americans to not feel like AI is a threat to them or their lives or their children.

And the cycle continues in ways virtuous and not. From there for today's session, given recent events in the news in regards to Anthropic, its relationship with the Department of

Defense in regards to the. Increasingly AI driven conflict taking place in Iran right now. We thought we would spend a little time exploring the more national security oriented side of this set, of this web of interconnected concerns the senator's illustrated for us.

And we have a set of experts that we could not ask for a better group to talk about this with. Joining us first immediately or far to my left is Zachary Burdette. He's the assistant political scientist at the Rand Corporation. He's the head of the defense team at the Center for the Geopolitics of Artificial General Intelligence there. Zachary, thanks for joining us.

Joining us online is Ashley Deeks, she's the vice dean at the University of Virginia School of Law. She also was previously the principal deputy legal advisor for the National Security Council, among other positions in government. And notably, particularly given our topic today, was the author of the recent book, "The Double Black Box: National Security, Artificial Intelligence, and the Struggle for Democratic Accountability." Ashley, thank you for joining us.

And joining me immediately to my left is my colleague Tom Wright, who's a senior fellow here at Brookings, also the former senior director for strategic planning at the National Security Council as well. So, Brett, I wanna start with you. You have written in your work about the transformational impact AI will have on national security, and in this sense, particularly hard national security, war fighting, warfare, the way we go about the tip of the spear aspect of national security.

Give us a high level overview of what you see those effects being and how they integrate with some of the questions that the senator has drawn forward to us. What are the contributors to those impacts that we're gonna see that are particularly important?

BURDETTE: So I, I think distinguishing between the short term and long term effects is particularly important here. 'Cause the technology is still maturing. In the short term we see a lot of use already of AI for analysis and decision support. I think the key challenges we face here it's it's already baked in and this is happening. The key challenges are figuring out how to make better decisions before we make faster decisions.

Part of the problem here is technological, and that recent research has showed that the capability of these models has outpaced their reliability. And there are some unpredictable failure modes, more variants than humans, even as the capability is, has been really impressive in its advances. Some of this is also figuring out our organizational procedures for understanding how the technology works and what's an appropriate and effective way to integrate it.

I think in the long term, I think there are gonna be two more defining things that haven't really started to show up yet. The first is the autonomous drones and AI enabled robotic mass. The senator talked a lot about the challenges that we face in deciding how to make sure these are accountable and effective.

I'd also just note that I think that we're still this very early end of this trend and that the force structure that the United States military has today looks a lot like the force structure to had 10 years ago. And so I think it'll take a lot of time and money to actually make these changes and that we shouldn't overstate how much progress we've made.

I also wanna note that there's a lot of emphasis, understandably, on using autonomous drones for the tip of the sphere and lethal purposes. I think there's a lot of opportunities to explore using these drones for things like logistics and a lot of the supporting scaffolding required for military operations to work well.

That I think that we're gonna start to see more research and analysis in that category. And then finally the other big long-term bet or trend that I wanna emphasize is the role of AI for better cybersecurity. I think in the short term, we're already starting to see in Google has produced some concerning research on.

Malicious actors looking for ways to use ai to support their cyber attacks and automate their kill chains. And in the short term, we do think this is gonna be a really messy and painful transition. But our research at Rand has suggested then that the long term there may actually be real opportunities to move the terrain onto more favorable terms for the defender and to address some of the limitations that hold cyber defenders back in terms of speed, scale and effectiveness today.

Some of this could be more sophisticated formal methods and secure by design architectures that kind of rethink cybersecurity. From the ground up. And we may have to do that because of the short term transition pains. Some of it may be more straightforward of using things. We've already seen huge progress in AI for software development.

And you can think about AI coding maybe going the way of Waymo compared to human drivers, where it may eventually still produce errors, but it may produce far less than human drivers do in terms of accidents. And if we are able to increase the reliability of these capabilities as well as their as, as well as their effectiveness, then you might see the attack surface shrink for the cyber defender and make its job a lot easier.

And so I think that's one thing though, that as a final note on this, that you have to align policies and resources to shape these trends in these long-term effects. And that we have an opportunity if we really commit the resources and policies early to shift that terrain, to favor the defender.

And that it's not just the technology alone, it's the policies we set and the resources we allocate to ensure how the technology's integrated will, will shape these long-term effects.

ANDERSON: So part of the reason we are concerned about the hard edge consequences of some of these new technologies is because AI is emerging, somewhat coincidentally, somewhat in a symbiotic sort of relationship with an era of major power competition era where we are worried about competition with China in particular.

Also to some extent Russia, where international relations are changing in a pretty fundamental way, at least by many accounts. So Tom, I wanna turn to you for a question about this. Brad gave us a really good overview about how it's likely to impact war fighting and other hard aspects of our international security.

But the competition to get there incorporates so many other aspects, as the senator helped illustrate, how does the competition with China, the broader geopolitical considerations of competition, drive the sort of three Ds of AI development? Of AI development, meaning developing new technologies, deployment, how we use AI, and diffusion, how we share AI technology with allies and consumers around the world.

And in particular, you have straddled, the two administrations we've seen tackle this question, the Biden administration, the Trump administration. How have we seen them take very different tacks to these questions?

WRIGHT: Yeah, thank you. And it's great to be here. I think it, it's a key driver behind everything, I think for one thing, just on the development of the models the reason why I think there is a race because there's, huge pressure to, if it's not quite get to AGI, but get to

a more powerful, AI as quickly as possible, I think is the China dimension, right? And you hear this from leaders of the labs who say it would be good to have more time. It would be good to be able to test some of these more rigorously, but we can't fall behind in the race with China. And if they get there first, that could give them, an advantage that they could exploit. And so it's important to, to win the race, whatever that means, but certainly to develop more capable models.

And I think that's because AI has the potential to really upend the balance of power. It's one of those new technologies that obviously could render previous sort of strategic assets OBE to some degree. So I think just on a meta level, one of the reasons why you have these sort of, the investments obviously are by the companies, but one of the reasons you have the pressure on developing newer models is is that geopolitical bit.

Now obviously there's just a normal commercial competitor bit too. But I think if it wasn't for the geopolitical part, I think there might be more brakes on it, certainly for us in the Biden administration. The geopolitical piece I think also was critically important in terms of what what you were saying on diffusion, but really on whether or not you should control the supply of chips internationally. Because when you look at the competition between the US and China, China has like a lot of talent. Like the US has a lot of talent, China has, just as much talent. It has probably a more permissive environment in terms of building the infrastructure on power and permitting and the like. Because they don't need to worry about a lot of the things we have to. I worry about being a democracy. So they may have an advantage there.

The one sort of advantage we have is on the chips and on the hardware side, right? And our sort of theory of the case was that we should, not be supplying China with advanced chips that would enable it to, get to a more powerful AI or to pass us out faster than otherwise will be the case. So we should try to slow that down with some very tailored sort of export controls that will be updated on a regular, basis as companies and China try to work around them or try to find different loopholes or come up to the limits of the controls.

And that we implemented those. I think those are relatively effective. It doesn't mean that China would never get to a more powerful AI, but it did mean that we are trying to lengthen the time between when we will get there and when they would get there. And that time would give you the ability to maybe introduce regulations and to test some of these new models more and rigorously.

That was largely continued for the first few months by the Trump administration, and then it was abandoned, of course, around last April or May or so when we saw the end of the diffusion rule on the president's trip to the Middle East. And then also an abandonment of some of the newer export controls that they had introduced, and then a further relaxing of some of them last year.

And so I think there's a different model, right? And their theory of the case is the addiction thesis that we will addict China to our AI stack, and to our chips and prevent them from developing their own indigenous capacities. That sounds to me very farfetched. It's never worked in any other industry. It's unlikely to work here. China's pretty determined to try to develop its own indigenous capacity. I think they've had challenges in that. They're continuing to work on that. But I think you see a very different approach.

And then I'm sure we'll get onto the deployment bit on Anthropic later on. But I think we see obviously a huge divergence there as well. So, as I see it, I think there was, very different sort of approaches on AI between the two administrations that are based on very different assumptions.

ANDERSON: So this point about the shift in perspective from the Biden and the Trump administration really underscores the extent to which AI policy and technology is tied in with our democratic governance. Any sort of big shift of this focus that impacts so much requires so many changes and adaptations by government, by public policy inherently is gonna be integrated with our political system. Ashley, you've written in your book and elsewhere about some of the unique democratic challenges that AI focuses, particularly in the national security space, particularly when we're dealing with these foundational and fundamental questions that our leaders must deal with that all states must deal with to some extent.

Talk to us about the unique governance challenges that AI presents in this space, and in particularly how that intersects with the competitive dynamic that Thomas discussed because of course, our main competitor in, at least by most accounts is China stay with a very different government.

Government and very different system of accountability, or perhaps lack thereof. So talk to us a little bit about that.

DEEKS: Sure, great, thanks. And thanks for having me. I'm sorry I'm not able to be there in, in person. So the challenge you just described is something that I have called the double black box where we are taking the black box of national security operations and we are placing into that black box a set of algorithmic black boxes.

It is already hard to know what the US government does in our name in the national security space because so much national security activity is classified and generally needs to be classified. My, the idea that I try to flesh out in the book is that adding AI to that first national security black box makes the democratic accountability questions even harder, right? Where it is not just hard for the public to know what tools the government is using and how they work. But it's hard even for AI labs and for the military and intelligence users to know exactly what the systems are doing and how they're reaching the recommendations that they are.

So, so why does it matter? Why do we care about some of the challenges that government secrecy poses? Well, I think it's because when things are done in secret, it's hard to know whether our government is complying with our public law values. So those are things like, legality. Is the government acting lawfully? Is it acting effectively? How do we hold accountable people for decisions that they're making? And how do we require them to justify their decisions to somebody not just themselves?

So there are some actors, of course, who can see a little bit behind this veil of secrecy, Congress being the major player, but also to some extent our allies, whistleblowers do some work in this space. And tech companies, I think do some work here. And I know we'll talk about an Anthropic in a little bit, but this may be a kind of case study of that.

But lots of what the government is doing is opaque. And so this double black box, I think raises some hard questions. What types of AI systems is the government using to develop targets? What confidence levels is it requiring of its systems? Are there humans reviewing the targets? What risk tolerances is the military accepting? Which seems particularly relevant when we're talking about cases in which life or liberty are at stake. This came up a little bit in the initial conversation, but will the executive retain people in positions to override machine generated decisions? And if so, when and how?

So if it's already hard for congressional committees and others to gain access to knowing about sensitive military operations to try to provide helpful oversight. How can those committees understand the executive's AI programs and be confident that they are in fact complying with our values?

So one approach I think has been to just push ahead aggressively, right? This is the Department of War Secretary Hegseth AI strategy, I think. It embraces a very high risk tolerance on this front. But I think that's not entirely, it's not clear that's the right way to go.

And I think this ties into the China part of your question. And to this, I think I'm gonna mirror some of what Senator Kelly said, but I think there are three downsides to taking a very aggressive approach to AI here in the national security space. The first, of course, is that the tools may not work as they're intended to which is obviously bad for us war fighting.

Second, I think other states, including our allies, may not wanna buy these tools. They may not wanna conduct joint operations with us when we are using them. And third, I do think there are some things that China may be willing to do that we just should not be willing to do. I'm reminded of the idea of the laws of armed conflict where states agreed to follow these rules even when they're adversaries are not.

And they're doing so for their own reasons. So I do think some risk taking in this space is reasonable, but I think taking excessive risks are probably gonna make us less competitive, not more so.

ANDERSON: So an essential relationship in this network of government democracy institutions, different policy demands are the labs developing these AI technologies. Frontier labs like Anthropic, like Open AI, like Google with Gemini. That relationship isn't entirely new. We have seen the Defense Department, the US government, have very close, integral relationships with the development of emerging technology, with defense relevance and other domains with private companies doing that. Yet somehow it feels different maybe in scale or significance or maybe just the rapidity with which these relationships have grown. Brad, talk to us a little about that. Help us understand the relationship between the government and these labs, how it's evolved and the points of tension we're seeing emerge from that.

BURDETTE: So one of our teams at RAND has been doing a series of day after exercises where we simulate 24 different kinds of AI crises that might occur and then assess what went wrong, what do we need to be to do, to be prepared and how can we better mitigate these threats. One kind of enduring finding has been then the relationship between the labs and the government could be a really useful resource to have.

One reason is just visibility into the technological ecosystem, and that the government alone actually has huge gaps in its situational awareness. And so it's, the labs provide a concentration of talent and expertise to understand the domestic ecosystem in a way the government can't alone. And also to understand the frontier models themselves.

That is a level of complexity for this technology that I think is different from a lot of past commercial technologies that it's just a step above. The second is that the labs can also serve as a more proactive first responder or maybe more often an enabling first responders in certain national security incidents related to AI that are separate from military adoption.

So one example is loss of control scenarios where an agentic AI model is pursuing goals that are misaligned with the ones given to it, or it's pursuing its goals in ways that are unpredictable and causing harm to humans. Even if it's technically pursuing what it was told to do and some of the organizations that might be best suited to help deal with these unpredictable and dangerous failure modes may be the organizations that help develop and grow the technology that is causing these problems.

And so that the relationship I think between the labs and the government is a little bit different than surpass technologies in that it's many different agencies have many different vested equities and that there needs to be idy a dynamic and enduring partnership in that strains in one area can impact others.

And I think that it's gonna be an enduring challenge to figure out what this relationship looks like and how to balance it across these different portfolio of different national security concerns.

ANDERSON: So in the Anthropic dispute, we are really seeing these different threads all intersect and achieve something of a breaking point. We're seeing this relationship with the labs and the, at least one of the major labs, arguably the leading lab, at least in terms of the model and the degree to which the Defense Department has been relying on it, come to a breaking point, come to a potential crisis. It is based in part off of major power concerns. Remember, part of the justification of this break for the Defense Department is concerns over how would it be applied in potential nuclear scenarios, scenarios tied in with major power competition. It's happening as the Defense Department is still using this model in a very different military operation in Iran, which by the way, ties in with a lot of democratic considerations-- small d democratic considerations-- in that the war isn't popular.

There're concerns about, Hey, how AI may be being deployed there, or could hypothetically be deployed in the conflict in the future? All these different considerations are coming into intersection and the anthropic crisis really illustrates what brings them to a head. So, Tom, I wanna come to you on really the question that's underlying all of this, which is when we see a big break like this dispute between DOD and Anthropic, and it may be just the first of, maybe more of these to come, as we see this AI relationship become so central to US national security, how is it gonna impact US competitiveness, the trajectory of AI development? How damaging is this? And what alternative tax might there be other than the one of confrontation that we've seen the defense department take in this particular case?

WRIGHT: Yeah, so I think it's important to be specific about what we understand and tropics concerns to have been right? Because I don't think it was a clash on sort of the scale that, you are implying. I think that's there. That can happen for sure.

ANDERSON: That was the framing, to be clear.

WRIGHT: Yeah. No. I think that, you could see that emerge, but I don't think that was the case. In this sort of example. So they had two principled objections, right? One was that these, that these models could be used for domestic surveillance by by the Pentagon. And that would specifically be and I defer to Ashley on some of these she may have a better knowledge of the legal authorizations. But basically, DOD can be asked to provide domestic support to an agency or department. And as part of that, they could do surveillance, right? And you could imagine because of what more powerful AI can do that the government could listen and monitor, communications in a way that they couldn't previously.

So, closed circuit TV cameras, right? In public spaces. The, it's impossible for the government to monitor and to collate that. But with ai, maybe you could, right? So that was one category, and that was a principled objection. I think that was one sort of area where they said, we're not comfortable with our technologies being used for these purposes. DOD or whatever they call themselves, these days, DOW, says, that they wouldn't do that.

But that was one objection. The other objection, as I understand it was not a principled objection, right on autonomous weapons. They weren't saying that they refused in principle to do that. But they were saying was that they don't fully understand and trust their own

technology at this point. And this gets to the point that others made, earlier on, is we're still in the earlier stages of understanding, these models and they develop, personalities and biases and and inclinations that aren't fully understood.

And so if you were to deploy those in autonomous systems without a human on the loop, not even just in the loop, but if you don't have a kill switch and you don't have any ability to, stop something after it's set in motion, then that's quite dangerous. And I think they worried about being, held responsible for that if those technologies were used early on.

So those were the two sort of objections that they had. I think there was a way in which the Pentagon, could have responded if they wanted. They have a reasonable objection to, companies should not of course be deciding US defense national security policy. But I do think, AI is a unique technology that is, we need the lab involved in helping us understand and to deploy and to use these.

And so, they could have pulled back and said, well, we are not gonna use Claude as much. We're going to, opt for, X AI or for open ai. But we'll do it gradually or we won't use, Anthropic, at all. But actually they went much further and they designated it as a supply chain risk, which is not something, by the way, that they do for Deep Seek, right? So there are more restrictions on Anthropic today than there are on any sort of Chinese AI company which is just like crazy when you think about it. And so they've set themselves up as trying to, destroy, like a leading American lab now. They rolled back in that a little bit in the last two to seven days or so, and they've said, well actually the supply chain designation risk will be a little more narrowly tailored. So it only pertains to work that other companies are doing and with the Pentagon rather than work they're doing for civilian commercial purposes.

So that's, somewhat a step in the right direction, but I think it is, I was just finished by saying I think, it's a problem in many ways, but I think one of them is that, Claude offers as do all of the, other sort of companies, unique sort of advantages, right? So each, you wanna draw from all of these models, right? And when you want to be using them and trying to deploy them, Anthropic is the earliest in involved in the in classified systems and in the national security space. And if you say, we're not going to use that model at all then you are depriving yourself of certain capabilities. So, if Anthropic launches a model on cybersecurity, for instance, will the US government then deprive itself of the ability to use that while other actors actually have the ability to use it? And not all of that can be plugged by, Open AI or X AI.

So I think you want to be cultivating a pattern of collaboration, of partnership with Silicon Valley and with the tech sector and we're going in the opposite direction now.

ANDERSON: So the concern, at least underlying what we've seen the Defense Department do in this case is an entirely novel one. We've seen the United States government wrestle with the fact that it's reliant upon private companies in a variety of national security contexts, dating all the way back to World War II and earlier.

We have certain laws in the books that are supposed to help address that, like the Defense Production Act, which was invoked in the context of anthropic but never actually applied. Instead, the Defense Department so far is just invoking the supply chain authority. Ashley, lemme come to you on this question because whether you agree with what the Defense Department has done in regards to philanthropic or not, you can imagine other scenarios where other administrations involved other sorts of concerns, might say, look, we are so reliant upon these technologies, we need to have some legal vehicle by which we can assert control over and ensure we aren't having our essential tool taken away from us because of

the whim of the head of Anthropic or perhaps Elon Musk in other contexts or other technology, other applications.

Do we need additional different set of toolkit to facilitate that sort of government relationship or control of these essential technologies as they become more integrated into our defense policy and implementation? And in particular, if we were to give the government that level of control, is that in turn require some degree of greater control or oversight or transparency around how the executive branch approaches these fundamental questions so that we could be confident it's not abused in a way that doesn't align with our broader democratic values?

DEEKS: Yeah, so I, the executive now has a, an existing set of legal tools that I think it, it can use in relation to AI labs as well as other material defense related equipment. And also a set of robust legal tools that it can use regarding the AI ecosystem more broadly. I do think there's a case to be made for more congressional regulation and oversight over national se security AI tools generally, and I guess that would include more oversight if you give the executive more power than, for example, the Defense Production Act has already given it.

So just very quickly, you mentioned the Defense Production Act. This is a 1950 statute that was enacted to give presidents the ability to ensure that the defense industrial base is producing enough things for the US government and the military needs. And it gives him the power to divert certain materials and facilities from their ordinary use. So, at the time I think that was thinking about things like energy systems and tanks and so on. The world obviously has changed, but the president can prior require companies to prioritize who they're contracting with and couldn't put the government in the front of that line.

And I think this was relevant to the Anthropic debate. They, it allows the president to require acceptance and performance of contracts by anybody. Any company that he finds capable of and then he can allocate those materials and services in such manner and on such conditions as he thinks will advance the national defense.

So this is basically compelled contracting and allocation, and it seems like that was what was in play here, trying to require anthropic to perform a contract and allocated services on certain conditions that the secretary of defense was determining necessary. I think it's I think it's not entirely clear whether the Defense Production Act would authorize the president to force a company to make something it doesn't already make. And that's, Anthropic has raised this concern in its in its litigation. There are questions about whether forcing a company to code in a certain way actually runs afoul of the First Amendment.

But as you note, there's a different set of tools which DOD ultimately ended up using, which is a statute that require allows the government to declare certain things to be supply chain risks. So the government has at least two different sets of tools. They're in some tension with each other, I think in this case. But those are clearly available for the government in a range of circumstances. And as you've written about, the government has lots of economic tools of national security related to the AI supply chain more broadly, right? So government has a lot of control over what's coming into the country and going out of the country including for items related to artificial intelligence.

So things like export controls, limit sales of chips to to China. Their ability of foreign labs to access things that are gonna be critical for them developing their AI. Although as Tom mentioned, that has been pulled back a little bit, but there're also restrictions on outbound investments into Chinese and other adversaries AI labs as well. So that's the kind of pull factor that we're pre preventing allies from-- I'm sorry adversaries-- from getting a lot of access to tools they might otherwise want.

One other thing I'll mention that's unusual, I think we've seen a few times in which you have corporate actors serving as proxies for the United States. A sort of odd intersection I would say between tech companies and the US government here. So I'm thinking for example of Microsoft basically serving as a proxy for the US government in its relationship with G42, this UAE company, where Microsoft invested a large amount of money and is allowed to ship into the UAE large numbers of GPUs that give access to G42 to use certain AI models while helping to protect those chips physically and and from cyber attacks.

So I do think they are, for example, there's a role for Congress in monitoring this kind of unusual use of corporations serving as national security proxies. And in my book I talk about some other ideas that I think Congress could pursue if there were political interest to do so, including developing framework legislation for high risk ai, along the lines that we do for covert action or foreign intelligence surveillance. So making sure that Congress has a window onto how the executive is using high risk ai in this space. And of course, reporting requirements are maybe a less traumatic version of that. And they've, Congress did that with regard to offensive cyber operations, and I think it could do something similar here.

ANDERSON: Wonderful. We have a few minutes left. We wanna leave a few minutes for audience questions. So I think I'll open the floor. If anybody has any questions, just throw your hand up. That's what, I can see, I see one right here, I think in the middle, on the aisle here. Raise your hand a little higher so they can find you with the mic.

AUDIENCE QUESTION: Thank you. I have a question more so about touching on what you were previously discussing about international cooperation. And I'd like to open this up to the whole panel as well. Specifically also for Mr. Wright on this area. So, with recent and historic changes in, for example, United States companies shifting a lot of operations to offshoring and moving a lot of the technical know-how even over there. So for example, Apple building, like essentially building up a lot of China's technical know-how. And then, but then you have and then also with the recent focus on like the CHIPS act, for example, bringing some of that manufacturing back here. And then you have, the, but then also the United States shifting towards an isolationist stance.

So two sides of shifts in terms of international cooperation within business. I'm curious, what role will, do you think international cooperation from both companies and countries will play in securing a strong American AI industry?

ANDERSON: Wonderful. Why don't we take a few questions just to get started.

Lemme try this gentleman here in the blue sweater. I'll do two and then turn it back, and then we'll take another two.

AUDIENCE QUESTION: Yeah. I'm John Strand from the World Bank. I, I have a, it's somewhat different perspective to your angles here. The, if you look little bit more long run and you think about the sort of this competition between the US and China. The, I think the main issue here with AI is how it transforms the economy. And whether it's most useful in the sense of, say increasing the productivity of the average worker or the more useful thing is these big tech companies building their own infrastructure. And I think the first perspective would favor China more, perhaps while the second perspective could actually increase the, the general grip hold of these big companies, which are now investing huge amounts in tech, these technologies.

And actually, I've seen some figures here who seem to show that that over the last year or two, these investments have been significant also for the macroeconomic development of

the US because they've been so large. So, so that's another perspective here that that these investments have macroeconomic implications.

So, so I, I don't think these issues have been discussed much but they're under the surface here.

ANDERSON: Thank you for that comment. Why don't we take one more question, then we'll turn it back over the panel.

The gentleman right behind you, it's 'cause you happen to be next to the microphone.

AUDIENCE QUESTION: Hi my name is Lou Kahn and I'm an associate at the Institute for News and Information. At the Service Naval Association this past couple months, there was this general theme within the naval community and just like the INDOPACOM in general, that like the pace of AI is outgrowing their ability to catch up with it and really incorporate it into their systems, including their ability to like actually work together, like with allies specifically like in the Philippines.

So actually the comment of companies being proxies is really interesting 'cause Sea Machines is directly selling drones now in Southeast Asia, for the South China Sea. And so I guess my question for you is, what challenges are there actually in incorporating it at the same pace of development? Or are they really just like, is there nothing really that they can do? Thank you.

ANDERSON: Excellent. Thank you. Brad, why don't we start with you on that last question about this deployment challenge. And then Tom I'll turn to you to help address our first question. And Ashley, I'll invite you to add anything on to those two responses around the books.

BURDETTE: Sure. So on the third question, I think some of this is making sure that the adoption and integration that we do in the short term is scaffolding appropriately so that you can integrate more advanced models as they come later. Some of this, I think, is foundational investments in having the right compute for inference.

Having the right organizational procedures and talent in place and having a clear vision for what you'd like to achieve if the technology continues to improve. So I think that part of the problem, because it so far, at least there have been really rapid advances, if it's possible that those might continue potentially and at kinda the rate they are now, even if they don't, it'll probably get incrementally better and our ability to adopt it is not where it needs to be. So I think that it's a question of, in investing, the way that we invest it now has to assume that it'll take time to implement. And so I think it's setting that up.

One, one thing on the second question about economics, it's my favorite kind of shameless plug is one for somebody else's work. My colleague Toby Sytsma has a new report out on decisive economic advantages and how AI might generate those. Looking at different pathways of things like worker productivity versus big breakthroughs and new innovative technologies and how, depending on what pathway you go down and assumptions you make, it could benefit the United States or China. So I, I recommend looking at that a trand.org. It's Toby Sytsma. Thanks.

WRIGHT: Yeah, I would just say on the, well, firstly on the economic point, I totally agree, but I think it's just a separate topic, so we were more, a little more focused on the national security piece today, but on the cooperation bid, I think the harsh sort of truth is, this revolutionary technology that will have massive implications not just for national security, but

also for the economy and international security, is being developed at a time when we are probably worse position for global cooperation than we ever have been since the 1930s, right. So the chances of global governance or some even more modest cooperative elements on AI, I think are in incredibly small, right.

And during the Biden administration, we got one thing done with the Chinese, which was basically, each side agreed not to use autonomous AI systems around the decisions to launch nuclear weapons. Right? So you might think that's a no-brainer, right? Like you would each side could agree, right, that they wouldn't want some AI model to autonomously launch their own nuclear weapons. And so there are maybe some things that we can do. I would like to think that maybe biosecurity might be a part of that too. So trying to have some transparency in the model so individuals cannot build lethal pathogens.

But for the most part, I think even that will be very difficult and more broadly cooperation between not just the US and China, but between just the international community, like countries more generally will be almost impossible. Because of this scale, the speed of the development, the disposition of governments, I think the Trump administration's really not interested in this, right? China and Russia are not interested in this. No one wants to constrain some constrain themselves. No one's gonna want transparency, verification, enforcement sort of mechanisms.

So that is the world that we have, right? And I think the question that we need to really grapple with is like, well, what do we do with that? Like, are there unique cases like on the NC3 or on bio, or maybe on certain cyber attack capabilities where we could, make a little bit of progress, maybe. And can we also do the thinking that we need to do about more governance solutions that when the time is right geopolitically, maybe we can, turn to those in the future. But unfortunately, I think we're not really in that world now and we won't be for some time. Not to be overly pessimistic. I'm sorry.

ANDERSON: Ashley, you want have any closing words you wanna share? I think we probably are out of time for questions, but I wanna give you a chance to add anything in on top of what we've heard about from Brad and Tom.

DEEKS: Yeah, I, so I tend to share Tom's pessimism about the likelihood of new international agreements in this space at all. But I will say I do think there's probably some space for. Thinking about interoperability and other related AI questions, legal interoperability, technical interoperability shared trust of systems in places like NATO where these tools are AI tools are quickly being integrated into US systems and the systems of some other members of NATO. And so I do think there can be room for and has already started to be some healthy thinking about how to make sure that we know what each other's doing in the AI space and trust each other's AI.

So, just a plug for West Point, the Libra Center up there is producing a, an edited volume about interoperability of AI. So, little plug there, but anyway I'll stop there.

ANDERSON: Wonderful. I think we're at time today. But thank you to Zach, Tom, Ashley for joining us. Thank you all for joining us today and I hope you have a good rest of your day.

WRIGHT: Thanks.