



**20th Anniversary Celebration
Women Leaders Tackling 21st Century Challenges
June 10, 2015
Washington, DC**

***Luncheon Panel
How Are Technology and Social Media Revolutionizing Foreign Policy?***

Keynote Speaker:

Catherine Novelli, Under Secretary of State for Economic Growth, Energy, and the Environment

Panelists:

Ann Mei Chang, Executive Director, US Global Development Lab, USAID

Astri Kimball, Policy Counsel, Google

Bay Fang (Moderator), Senior Fellow, New America Foundation

Dawn Calabia: I want to welcome you most heartily to our 20th Anniversary Celebration luncheon. We have many guests who have joined us for the luncheon, and I'd like to make a few introductions, but first of all, I'm going to ask all the former board members and current board members of the Women's Foreign Policy Group and the wonderful interns and staff assistants we have present in the room to stand up, please, so we can give you a round of applause for getting us this far and for staying committed to the women's advancement and women's leadership in the future. [*Applause.*] Thank you very much. These are women who are doers and shakers.

I'd also like to thank our anniversary sponsors, without whom we could not be here today, and particularly for their real interest and support for women's advancement and women's leadership. We are especially grateful for the leadership of Lockheed Martin, our Golden Sponsor, and I want to thank them very much for being here and having their wonderful emissary on our board. Thank you very much. [*Applause.*] And I want to thank CH2M, which heads our Leadership Circle, and Theresa Loar, of course, represents them here. Thank you very much for being here with all your colleagues. [*Applause.*] And I'd also like many of our generous benefactors to stand as I call their names, and we'll hold our applause 'til the end—NAFSA: the Association of International Educators, the Embassy of the State of Qatar, and United Technologies. Thank you very much for helping us be here today. [*Applause.*]

Our Anniversary Hosts include the Anne and Ronald Abramson Family Foundation, ConocoPhillips, Donna McLarty, the Embassy of the United Arab Emirates, General Mills, Henrietta Holsman Fore, Maxine Isaacs, the Rattner Family Foundation, and our own wonderful Chair Ann Stock. We're grateful to all of you for your support, and thank you so much. [*Applause.*]

What many of you don't know is that the support of our sponsors and many people who bought tickets to the event enabled us to have young leaders participate, like our former interns and staff, and a number of promising and rising young people in the State Department, who I'm going to ask to stand up as guests to this event. Can we have all the young State Department staff stand please? There we go, woo-hoo! [*Applause.*]

I'd like to thank our Supporters and Special Friends, listed in your program, and please take a look at the program, which was designed, produced, and done by all of our interns, particularly Katherine. Your generosity and your partnership is much appreciated.

I'm going to ask all the women ambassadors to stand, as, of course, this is the Women's Foreign Policy Group, so would the lady ambassadors here today please stand. Woo-hoo! [Applause.] It's a growing number, everybody notice that. Now I'm going ask our great male friends if they would stand, the ambassadors who are here present. Thank you for your braveness for coming out today and for your support. [Applause.] And I'd like to ask the rest of the diplomatic community, for the DCMs, the consular officers who are here, to please stand, also as our guests. Thank you so much for coming and for our international partnership. [Applause.]

Now I have to introduce my friend of almost 20 years, who is an amazing person who had the vision, along with Julia Chang Bloch and Pauline Baker, to come up with the idea of an organization, an organization to which she has—I don't think she planned, but she has devoted 20 years of her life to it. She's an architect, she's a builder. She's one of the greatest panel moderators I have every worked with. If you're on her panel, she sends you questions, she makes sure she has all the related stories that appear in the newspaper, and she's got your bio down to a T. And if you don't know the issue as well as she does, you're in trouble. But she's just fantastic. She's a friend to all of us, a former foreign affairs journalist, a woman who's made things happen her entire career, and a woman who's been deeply and fully committed 24-7 to the work of this organization and to the advancement of future women leaders. I'm pleased to introduce Patricia Ellis, gem. [Applause.]

Patricia Ellis: Thanks so much, Dawn, for your very kind words and most of all for your amazing leadership of the Anniversary Celebration. Thanks so much to the Anniversary Committee, the Board, our Board Chair Ann Stock, and thanks to all our sponsors and friends, including the former board members and interns and staff who have come back to be with us today to celebrate our 20th. Special thanks to my partner in crime Kimberly Kahnhauser—I hope she's in the room now—[Applause] who did a fantastic job coordinating the event with the very able help of our team of new interns—baptism by fire, that's all I can say. My co-founder, Julia Chang Bloch, could not be here with us today, but I wanted to recognize two very special people who were very key to the launch of the Women's Foreign Policy Group, and I'll ask them to stand. Pauline Baker, president emeritus of the Fund for Peace and my co-chair when Julia left to become an ambassador, and Tom Hughes, the then-president emeritus of the Carnegie Endowment for International Peace, who believed in us and who let us meet there at the beginning. So if the two of you could please stand, and let's give them a round of applause. [Applause.]

It's really exciting and hard to believe it's 20 years since we met around the kitchen table. It's been such a privilege, a pleasure to lead and help develop the Women's Foreign Policy Group into the thriving and important organization it is today. So many of you have been along for the journey and played an important role as board members, sponsors, partners, members of the organization, speakers, mentors, and moderators, and for this I am extremely grateful—really, really grateful. As an organization, we've achieved a lot and are going strong and still have lots more to accomplish.

So what are we proudest of? We've been true to our mission of promoting women's leadership and voices on pressing foreign policy issues through 30 to 40 programs with great speakers annually, with women officials, experts, leaders, including many top journalists, as speakers and moderators. Today's conference is yet one more example of this. And we are also pleased to see more and more men attending our programs. Let's hear it for the men. [Applause.] We also have developed regular State Department briefings on timely issues, such as ISIS, Cuba, Syrian refugees, human rights. Our Behind the Headlines Series, one near and dear to my heart as a former journalist, has—we have covered Russia, Ukraine, Ebola, just to name a few. We've established close links with the diplomatic community, and the last year alone have been hosted at the residences of Japan, Ireland, France, Germany, Monaco, Spain, and the Philippines, so that has been pretty, pretty amazing, with more exciting embassy events to come. And also very important to us, as we continue to mentor more and more young people at our mentoring fairs, career panels, and as interns. A lot goes on in the office on a daily basis. Lastly, we've been fortunate to hear from top women officials, including secretaries of state and most recently National Security Advisor Susan Rice. So I would now like to invite you to view a video with clips from women

leaders who have addressed the Women's Foreign Policy Group over 20 years, which gives you a flavor of who we are and what we do. So enjoy, and thank you again for coming. [View video](#). [Applause.]

[Break for luncheon]

Bay Fang: Hi everyone, I hope you're enjoying your lunch, and please feel free to finish your desserts while we launch into our luncheon program. So thank you Patricia for inviting me here to moderate what proves to be a fascinating panel on how technology and social media are revolutionizing foreign policy. I'm going to phrase that as a statement rather than a question because I think everyone would agree with that. My name is Bay Fang. This topic is near and dear to my own heart, having covered foreign policy as a journalist before overseeing our public diplomacy efforts in Europe and Eurasia at the State Department, where I saw upfront the effects of technology and social media on actual revolutions and on the relationships that people have with their governments around the world.

Now it's my pleasure to introduce someone who has also worked on these issues from a variety of different angles. Cathy Novelli is the Under Secretary of State for Economic Growth, Energy, and the Environment, as well as the Senior Coordinator for International Information Technology Diplomacy, so basically she oversees the future of the world. [Laughter.] Previously, she was the vice president for worldwide government affairs at Apple, and prior to that she oversaw our trade and investment policy for Europe, the Mediterranean, and the Middle East at USTR [The Office of the United States Trade Representative]. So I look forward to hearing her very well-rounded perspective on technology's effect on our foreign policy around the world. Cathy, the floor is yours. [Applause.]

Catherine Novelli: Thanks so much for that kind introduction, and I just want to say I feel very humbled and honored to be here with this incredible group and to see all the women in that video who have addressed this group and come before us and to be here with such amazing women and men. So it's really an honor to be here.

You've already heard, I understand, a great address by our own Anne Patterson about the Middle East, and also I understand there's also a discussion about women in the work place and what's going on around the world to meet the challenges of tomorrow. And of course now we're talking about technology and foreign policy, which is also near and dear to my heart. And so I thought I would just talk a little bit about what we're facing in this area globally, because in fact the internet is probably one of the most empowering and revolutionary of all the technologies that have come across the transom in the recent past. And one thing that people often don't think about is that it's a platform for economic growth. And it's a fundamental, it's as fundamental as highways, forts, and electric power grids. So it really is now part of the infrastructure. And what's really interesting is that by 2016 the internet economy is going to represent 5.4% of the US GDP—yeah—and it's going to contribute \$4.2 trillion to the G20's [Group of Twenty] collective GDP. So if the internet were a national economy, it would rank in the top five of the world, behind only the US, China, Japan, and India. So it is absolutely something seminal, and we have to pay attention to it.

One of the other things that's really fascinating is that we have now shown a direct link between internet connectivity and economic growth. And in fact studies have shown that for every 10% increase in a country's internet penetration, its total economic growth expands by 1-2%, so this is something that we are really, really trying to imprint on people's minds. And I think what's really important is that these facts have not completely penetrated the policymakers globally, and so it's our job to really—to work on that.

Ordinary citizens, as we know, around the world are using internet and online resources in new and innovative ways, which also goes to protecting human dignity, fighting against repression, and holding governments accountable. So there is also very much of a human rights aspect to the internet as well.

Another interesting statistic, which blew my mind and may blow yours, as an example of how much we all use the internet, globally, the average adult spends 16 hours a month online. That's globally. For the

US, that number is 32 hours a month—which I looked at that and said well, I spend a lot more hours than that online, but—[*Laughter.*] But if you add it all up, what's really mind-blowing is that it's about 4 million years being spent on the internet.

The reason why I bring all this up, as I said before, is because having good policy that protects this resource is absolutely key. And so we are working very hard in the government to promote an open, interoperable, secure, and reliable internet because we think it's key to our foreign economic policy and to our foreign security policy. And what we think that this is not something—because it's such a new phenomenon, it isn't something that's only a government responsibility. We all have a responsibility to be good stewards of the internet, and so we are working with all of you in the private sector to make sure that our efforts dovetail.

And we're focusing on three interrelated aspects. One is increasing access to the internet. As I just explained, obviously this is very important for economic development. The second, though, is how the internet is governed. And we want to make sure it's governed transparently, ethically. And thirdly, we want to make sure the internet is secure. And of course anyone who reads the newspaper knows that there's a lot of issues surrounding that third piece as well.

So for the first piece. The internet can only be an engine of growth if it's available to people. And right now three out of every five people in the world remain without internet access. And in the poorest countries, that figure can top about 95%. So we really feel that we need to amp up connectivity, and that's why Secretary Kerry recently announced, in a speech he gave in Korea, that the State Department is going to launch a new initiative to increase connectivity worldwide. And we are working on pulling that together, but our vision is to involve countries, development banks, engineers, industry leaders, and to connect this connectivity with good policy in the countries in which we will be building this out. And so we're going to be working with our colleagues at AID [USAID] and the MCC [Millennium Challenge Corporation] and other organizations inside the US government as well as outside to really see what we can do to catalyze internet connectivity.

There's a really important gender aspect to internet access also. And according to the International Telecommunications Union statistics, 16% fewer women than men are using the internet. And a recent study by the Clinton Global Initiative painted the picture even more starkly—200 million fewer women use the internet; 300 million fewer women own a mobile phone. So we have a lot of work to do there. Some countries are beginning to address this challenge. Nigeria is a really good example. The former minister of communications and technology, Dr. Johnson, sponsored a number of initiatives to bridge the ICT [information and communications technology] gender gap in Nigeria and empower women and girls by making them ICT savvy and self-reliant. And we want to work to do more of that and build more of those kind of programs across the developing world.

The second key issue for the internet is how is it going to be governed. And those of you who don't spend all your time thinking about internet policy may not have heard of the "multi-stakeholder system of governance," but essentially what that means is, if you think about how the internet got started and how it's continued to grow today, it really did that with a little bit of government infusion from DARPA, but then it was all private engineers and scientists who built the protocols and continued to kind of run the standards that make things work. So in our view, the internet is a new animal, and it needs a new way of governance. And so we don't believe that the old top-down, highly bureaucratic, UN-style way of governing things is the appropriate way for the internet to be governed. And instead, we think we need to have something that's maybe a little messy but more effective, and that is to include all the stakeholders—so civil society, the private sector, engineers, governments, who can all have a say in how things are governed. And this has been what has been happening so far. We think it's served well. There is actually an organization called the internet Governance Forum that pulls all these stakeholders together under the auspices of a UN organization, but not a heavy bureaucratic approach. I should say that there are a number of governments that are very uncomfortable with this for various reasons, and they would like to have much tighter control over the internet and rules that would legitimize things like censorship,

things like high charges and fees. We continue to fight against that, and we hope all of you will too, because obviously that is going to be the death knell of something that is a free-wheeling and kind of organically growing process.

The third issue that I wanted to talk about is security. As you know from reading the paper and even the most recent headlines, cyberattacks by state and non-state actors are a real and persistent threat for everyone. And we believe that the best defense to this is to promote what we call international cyber stability. And what that means is that we are trying to get a broad consensus on what constitutes responsible and irresponsible behavior in cyber space. And we'd like to be able to create a climate in which people everywhere are able to enjoy the benefits of the digital world without fear of being hacked. So we've set about in the United Nations to affirm some basic rules of international law that could apply to cyberspace. And we're promoting some additional principles that we think should underpin what countries' behavior is in terms of the internet, and we're hoping to get much more adoption of this. Obviously, if you read the paper, not everybody has signed on to these principles. But the first one is we think that no country should be intentionally damaging or impeding another country's use of critical infrastructure. The second one is that they should also not seek to prevent emergency teams from responding to cybersecurity incidents. Third, that no country should conduct or support cyber-enabled theft of intellectual property, which we know has occurred for commercial gain. Fourth, that every country should mitigate malicious cyber activity in its own country, so they have a duty to sort of try to clamp down on that. And fifth, that we work together to help countries that are actually damaged or victimized by cyber-attacks. So we're really promoting these norms of behavior. Obviously we have a long way to go, but we're not going to stop doing that because we believe that the stability of the internet and our critical infrastructure that is tied to it is—it's very important that we get everybody on the same page.

It is also important that we not only look inward at ourselves, but that we also are working to improve our partners' capacity to respond to cyber-threats. So it's not just what are the rules but that they can do something about it if something happens to them. So their networks can be more resilient and our response teams can work together. So this is a whole new area of diplomacy that we're launching forward with, and it's going to evolve as time goes on.

So just in conclusion, I'd just like to leave you with the thought that, you know, the internet is, as I've said, an unparalleled platform. Voices from every corner of the globe can contribute to political, economic, social discourse. It is an incredibly powerful global social good, and it's important that we preserve it. And we believe we have a strategy for doing so. It's going to take help from all of you. And these issues transcend any one policy area. That's the amazing thing about the internet. They include questions of ethics, the role of government in society, commercial issues, and even democracy. And so, women's voices are particularly critical in this conversation and to ensuring that this revolutionary tool is available for women as well as men to break down barriers in any field they want to engage. So we want to see an equalization of things and a stability. So I look forward to taking your questions and discussing this with you and to working with you to make the internet secure for the future. Thank you. [Applause.]

Fang: Thank you so much, that was fascinating. I wanted to invite the next—the panelists up to join us. So first, my good friend Astri Kimball, on Cathy's right, who is currently policy counsel at Google and a six-year veteran of the White House. When I met her, she was deputy counsel to Vice President Biden, and this was actually at a women's conference in Switzerland that we met. Next to her is Ann Mei Chang, who recently became executive director of a really interesting—the newest bureau of USAID, the Global Development Lab, and served for many years in senior positions in Silicon Valley, including as—at Google itself. She also served as senior advisor for women and technology in the Secretary of State's Office of Global Women's Initiatives.

So, let me just start off the conversation first. Under Secretary Novelli, that was fascinating to hear you speak about all the different aspects of internet governance and what our government priorities are. I was wondering if I can ask you a bit about what that means on a daily basis for you in your practice of foreign policy. I know one of the biggest foreign policy challenges to the US government in recent years was

when—a couple of years ago, when a government contractor named Edward Snowden leaked information about government surveillance programs both at home and abroad and set off a worldwide discussion about privacy issues. Can you talk about how that has affected and possibly still affects your work when you're sitting across the table from your counterparts in Europe and elsewhere?

Novelli: Well, there's no doubt that the disclosures that Edward Snowden made have had an effect on our discourse on these issues. And certainly I think it has amped up the discussion that was already occurring about privacy and what is the balance between privacy and security. And that discussion goes on. We've taken a number of steps inside the US government—the President has announced them—to deal with some of the disclosures that Snowden made. What I would say is that I think a lot of the other things I outlined about the economic impact of the internet are coming back into the discussion now. We had a sort of a period of time when it was very difficult to talk to countries about that because they were fixated on the issues surrounding the disclosures. But I think folks are understanding now that we have to move forward and that we have got to bring connectivity to more people and that we have to make sure that the policies that are governing the internet writ large—they're much larger than the things that Edward Snowden was talking about. They're about the very essence of how companies and economies operate. They're about democracy. They're about all kinds of things. And so I think we, in the recent past we've worked very hard to have a much more robust discussion in a more holistic way.

Fang: Wonderful. Actually it's interesting because it's both—there's the question of privacy versus security and also privacy versus freedom of information, right? And actually Astri, I wonder if you can talk a little bit about one of the most fascinating sort of aspects of that question is the whole idea of the right to be forgotten, something that was passed by the court in the EU last year, and I know Google's been doing a lot of work on that.

Astri Kimball: Yes, yes we have. And I think the balance that we try to strike between privacy and freedom of expression and security is something that we're constantly trying to talk to ourselves, are we doing this the best way and are we making the right choice. I think on the point about privacy, the balance between how important free flow of information is to get all the benefits of the internet that the Under Secretary described and also cultural values and legal values in this country—often it's the most unpopular opinions that are the most important to be heard. So how do we balance that with the things that we don't want to see online—illegal content, violence. I know this came up earlier, and in the case of the right to be forgotten, our own—in Europe, our own—some stories about us that we don't want online. And for Google, first of all, there's always been limits on the freedom of expression for online and not online. This is something that we as a society have been and legal systems have grappled with. So we strive to—we've always followed the law in every local jurisdiction, but we also make policy choices. And in Europe we're complying with the court decision, which is that you can request that Google take down a story about you if it's no longer relevant, which is a huge lift for Google to implement, but we're working through it. And we also have policies in addition to law. We as a business want to create a good user experience online, and have—it varies by product, but have things like the Trusted Flagger Program on YouTube, which is—people can flag content that they think is illegal, so that's one way we really rely on our users in addition to the law.

Fang: Wonderful, thank you. As a former journalist, you guys already touched on this, but one of the most interesting outcomes of the development of the internet is precisely this sort of democratization of information, how anyone can be an information provider to people anywhere, and basically made information borderless. One of the most fascinating statistics I saw recently was that 300 hours of video are uploaded to YouTube every minute, and 60% of a creator's views are actually from outside that person's country. So this has made it much more difficult for governments to control information flows and to control the message. It's had positive implications, as you discussed, but it's also had some negative implications. I know one of the government's big challenges is looking at how to counter the use of social media and technology by extremist groups. So I wonder, Cathy, if you can talk a little bit about that, and then I'll bring it to our discussants as well.

Novelli: Sure, and I think, you know, I think that is a real—a crux of a very difficult question, that you were just discussing as well, which is how do you balance free speech and voices that are maybe not so popular with violent extremism—and of course nobody supports that, at least I hope nobody in this room does. And so this is difficult, and I think part of our challenge and what we're trying to do is that—I think, particularly in the State Department, folks have been used to, for a very long time, communicating on a government to government basis in a closed room and doing diplomacy in that way. And I think that the internet has forced us to do diplomacy in a very different way and to understand that, with the democratization and the spread of information, we have to be out there also, telling our story, not just to other governments but to the public at large, and we have to make things understandable and accessible and transparent. And sometimes that's hard to do when you're in the middle of a very intense negotiation, but I think this is something that we're working very, very hard to do—and particularly in the context of ISIL and what it's doing—because our narrative has to be more compelling than theirs. And that is really one of our prime focuses that our public diplomacy people are working on now.

Fang: Yeah. Ann Mei, I would like to bring you in on this discussion. I know that the Global Development Lab is using very innovative ways of—tools of social media and technology to source information, new innovative ways of dealing with global challenges, and I wondered if you could talk a little bit about that.

Ann Mei Chang: Absolutely. I mean, one of the goals of the Global Development Lab is to open the realm of international development to non-traditional players who haven't typically engaged with USAID, whether they be entrepreneurs in developing countries or they be students at universities or people in the private sector. And so, through social media, we've been able to cast a much wider net through things like our Ebola Grand Challenge, our Securing Water for Food Grand Challenge, our Development Innovation Ventures Fund. We've been able to solicit ideas from people who typically haven't worked with the government and that's opened us up to a lot of surprising breakthroughs that we wouldn't have found otherwise. To add to that though, what I would say is, to bring a different perspective into the discussion, is we primarily at USAID work in developing countries, and within developing countries we work with the most disadvantaged, mostly people are living in extreme poverty. And with that population, while social media is very much in our life blood here, most of those people—many of those people maybe have mobile phones, but not all of them, by far not all of them, and when they do have mobile phones, they're typically simple feature phones that don't have internet access. In Africa, only 20% of people have internet access. And so when we talk about things like the power of social media, we also have to think about the people that are getting left behind when we're using social media. So for example, in Egypt, you guys have all heard about the Facebook revolution, right, and how Egypt's revolution was very much fueled by social networking. Well during the time that that Facebook revolution was happening, less than a third of the population in Egypt was online, so that Facebook revolution was happening largely [among] urban, educated, wealthier men, and we weren't hearing the voices as much of the people in rural areas, of many women, of many less educated, poorer people. And so there's a danger that we also need to balance. And so one of the things that we really look at, as Cathy talked about, is how do we expand access, because that's a key pillar to development, is having a lot more people be able to have access to this incredibly powerful tool.

Fang: Yeah, and I know that you've been doing some work with Google as well. So I'd like to hear, Astri, about how Google Maps and, you know, all of these different—

Kimball: Sure, yeah, I think that's a really huge challenge, the digital divide. We think about it a lot, how do we make sure that all of the benefits of technology and science don't just help the richer, stronger countries get richer and stay stronger. And one incredible way that I think data and technology and science are helping vulnerable populations around the world is through disaster preparedness and response. It's—I was at a White House event about this yesterday, actually, and it was a group of scientists, who are both in government, academics, USAID, and Google and other companies, talking about how they can provide early warning on floods, droughts, to Bangladesh, where literally whole cities and farms are disappearing due to floods and drought. And so that was just incredible to see the potential of how early warning can help people. And it's not just disasters but also planning around our agriculture

and things like Google Maps, which we have—save about a billion hours in traffic annually for people, which I think we all appreciate, but is also the efficiencies and fuel savings that come with that globally, so—which is why I think that, you know, the free flow of data is so important. And there's huge opportunities there, and then there are huge risks that you can use it for censorship, like the Under Secretary discussed.

Fang: Great. So before I go to questions from the audience, I wanted to ask about your own experiences as women in your fields. I mean, I know personally, as a former war correspondent and when I was Deputy Assistant Secretary, I would often go into rooms and people would sort of look past me, waiting for the man to show up who was the war correspondent or the Deputy Assistant Secretary. And you know, I'm seeing nods around the room as well. And I think probably even more in some of the jobs that you guys have been in in science and technology fields. My mom actually, who is visiting from Boston, was a radar engineer at Raytheon and worked on the Patriot Missile, and I know during her time there she was also very much facing these issues. So I was wondering if you can all tell us about how you've personally dealt with these issues in your positions.

Novelli: Well, you know, there's no doubt that people—some people, especially from very male-dominated cultures, as I've been negotiating over the years, have felt that somehow they could get the better of me because they could out-tough me or out-whatever. [*Laughter.*] And I guess my favorite story of that is a negotiation we did with the Russians when we decided to take them off the ITAR [International Traffic in Arms Regulations] list, and so they were going to be able to export guns to the United States. And we were negotiating a voluntary restraint agreement with them. And the folks on the other side of the room were all from munitions manufacturers from the middle of Russia. And so at the time I was seven months pregnant. [*Laughter.*] And so I came into the room and they clearly just thought, oh this lady, you know, we don't really—she's not going to do anything. And at the end of the negotiation, when we had the deal that we wanted to have, they came up and shook my hand and said, you know, we have never met another woman like you, and we're going home to tell our wives about you. [*Laughter.*] So I thought I had struck a blow. [*Laughter.*]

Kimball: Yeah, I think tech is struggling with how to get more women in the pipeline as engineers. And it's actually—I've worked on Wall Street and in the White House and—but tech is tough, actually, because there just aren't a lot of women, and I don't—I feel very supported and encouraged, there just aren't a lot of engineers. But Google is doing a lot, and the whole community, the whole group of companies is. But it's really important to start young, with getting girls interested in computer science. Less than one percent of girls are interested in computer science in primary school in this country, so that's a huge challenge that really starts with our whole ecosystem, about showing how relevant science is, and it's not—and tech—it's not just someone sitting in a room coding, that it's actually relevant to your health, your daily life, checking the weather, checking what you're going to wear, I mean it's very—and so, that's important. But I also think, on the flip side, I think there're real opportunities that come with the internet, that sort of democratizing influence, where girls can have a voice. There's a YouTube star, Bethany Mota, who just interviewed the President after the State of the Union. And she had been bullied, and really didn't have friends in her school, and she created this online community, where she now has millions of followers. And so there's also an opportunity for new voices to emerge that we need to embrace.

Chang: So I studied software engineering in college, graduated in '88, and in my class there were maybe 10% of students who were women. And I've worked most of my career in the technology field in Silicon Valley, and in general in engineering there's about 12% of women, and plus or minus like 1%, in most of the tech companies. And so I never knew any different. This is like what I grew up with and how I always worked. And what I would say is I was lucky in that I rarely encountered overt discrimination. I certainly know people who did, but I didn't so much encounter overt discrimination so much as there are subtle things about the cultures that are established that are so male-dominated, that really value more the way that men tend to work. So, you know, the traditional image of computer scientists working in dark corners, late hours, it's very much a kind of male ethos, and not necessarily exclusively, but it's an environment that a lot of women aren't comfortable in. And if I look at what things are valued in a lot of tech companies,

the people who are feted are the men who stay up all night the night before a product is going to launch and fix the last bug, and they're like the hero, right? And nobody talks about the woman who actually planned ahead and tested her code such that the bug wasn't there in the first place. [*Laughter and applause.*] So there's a lot of subtleties there. And what I've seen is a lot of women that I worked with in the technology field, in engineering, gradually migrated to adjacent fields like marketing or business development where they were able to work in a slightly different culture. And you know people often ask me, because I left Google to go to the State Department, and they ask me wow, what was that like [*Break in video*] been a real culture shock, going from like Google to like this government bureaucracy. And what I would say is actually the biggest culture shock for me is going from working in an environment that was 90% men to an environment that was 90% women, because I was in the Global Women's Issues Office, because people work so differently. People would ask me, like, "How was your weekend?" And I'm like, "Why are you asking me that?" [*Laughter.*]

Fang: That's great. Yeah, and to underscore that, I mean it's so important to bring young people in at an early age. And I know Google actually did a great initiative last Christmas having girls code the Christmas tree, right?

Kimball: Yeah.

Fang: The White House Christmas tree. So anyway, that was wonderful. And that actually goes to the first question from the audience, which is how you'd advise a young professional in each of your fields to get noticed, you know, beyond just networking.

Novelli: Well, I think the best way to get noticed is to do excellent work and to pursue things that you love so that you can be passionate and excellent at the same time. And I also would say, at least for me, I was incredibly lucky to have amazing mentors—men and women—along the way, and I think making use of that is also really helpful in terms of getting the culture and understanding how to make the most of the opportunities that you have.

Fang: Yeah, and actually one thing I heard is that women—sort of the idea of mentorship is different between women and men. Men actually see that it's not just about being a mentor but also being a sponsor, and that's something that women have to start doing more of, so I completely agree. Astri?

Kimball: Yeah, I think the point about doing great work in everything you do. I was on the Obama campaign for two years before the White House, and I got my White House job because I organized vans with the Chief of Staff from the Senate, who came up to volunteer, and we worked together for two weeks. And it was not a glamorous job, as anyone who's done a campaign knows, this is what needs to get done the week before the election in New Hampshire. And we just worked together really closely. And then Obama named him to be Cabinet Secretary in the White House, and then he called me and said I want you on my team. So I could never have networked or predicted that. I just did a really good job with these vans with him. [*Laughter.*] And it was nice and fun, and then—so it's I think just doing every single—I think that's important to everything you do, to do a good job and be respectful, because everyone pops up again.

Chang: Yeah, I'd agree 100% with what both Cathy and Astri have said. One thing I'd add is that, in addition, I think I'd really encourage you to take risks. I don't know the exact numbers, but there've been studies that show that men, when they have something like 30 or 40% of the qualifications for a job will try to get themselves promoted or apply for the job, whereas women want to get almost 100% before they'll go for something. And so I think we often hold ourselves behind because we're not willing to take those risks or stretch—we don't have enough level of confidence. In fact, I'll say that when I was first asked to apply for my current job, I was like, "No, they'll never hire me." And I had to be convinced to actually apply. And I think that this is a common tendency among women.

Fang: Great. One more question. In the private sector, there's a reliance and value placed on using personal data to frame and improve messaging and engagement. Is there a place for this in the public sector, and how do we introduce it?

Novelli: I'm not sure I totally understand, can you reread the—

Fang: I think, so, in the private sector, there's a reliance and value placed on using personal data to frame and improve messaging and engagement. I think it may be a question on big data.

Novelli: Right. Is there a place for that in the public sector? I think there is certainly places for big data to be used in the public sector. There is no doubt whatsoever about that. I think the question is how do you do that in a way that is anonymized enough that people do not feel like the government is a big brother watching every single thing they do. And I think that is one of the areas of controversy even with the private sector, but I think it becomes even more fraught when you have the government involved. That said, as I said, I think there's huge advantages in medical technology and the weather and all kinds of things from having big data, and so the key is going to be how to figure out how to use that without actually attaching it to individuals.

Fang: Yeah, that's really interesting. Did you want to jump in?

Kimball: Yeah, I think health is a particularly important example that a lot of people are thinking about. Could you cure cancer if you had enough data? And you probably could, if you knew how to use it. It's not—it's also I think what—it's not just having the data, it's figuring out how to use it, which is why actually public-private partnerships are so important, what we did at this event yesterday is, there's a lot of government data, but what Google's strength is actually figuring out how to use the data and make it relevant and look at it. So I think there's tremendous opportunities. The other place is education outcomes, I think, but then there's a lot of privacy issues with kids, of course, so we have to figure that out and make choices.

Fang: Great.

Chang: Yeah, I absolutely agree that there's many uses, and there are challenges that we still need to figure out around privacy. One of the things that, before I joined the USAID Global Development Lab, was a big effort, that never quite succeeded but I hope it will next time, was in the Ebola outbreak in Liberia and Sierra Leone and Guinea, there was an attempt to try to get mobile phone records so that we could actually track movements of people and track disease trajectories. And we were never able to find a way to securely get that information to be able to use that data to help us fight the disease. And that's the type of thing that we would very much like to figure out a policy way to do so that is secure and maintains people's privacy but informs the greater public good.

Fang: Yeah, that goes to the next question, which is basically looking at the dark side of the internet. "Should we block communications between hostile groups such as ISIL in the same way we take down sites on pornography?" Yeah, Cathy, if you—

Novelli: That's a really—I think that's a very, very tricky question, and I'm not sure that we have completely figured out the answer. Certainly the answer is not a one-size-fits-all answer. Clearly people who are fomenting actual violence is something I think everybody agrees is not all right. But at the same time, folks who have a different point of view about religion and what that means. So I think drawing that line is a really difficult thing, and it's something that we're going to have to continue to kind of iterate as it goes forward.

Fang: Yeah, and Google is having to do a lot of policing work on this as well.

Kimball: Yeah, we do a lot of—well, it depends on the product, and we have an incredibly diverse audience and we have a range of products. So there's Search, but there's also YouTube, which is a more curated, where you log in. And so on Search, we don't review everything. We'll take things down. But on YouTube we have different policies. And I think we have this—we rely a lot on users to flag things for us and law enforcement to tell us things. But there's a lot of protection, a lot of ways to take down content that are both law and policy. I mean I think everyone's grappling with this. With the Supreme Court decision two weeks ago for the Facebook, the guy who was threatening his wife online on his Facebook page, and the Supreme Court found that was protected speech, and there was—so, I think every country is going to strike the balance differently, and you could veer, if you start to censor it because of violence—I mean, Russia and China want to censor, too. So there's a lot of choices. I think there's a movement—consumers are really valuing privacy with their devices and security and the ability to control them, and so that requires a lot of conversations with law enforcement too. So a lot of choices.

Fang: Did you want to jump in too, or—

Chang: No, I'm—

Fang: Okay. So the next question actually has to do with hacking, and this is something you addressed a bit in your remarks. How do we deal with countries like Russia and China who do a lot of cyber hacking? And sort of connected to that, there's another question about North Korea and obviously that, the idea of hacking into private sector companies. There's this saying that there are two different kinds of corporations, ones that have been hacked by China or one of these countries and ones who just don't know that they've been hacked, so—[*Laughter*]*—*whoever wants to jump in on this?

Kimball: Sure, yeah. I would say, I think this requires public and private discussion, the engineers who actually understands the systems and security and government who can do things like what the President did recently with cyber sanctions, which was really innovative to use sanctions in that way. I think we are struggling with, there's not a—we want everyone to come in—law enforcement to come in through the front door. And this is post-Snowden, and you can't create a back door for that's just for law enforcement and the good guys, then China can get in, too, and hackers can get in, too. So for us, and I think the US government has expressed this in certain contexts, is that encryption is the really best practice. But we want law enforcement to be able to get in too, so it's—but I think it's really an example where you need industry and government to be talking to each other, and a lot of engineers in the room.

Novelli: And I think it's very important, as I was saying in my remarks, that we work with like-minded governments, that we really have—we do need the public-private partnership to strengthen networks and to do everything we can't really bulwark, especially our critical infrastructure systems. I mean, if you think about what that can mean, if somebody really maliciously got into an electric grid or a water system, those are really huge threats that we absolutely have to figure out how to strengthen, and it can't just be that we try to do it by ourselves.

Fang: Yeah. Did you—USAID probably doesn't have much of a role in that.

Chang: No, we mostly deal with people who aren't online yet, so we don't have that issue.

Fang: Right, yeah, completely, completely. There's a question about the internet and social media and how it played this critical role in so many revolutions, from Ukraine's Euromaidan Revolution to the Arab Spring revolutions. Critical Facebook pages were sources—and Twitter, were sources of firsthand, truthful, on-the-ground info, but they have been shut down due to internet trolls. Is that something that any of you work on or know about?

Novelli: We certainly—I mean, a lot of these things have been shut down at government requirements, not necessarily because of trolls. And that is something that we have been very strongly working with governments to advocate against, in other words, to say you really need to keep these things open, you

should not be shutting them down. We've faced this in a number of countries. We faced this with Turkey around their election. And we continue to advocate to keep open all of these lines of communication, but particularly when something becomes hot or controversial, that's when you really see like extra effort to kind of try to insulate against this, which to me is a testament to the power of information in the first place.

Kimball: Yeah, I think it goes back to the point of working with like-minded countries. But even in Europe right now, where there's a lot of geo-blocking—more in the commercial setting than the content like there is in China or Russia—where you can't get certain movies or Netflix in most, in European countries, and so they're trying to figure that out with the State Department's help on how to get information flowing within the 28 members of the EU. But that's a different kind of illegal activity because that's pirating movies that a lot—so that's, I think, getting free flow of data and getting like-minded countries to support that, with the rule of law, is the way forward.

Fang: Yeah. A question that is completely out of my purview, but it's a question on the dark internet. There's a new book out, apparently, and so the question is, what percent of the internet is dark, and how are companies and government agencies dealing with this?

Novelli: I do not know, do you know?

Chang: I don't know the percentage.

Kimball: I don't know the percentage.

Novelli: But there's certainly, I mean—

Chang: More than we think.

Novelli: Law enforcement is doing, you know—is attempting to do a lot of work there to really try to get at child pornography, some of the worst forms of abuse, and things that are on the darknet, and they're doing a lot of great work to try to do that. And there's a lot of pioneering things being done as well. Folks are looking at facial recognition technology to see if they could actually identify children who are being abused so they can go rescue them. So there's a ton of things being done by government and the private sector to address these things.

Chang: One of the things I'd say is that with any technology, there are lots of upsides and value that a technology adds, and there's also downsides. I think, as Cathy was mentioning, on the darknet, it's actually—the internet has actually facilitated a lot of illegal activity, more so than before the internet existed. Someone was telling me the other day that child pornography had really been whittled down to a very minimal level before the internet took place, and since the internet has existed and the darknet existed, it's become much easier for people to exchange this kind of information that may be illegal because now they have a tool to do so more easily and securely. And so, there's always an upside and downside, and I think the thing that we need to balance is both continuing to fight the downside but not restricting the upside because of it.

Fang: Yeah, fascinating. So one last question before we wrap up. How has diplomacy changed by having ambassadors and officials on Twitter? Something—yeah.

Novelli: I think it's changed in a good way. I think it's forced people to think about what their message is, and how is that perceived when it's communicated out to a much wider group of people. And it's also forced a change in strategic thinking because you recognize that the power of the discussions you can have is so much more powerful if you have a lot of support among the general population in whatever country you're having the conversation with. So I think it has—it's actually put some air, welcome fresh air, into the system, and it's going to behoove us to really use it to full advantage.

Fang: All right, if you could join me in thanking our panelists and our speaker. [*Applause.*] Fascinating discussion. [*Applause.*]

Ann Stock: And don't go away. Let me add my thanks to this. But it's now—are you ready—speed mentoring time. With so many leaders in the room and so many aspiring leaders, it's time to do a little speed mentoring and networking. And yes, they do have to change over this room quickly. So if my board would get up and you'd follow them out into the foyer, we'll have a chance to meet again with our Young Leaders who are in the room and do some mentoring and practice what we preach. Thank you again, and we'll see you back here at 2:30 for the next panel. [*Applause.*]