



CHARTING

CYBER'S FUTURE

From safeguarding elections to engaging with China's cyber officials to protecting user data, the Center's cyber initiatives are working to protect the public from digital dangers and make this technical arena more accessible.

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From the Director

Ash Carter

The Belfer Center exists to advance policy-relevant knowledge at the intersection of science, technology, and international affairs. Helping leaders in business and government make better decisions is vital work. Yet it's only one half of our distinctive mission. The second pillar is preparing future generations to lead in these important arenas. Indeed, we sometimes say that our most important product is people.

In recent months, students have benefited from mentorship sessions with former Cabinet members like **Susan Rice**, **Jim Mattis**, and **Loretta Lynch**, and tech founders such as **Allen Blue** and **Christopher Ahlberg**. Wisdom from renowned figures like these only goes so far without real-world application. And that's what really sets us apart.



Former UN Ambassador **Samantha Power** shares career advice with Harvard Kennedy School students in an October seminar.

Training tomorrow's leaders is serious business; it's also deeply rewarding. The opportunity to mentor service-minded young people is why I returned to campus after serving as Secretary of Defense. I love sharing practical lessons with students. Though they hail from the four corners of the globe, they all share a common commitment to making a better world. Harvard Kennedy School students typically arrive having already honed their skills for several years in the public or private sectors. Their curiosity is exceptional. By semester's end, I've learned more from them than vice versa.

Because leadership is multi-faceted, our training is, too. Our faculty teach policy expertise in dozens of domains, including budgeting, cybersecurity, national security, and nuclear safeguards. We also teach courses that strengthen personal effectiveness, such as negotiation, communication, and productivity. (We're still negotiating with the registrar on a course called "Getting S#!t Done.")

Two things distinguish this training at the Belfer Center and HKS: engagement with world-class practitioners and the opportunity to apply best practices in the field.

"The opportunity to mentor service-minded young people is why I returned to campus after serving as Secretary of Defense."

Among other activities, students have:

- Traveled to Iowa to help democratic stakeholders safeguard their systems from cyber and misinformation attacks.
- Pitched climate proposals to Arctic leaders in Iceland.
- Spent time on Capitol Hill helping congressional members and staffers deepen their grasp of science and technology.
- Applied for an upcoming January term in the Middle East to learn firsthand about social transformation in the Arab world.
- Documented misinformation campaigns in Taiwan and South Korea.

The Center is pleased to sponsor these and many other research projects that get students out of the classroom and onto the front lines of policy influence. We make these investments not to give students another bullet point on their resumes, but to give them the tools they'll need to make a difference now and in years to come for a lifetime of impactful public service.



Staff Spotlight: Guy Keeley

Impactful programs require good budgets, and good budgets require a good finance director. We're fortunate to have the great **Guy Keeley** managing the funds that fuel the Center's research.

Keeley, who is quick to credit his colleague **Lovita Strain** for the team's success, brings nearly a quarter century of experience at Harvard to the job. Such depth is critical to managing the financial operations of the largest research center at Harvard Kennedy School.

"I have the unique opportunity to help a broad range of researchers think more strategically about their projects and make the most of their funding," says Keeley. "That makes life interesting."

When he's not deep in Excel files, the Liverpool, England native might be doing analytics on the Center's own recreational soccer team. "Coach Keeley" has bravely molded a motley crew of players into a unit worthy of the Belfer FC jerseys they wear.

On weekends, Keeley likes to browse local used record stores. Blending old school and new school, he uses an app called Discogs to determine if that vintage Pink Floyd LP is already in his copious collection. And yes, he not only owns a first pressing of *London Calling*, but saw The Clash perform live many times starting in 1977.

Each December, Keeley organizes a staff quiz based on knowledge of holiday-themed movies. Newcomers quickly learn there are no easy questions about *The Grinch* or *A Charlie Brown Christmas*.

One of the most memorable community gatherings at the Center took place a few years ago to honor Keeley taking his oath of U.S. citizenship at Boston's famous Faneuil Hall. "The only way I can participate in this democracy is to embrace becoming a citizen, so I took the opportunity to do it," Keeley says. "It shows the importance I place on what it means to act and participate as a citizen."

New Approaches to Security and Global Health Challenges

The Belfer Center recently launched the Security and Global Health Project (SAGH), an initiative aimed at generating new approaches to global health security threats. The project is chaired by Senior Belfer Lecturer in International Security and former Department of Homeland Security Assistant Secretary **Juliette Kayyem**.

The Security and Global Health Project's mission is to conduct and disseminate policy-relevant research and training on issues critical to global health security, such as threats from bioterrorism, pandemics, armed conflict, climate-related natural disasters, and mass migration. Through fellowships, seminars, research, and training, the project will bring together academics and policymakers to generate new approaches to prepare, prevent, mitigate, and respond to these threats.

"Global health threats are essentially security challenges," said Kayyem. "This is an exciting effort that will leverage the expertise at Harvard and beyond to address a challenge that cannot be neglected."

Drawing on the vast experience across Harvard University's graduate programs, research facilities, and partnerships, the project plans to produce collaborative research and policy analysis, and deliver training and service opportunities unique to the emerging field of health security. This year, the Security and Global Health Project will focus on three areas:

- Health Intelligence and Misinformation: A New Weapon of Mass Destruction?
- The First Line of Defense: Preventing Health System Collapse During Crisis
- Managing a Security Response to Ebola Epidemics: Liberia and the Democratic Republic of Congo

Margaret Bourdeaux, a faculty member at Harvard Medical School's Department of Global Health & Social Change and the Global Health Equity Division of Brigham and Women's Hospital, who also founded the Threatened Health System Project, will lead SAGH research efforts as Research Director.

Read more about the project at belfercenter.org/SAGH

Paul Kolbe Heads Center's Intelligence Project

The Belfer Center is pleased to welcome **Paul Kolbe** as the Center's new Intelligence Project Director. Kolbe will build on the work of the former director **Rolf Mowatt-Larssen** to advance policy-relevant knowledge in intelligence areas and help prepare future leaders in the field. The Intelligence Project is home to an elite roster of former senior intelligence officials and hosts rising stars from intelligence and national security organizations around the world.

"We're very fortunate to have Paul run the Intelligence Project," said Belfer Center Director **Ash Carter**. "His distinguished record in government and business exemplifies the kind of public service we aim to cultivate."

Kolbe served for 25 years in the CIA's Directorate of Operations in a variety of foreign and domestic roles, including as Chief of Station, Chief/Central Eurasia Division, and Balkans Group Chief. His overseas assignments included operational and leadership roles in locations ranging from the former Soviet Union and the Balkans to Southeast Asia, Southern Africa, and Central Europe. He was a member of the Senior Intelligence Service and is a recipient of the Intelligence Medal of Merit and the Distinguished Career Intelligence Medal. Following his CIA career, Kolbe was Director for Intelligence and Analysis at BP, where he built an enterprise-wide intelligence capability focused on geopolitical threats, strategic cyber threats, and support to commercial operations.

"Intelligence is central to the critical issues our world faces today," said Kolbe. "I'm excited to explore how the Belfer Center can help prepare a new generation of policymakers to use intelligence to shape their decisions and help tackle the most pressing public challenges."



"Intelligence is central to the critical issues our world faces today."

Read more about the project at belfercenter.org/Intelligence

Cyber Initiatives Chart Ambitious Future

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This fall, the Belfer Center named **Lauren Zabierek**, **Maria Barsallo Lynch**, and **Julia Voo** to head three of the Center's growing cyber-related projects: The Cyber Project, Defending Digital Democracy Project (D3P), and China Cyber Policy Initiative (CCPI), respectively.

"Cyber is an inescapable element of public policy," said Center Co-Director **Eric Rosenbach**, a former "cyber czar" for the U.S. Department of Defense. "From hacking and disinformation attacks on our elections and power grids to the intensifying global competition over cyber technology, this is an essential area for research," he said. "The Belfer Center is pleased to welcome these three exceptionally talented individuals, whose expertise will guide the Center's work on one of the most challenging areas confronting policymakers in Washington and around the world."



Lauren Zabierek (left), Maria Barsallo Lynch, and Julia Voo.

"CYBER SECURITY

DEFENDING DIGITAL DEMOCRACY

Foreign nations and non-state actors are not backing down in their efforts to hack systems, alter the outcome, and undermine confidence in our elections. The Defending Digital Democracy Project (D3P), a bipartisan initiative, has been working since 2017 on strategies, tools, and technology to protect democratic processes and systems from attacks.

Maria Barsallo Lynch, Executive Director of D3P, brings to the project experience in the cross-section of politics, cybersecurity, and technology. She has led funding strategy and program implementation initiatives in the nonprofit and political arenas, including as Deputy Finance Director for U.S. Senator Michael Bennet in Colorado.

"Our electoral system is the bedrock of our most cherished democratic values," said Barsallo Lynch.

"D3P is committed to developing meaningful strategies and tools to safeguard democratic processes in the U.S. and around the world," she said. "D3P's incredible team brings together experts, students, and alumni who understand our responsibility to help equip those on the front line of democracy with tools needed to face evolving threats."



Maria Barsallo Lynch speaks during a discussion of the documentary film "The Great Hack" in October.

In anticipation of threats to the 2020 U.S. elections, D3P is working with election officials and others involved in the elections process across the country—from California and New Mexico to Louisiana and North Carolina—to identify vulnerabilities and needs of election office staffs. Team experts, including **Eric Rosenbach** and **Debora Plunkett**, have testified before Congress about the threats and actions needed to fortify elections.

Adding to the playbooks it has produced for leaders in the democratic process, D3P is currently completing a new *Information Operations Playbook and Toolkit* with tips and tools to defend against the type of mis/disinformation that state and local elections will most likely encounter.

In mid-December, the D3P team will conduct "Battlestaff Bootcamp" in Washington, D.C. The training aims to bring more than 150 state and local election officials from large and small offices to train on best practices for election day operations. The bootcamp will include a simulation exercise to identify vulnerabilities in current processes and trainings to improve those processes.

D3P also is continuing to build a research portfolio to advise policymaking on digital democracy issues such as data and privacy, and developments in election security and information operations.

Find more at
belfercenter.org/D3P

THE CYBER PROJECT

The cyber problems that confront today's leaders are substantial: from protecting a nation's most critical infrastructure against cyber attacks to preparing a military force for conflicts in cyberspace to reducing vulnerable points of attack without stifling innovation. The Cyber Project aims to become the premier home for rigorous and policy-relevant study of these and related issues.

Lauren Zabierek, Executive Director of the Center's Cyber Project, is a military veteran, former civilian intelligence analyst, and former commercial cyber security senior analyst and manager. Zabierek served as an intelligence officer in the U.S. Air Force and as a civilian intelligence analyst with the National Geospatial-Intelligence Agency (NGA) assigned to the Office of Counterterrorism.

"The Cyber Project works with policymakers, technologists, practitioners, and academics to help shape policy for better security in this critical space," Zabierek said. "The overall theme for the year is 'Cybersecurity is National Security' and everything we're doing domestically and internationally aligns with this theme."

Currently, the Cyber Project is addressing two major challenges: (1) How to shore up defenses and vulnerabilities without stifling innovation or curtailing privacy and freedom; and (2) How to shape the external environment—such as international norms and rules—and engage in technology and security issues with our allies and adversaries.

To tackle these challenges, the project has been convening international cyber experts for seminars and workshops, meeting with Congressional members and staff, taking part in Track II dialogues, and engaging students in deep research on critical cyber issues.

Among its current activities, the Cyber Project is exploring ways to help states best process and analyze cyber threat intelligence and explore public-private relationships, and is researching best practices in personal cybersecurity.

The Project also is working with the Belfer Center's U.S.-Russia Elbe Group and conducting corresponding research to establish "rules of the road" in cyberspace for the two countries. The Elbe Group meets annually to discuss issues of importance to both countries.



Lauren Zabierek makes a point during a debrief session following a recent Elbe Group meeting of former U.S. and Russian officials. Also pictured: Rob Dannenberg and Elbe Group founder Kevin Ryan.

Find more at
belfercenter.org/Cyber

CHINA CYBER POLICY INITIATIVE

China's capabilities and intentions in cyberspace will increasingly have a significant impact on the international community. The goal of the China Cyber Policy Initiative (CCPI) is to promote U.S.-China dialogue on cyber issues and to better understand, analyze, and assess China's capabilities and intentions and their potential consequences.

Julia Voo, Research Director of the China Cyber Policy Initiative, worked previously at the British Embassy in Beijing, where she focused on China's cyber and artificial intelligence policy from a commercial perspective.

"We are in the middle of a great challenge to the current global power balance, a substantial part of which will play out in cyberspace," Voo said.

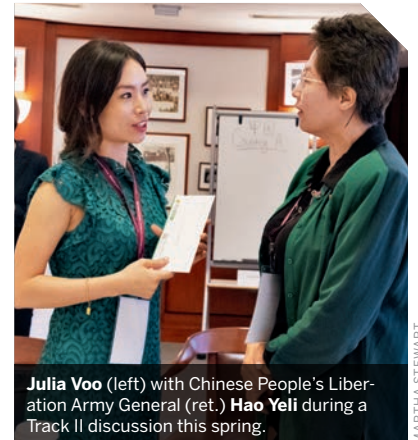
"CCPI is committed to helping policymakers and business find new areas for collaboration and managing risk."

In its effort to promote dialogue and better understand China's cyber efforts, CCPI has organized meetings in the U.S. and in China related to the U.S.-China: *Controlling Confrontation in Cyberspace* project, a Track II dialogue with the China Institute for International Strategic Studies to facilitate discussion on ways to reduce risks of cyber conflict.

The key to enhancing policymakers' understanding of the China cyber issue is through placing the problems in context, Voo believes. To that end, CCPI is creating three tools to better inform the international community about China's role and plans in cyberspace. These include:

- A map of influence and global connectivity to put China's Digital Silk Road and the potential of growing Chinese influence over global internet infrastructure into context.
- A framework for measuring state cyber power in order to help inform policy discussions and debates on the threats in cyberspace.
- A timeline and map of diplomatic alliances in cyberspace at international, regional, and bilateral levels to get a better understanding of the extent of influence the U.S. and China have in cyberspace and how this may be changing over time.

Because U.S.-China relations in cyberspace are a long-term challenge, Voo encourages policymakers, the press, and the public to invest in building deep expertise in China-related issues rather than focusing solely on immediate areas of friction.



Julia Voo (left) with Chinese People's Liberation Army General (ret.) Hao Yeli during a Track II discussion this spring.

MARTHA STEWART

Find more at
belfercenter.org/CCPI

Arctic Initiative Tackles Plastics in Oceans



Deenaalee Hodgdon, an indigenous student activist from Brown University, shares her insights as a Deg Hit'an Athabaskan and Supiaq woman from the villages of Anvik and South Naknek, Alaska, about how to build a circular economy that leverages indigenous knowledge.

Also pictured: **Peter Murphy**, Alaska Coordinator for the NOAA Marine Debris Program.

We have all heard of the “Great Garbage Patch” of plastics in the Pacific Ocean, but plastic pollution in oceans around the world is a growing international problem. Plastics are found even in the most isolated regions of our planet. Over the past decade, the amount of plastic debris in the previously pristine Arctic has increased considerably, to the point that in some remote locations Arctic Sea ice contains a greater concentration of microplastics than the highly publicized Pacific Gyre. The increase in plastics in the Arctic—including microplastic particles that can make their way into the food chain—are raising serious ecosystem and economic concerns for Arctic leaders and citizens.

Acting on these concerns, Iceland has chosen to highlight the issue of plastics in the Arctic Ocean as one of its focus areas during its Chairmanship of the Arctic Council from 2019–2021. Working with a broad coalition of partners, including the Protection of the Arctic Marine Environment (PAME) working group of the Arctic Council, the Icelandic Chairmanship is developing a Regional

Action Plan on Marine Litter to begin addressing this growing threat to the area.

In support of that initiative, the Belfer Center's Arctic Initiative and the Wilson Center's Polar Institute co-hosted a workshop with the Icelandic Chairmanship in late October at the Kennedy School titled *Policy and Action on Plastic in the Arctic Ocean*. The event convened global thought leaders, diverse stakeholders, and subject matter experts to begin developing a framework for tackling Arctic plastic pollution. Grounding the conversation in the latest science on sources and concentrations of plastic pollution, this workshop gave participants the opportunity to explore different policy levers and industry innovations that can shape an intervention strategy.

Discussions from the Kennedy School workshop will help shape the policy agenda at the Symposium on Plastics in the Arctic and Sub-Arctic Region which is being organized by the Icelandic Chairmanship and scheduled for April 2020.

Students Offer Solutions at Arctic Innovation Lab

The Arctic Innovation Lab, organized by the Belfer Center's Arctic Initiative, brings international student leaders together to present innovative solutions to complex challenges facing this vulnerable region. With topics such as food security, geopolitics, and waste management, 13 students pitched their ideas at the October 2019 Arctic Circle Assembly in Reykjavík, Iceland, the largest annual global gathering on Arctic issues.

The students from six universities—University of Iceland, Reykjavík University, UiT-The Arctic University of Norway, Aalborg University in Denmark, the University of Alaska, Fairbanks, and Harvard—each had two-and-a-half minutes to convince a diverse audience and a panel of judges that their ideas could promote a sustainable, prosperous, and environmentally sound future for the Arctic.

Siddarth Shrikanth, a joint degree candidate at Harvard Kennedy School (HKS) and Stanford Graduate School of Business, pitched an app to help manage tourism traffic across Iceland. He won an earlier Kennedy

School Arctic Innovation competition and placed second overall at the Innovation Lab in Reykjavík. Shrikanth later talked with an Icelandic student there about making his proposed tourism app a reality. First place went to University of Iceland student Kevin Dillman for an innovative “decentralized urban farming” plan to promote Arctic food independence and wellness.

Led by Arctic Initiative Coordinator **Brittany Janis**, the Harvard students participating in the Lab included HKS's **Emily Fry**, **Clark Yuan**, Shrikanth, and Harvard Chan School of Public Health student **Alicia Nelson**.

The Innovation Lab was among several sessions the Belfer Center's Arctic Initiative presented at the 2019 Arctic Circle Assembly. Science journalist **Cristine Russell**, a Senior Fellow at the



Harvard Arctic Innovators, **Emily Fry** (MPP), **Alicia Nelson** (HSPH), **Siddarth Shrikanth** (MPP/MBA), and **Clark Yuan** (MPP/MBA) meet with Ambassador **David Balton** at the Arctic Circle Assembly, to learn about his experience negotiating policy in the Arctic.

Environment and Natural Resources Program, organized a session on how to improve media coverage of the Arctic by telling more “Human Stories of Climate Adaptation and Resilience,” particularly among Indigenous peoples. Arctic Initiative Senior Fellow **Fran Ulmer** led a workshop on developing “A Strategic Plan for the Arctic,” focusing on recommendations from a recent paper she co-authored with Ambassador **David Balton**, a Senior Fellow at the Wilson Center's Polar Institute.



Bridging Congress's Science/Technology Expertise Gap

The United States Congress is known as one of the most-advised bodies in the world. Members of Congress can connect with the world's experts in groundbreaking fields by asking for policy briefs or inviting them to speak at committee hearings; they can task august bodies like the National Academies to conduct deep research into a specific topic.

And yet, when it comes to many emerging technologies, Congress has not shown that it has the necessary capacity and expertise to fully exercise its constitutional duties in regulating tech. While members of Congress in both chambers often produce thoughtful legislation on established science and technology issues, in legislation and high-profile hearings, Congress has appeared unprepared to reckon with emerging technologies and their effects on society.

The Technology and Public Purpose (TAPP) Project, headed by **Laura Manley**, conducted interviews, surveys, focus groups, and secondary research to understand how Congress can simultaneously be one of the world's most advised bodies and lack the capacity to fully engage with emerging technology issues.

The report, *Building a 21st Century Congress: Improving Congress's Science and Technology Expertise*, found that at the core of the problem is a divide between what Congress can absorb and what information it receives. Internally, Congress has not given itself the resources needed to efficiently and effectively absorb new information—particularly on complex S&T topics. Externally, while Congress is inundated with information, it often does not have information that fits its needs.

To address this divide, the report suggests four major actions that can be taken to bridge the science and technology expertise gap in Congress. First, Congress should hire more scientists and technologists to work in personal offices and on committees. Second, Congress should work with academia, think tanks, and foundations to build pathways for scientists and technologists to work on Capitol Hill. Third, Congress should invest in itself by, among other things, increasing committee and support agency budgets. Finally, external resource providers should tailor their expertise specifically for policymaker use.



Ash Carter discusses science and technology challenges facing Congress with a group of Congressional staffers.

The TAPP Project team will meet with policymakers, think tank leaders, and others in the months ahead to discuss findings from the report. The team will also conduct additional research into pathways for scientists and technologists to serve in the legislative branch.

Read the full report at belfercenter.org/CongressSciTech



Spotlight

TECH AND PUBLIC PURPOSE

TAPP “Spotlight” Will Recognize Tech That Protects Society

Technology and all of objective science are caught in a crisis of reputation. From investigations into competition practices to legislative scrutiny over the application and safety of new products, innovators are facing a reckoning for their seeming absence of principles such as privacy, security, inclusion, transparency, and accountability. But it is possible to bend the arc of innovation toward overall public purpose.

The **Tech and Public Purpose Spotlight** is a recognition program that seeks to highlight products, initiatives, and policies that demonstrate a commitment to public purpose in the areas of digital, biotech, and the future of work. Under the guidance of Belfer Center Director **Ash Carter**, the Technology and Public Purpose project opened a nominations process this fall with independent reviewers evaluating entries based on their proven ability to reduce societal harms and protect public purpose values including: privacy, safety and security, transparency and accountability, and inclusion.

There has been an abundance of scrutiny on the direction of technology today. However, there are still few meaningful guides on how to shape the way forward. “While a lot of good came out of [the digital era], we cannot say in hindsight that it came out at all the way we might have hoped,” says Secretary Carter. The Spotlight seeks to provide examples for technologists and policymakers alike to influence a tech culture that prepares us for a better future.

For more information, visit belfercenter.org/TechSpotlight



Q&A: Aditi Kumar

Aditi Kumar is Executive Director of the Belfer Center. Prior to joining the Center, she was a Principal at Oliver Wyman in the financial services and public policy practices, and earlier was a project manager at the World Economic Forum. A joint graduate of Harvard Kennedy School and Harvard Business School, she also worked previously in the International Affairs office of the U.S. Department of the Treasury.

Q You joined the Belfer Center as Executive Director a year ago this month. As you look back over the past 12 months, what are some aspects of your work and involvement with the Center that stand out most?

It's a very creative challenge to help lead the organization through a period of such rapid and significant change. We are in a political environment where the usual lines of communication to policymakers are weaker, so we have emphasized more field work, track II dialogues, participation in multilateral forums, and other ways to drive impact. The way people consume news and policy analysis, through social media, video, and short-form formats has pushed us to rethink the way we engage our stakeholders. And, we continue to evolve our research portfolio, and build out an expert and diverse team of faculty, fellows, staff, and students to address the most pressing policy challenges. It has been exciting for me to help shape the Center in these ways.

Q Along with your Center management hat, you have launched a new research focus called the Economic Diplomacy Initiative or EDI. Why is economic diplomacy especially important at this time?

The idea of economic policy as an instrument for achieving national strategic objectives is obviously not a new one. What is new, and evolving, is the number of nations with the capacity to wield economic power, and the interconnectedness and complexity of global economies that enable a more diverse and impactful set of economic tools. China, which barely had a GDP of \$1 trillion twenty years ago, today envisions investing \$1 trillion in its Belt and Road Initiative. The technological sophistication of the global financial system now allows the United States to surgically target specific Russian oligarchs in response to the invasion of Crimea, rather than enforce



Aditi Kumar (left), Executive Director of the Belfer Center, listens to Anand Giridharadas discuss his views on the perils of philanthropy and policy in the hands of the global elite. Kumar moderated the conversation with Giridharadas, author of *Winners Take All*, *The True American*, and *India Calling* at a JFK Jr. Forum in November.

blunt sanctions impacting the average Russian citizen. In the context of more state actors wielding economic power in meaningful ways, the Initiative explores the impact of policy tools like investment and sanctions, competing visions of the future of the global economy, and the industries and economic infrastructure critical to national security.

Q One of the major efforts of the Economic Diplomacy Initiative so far was the digital currency wars simulation event you organized. What were your goals for this event?

The simulation illustrated the centrality of economic power to national security. Today, the United States has so much leverage in the way it can shape foreign affairs, because we have the deepest capital markets, the most efficient market infrastructure, and the global reserve currency. We wanted to illustrate how these advantages could erode—in a matter of months, not decades—and what policy choices we need to be considering today to avoid this scenario.

“It’s a very creative challenge to help lead the organization through a period of such rapid and significant change.”

Q Looking ahead, what are you excited about with regard to the Center’s current and future impact?

For me, the most exciting part of all this is the students. The EDI simulation was entirely student-led, as is much of our work in the Defending Digital Democracy Project, the Korea Project, and many other initiatives. I was an MPP student here, so I know how much having a base for research and mentorship, and just the encouragement of faculty and staff to engage, can change the academic experience. It’s rewarding to then see these students move on to impactful roles in the public and private sectors. Hopefully we’ll be their first call when they face policy and management challenges in their careers.

Watch the simulation at belfercenter.org/DCW

MIKE DESTEFANO

Spotlight: Fran Ulmer



Fran Ulmer is a Senior Fellow with the Belfer Center's Arctic Initiative. She also is Chair of the U.S. Arctic Research Commission and Global Board Chair of The Nature Conservancy. She has served in Alaska as Mayor of Juneau, State Representative, and Lieutenant Governor—the first woman elected to statewide office in the state. She also was Chancellor of the University of Alaska.

by **Josh Burek**

Imagine taking everyone who lives in Boston and spreading them out over an area so big its boundaries would stretch from Florida to Minnesota and Arizona. That gives a rough idea of the breathtaking scale that defines **Fran Ulmer's** adopted home state of Alaska.

Ulmer, a Senior Fellow with the Belfer Center's Arctic Initiative, served for 18 years as an elected official in Alaska, culminating as Lt. Governor. In that role, and in her more recent service as chair of the U.S. Arctic Research Commission and chair of the Nature Conservancy Board, Ulmer has seen up close the challenges of driving economic growth while also addressing the dangers of climate change in a state where one-third of the economy derives from oil production.

“The smart young people I meet are amazing. They don't think, ‘We can't get it done.’ They think, ‘We'll figure it out.’”

Alaskans are literally on the front lines of disruptive climate volatility. “We see and feel the rapid changes in dramatic ways, from retreating glaciers to forest fires,” Ulmer says. “Some communities are moving because of flooding, coastal erosion, and thawing permafrost.”

It's easy to point fingers at a fossil-fuel rich state like Alaska, but Ulmer sees the need for shared responsibility—and shared solutions. “Until people stop driving cars with gasoline or heating their

homes with fossil fuels, there will be a need for the oil produced by Alaska or someplace else,” she says.

At the same time, she's adamant about the need for every stakeholder to step up. “There are many things that can be done by individuals, companies, governments—all of us—to reduce our fossil fuel use and slow the rate of warming,” she says. “Books like *Drawdown* give people good ideas about how they can help with both direct action and by using their voice and their vote to change the direction of policies.”

After her service as Lt. Governor ended, Ulmer spent a year at Harvard as an Institute of Politics Fellow. That experience underscored for her the critical need to train future generations to leverage good politics and effective policymaking to safeguard the planet. “It's

not enough to do good science,” she explains. “You have to connect science to policy and politics.”

Ulmer recently helped lead an Arctic Initiative trek to Iceland, where students proposed policies for safeguarding the Arctic. These engagements have left her hopeful about humanity's prospects for meeting an existential threat. “The smart young people I meet are amazing,” she says. “They're so positive about the future. They don't think ‘We can't get it done.’ They think ‘We'll figure it out.’”

Many outsiders think of Alaska as frozen tundra shrouded in constant darkness. But temperate climes and long summer days make the state a paradise for outdoor adventurers. Ulmer, who is a serious angler, reminded a recent staff gathering that half of all seafood harvested in the United States comes through Dutch Harbor, Alaska. Ulmer's favorite spot in a

state with seemingly endless vistas is a small cabin on an island in southeast Alaska. “When you close your eyes and think of a place that gives you joy, I mentally fly myself to this beautiful little piece of land where I can see eagles flying above my head, see whales spouting, and catch a halibut in a small boat. That's my favorite place.”



Fran Ulmer at the North Pole.

COURTESY OF FRAN ULMER

Belfer Center in Action



Balancing Priorities: General (ret.) **Vincent K. Brooks**, former Commander of U.S. Forces Korea, UN Command, and ROK-U.S. Combined Forces Command, speaks on “Threading the Eye of the Needle—Peace, Denuclearization, and the Regional Order in Northeast Asia” during a Belfer Center Director’s Lunch.



Fighting Force: **David H. Berger**, Commandant of the Marine Corps, speaks during a Defense Project event on the changing character of war and impacts to war-fighting that are driving the Marine Corps’ future force design. Berger has served in a number of operations including IRAQI FREEDOM and ENDURING FREEDOM.



Syrian Control: **Randa Slim**, Senior Fellow and Director of the Conflict Resolution and Track II Dialogues program, Middle East Institute, speaks on “The Regional Fallout of the Syrian Civil War” during a Middle East Initiative seminar. The map behind her illustrates which factions control different areas in Syria.



High Stakes: **Tzipi Livni**, former Minister of Foreign Affairs and Vice Prime Minister of Israel and current Fisher Family Fellow with the Future of Diplomacy Project, speaks with a study group about “The Israeli-Palestinian Conflict: Insights from the Negotiating Table.” She was the chief negotiator in the last two rounds of negotiations between Israel and the Palestinians.



COURTESY OF SHEILA JASANOFF

Innovation Implications: **Sheila Jasanoff**, Pforzheimer Professor of Science and Technology Studies at Harvard Kennedy School, meets Pope Francis during a Vatican conference in September on The Common Good in the Digital Age. Jasanoff was principal speaker in a session titled “Future horizons and their respective ethical dilemmas,” which focused on innovations such as AI.



Critical Times: **Philippe Etienne**, Ambassador of France to the United States, and Ambassador **Victoria Nuland**, Senior Fellow, Future of Diplomacy Project, and former U.S. Assistant Secretary of State for European and Eurasian Affairs, speak at Harvard Kennedy School on challenges to the Atlantic Alliance.



MARTHA STEWART

Point of Order! **John Bercow**, then Speaker of the House of Commons (2009 until October 2019), speaks at a JFK Jr. Forum about challenges facing the UK around Brexit and about his position as Speaker of the House known for getting Parliament's attention through his memorable call for "Order!"



American Journey: **Samantha Power**, U.S. Ambassador to the United Nations from 2013 to 2017, discusses her new memoir *The Education of an Idealist*, with Belfer Center Director **Ash Carter** during a joint Belfer and Carr Center event. Power is a professor at both the Kennedy School and Harvard Law School.



Indigenous Insights: Three indigenous women from Arctic countries discuss their work and Arctic challenges during an Arctic Initiative event. They are: **Gunn-Britt Retter**, Head of Arctic and Environmental Unit of the Saami Council; **Raina Thiele**, founder and President of Thiele Strategies; and **Deenaalee Hodgdon**, Brown University student and indigenous activist.



Social Media Manipulation: **Alex Stamos** (right), former Chief Security Officer of Facebook, discusses information attacks and social media platforms during a Cyber Project seminar moderated by **Bruce Schneier**, Lecturer in Public Policy at Harvard Kennedy School.



SCREENSHOT, U.S. CONGRESS

Election Trust and Security: **Debora Plunkett**, Senior Fellow with the Belfer Center's Defending Digital Democracy Project and former Director of the National Security Agency's Information Assurance Directorate, testifies before a House Judiciary Committee hearing in September on "Securing America's Elections."



Future Leaders: The 2019-20 Belfer International and Global Affairs Student Fellows gather with Center Director **Ash Carter** (center) and Co-Director **Eric Rosenbach** (standing). The fellows work with professors and projects and gain insight into the importance of community, service, and leadership.

Featured Fellows and Students



Belfer International and Global Affairs Fellowship Program



Stanton Nuclear Security Junior Faculty Fellow

Usha Sahay Understanding Media for More Impact on Policy

by **Shelby Grebbin**

During the Obama presidency, then-undergraduate **Usha Sahay** began reading about the role of the U.S. in two conflicts that dominated the news: the wars in Iraq and Afghanistan. Her interest was sparked in both journalism and international affairs; today she is a Harvard Kennedy School student and Belfer International and Global Affairs Student Fellow interested in U.S. leadership and decision-making in foreign affairs and the role of the media in how policy is crafted.

Sahay, who has worked for *The Wall Street Journal* and *HuffPost*, began her media career at *War on the Rocks*, a digital national security and foreign policy publication where she was Managing Editor before coming to Harvard and remains Editor-at-Large. She sees the platform as a way to connect policymakers, scholars, and the media in discourse about foreign policy and international relations.

“I kind of always had in the back of my head that I wanted to take those [journalism] skills and go back to the world of national security,” Sahay said. She remains invested in the role of the media in shaping the national security debate.

“I realized the importance of being someone who really understood the media environment and the journalistic process in a granular way but also had a deep understanding of policy issues,” Sahay said. “One of the reasons I was excited to come to the Kennedy School was that there are a lot of fantastic resources on the journalism side here and it is a great place to deepen your understanding of national security issues.”

Sahay is currently working on a podcast that will examine the history of nuclear weapons, with the goal of exploring unanswered puzzles and recurring historical themes. In addition, she is assisting Harvard Kennedy School Professor and historian **Fredrik Logevall** with research for his upcoming two-volume biography of JFK.

Working with Prof. Logevall is “a really great opportunity to learn from someone at the top of their field and get an understanding of the nitty gritty of how a book gets researched and edited,” Sahay said.

“I wanted to take those [journalism] skills and go back to the world of national security.”

Julius Weitzdörfer Managing the Impact of Nuclear Disasters

by **Brilee Carey**

Julius Weitzdörfer's earliest childhood memories are the major global events of 1986—the Space Shuttle Challenger explosion and the Chernobyl disaster. Looking back, he realizes that these events must have contributed to shaping his later research interests in managing technological risks.

Weitzdörfer is a Stanton Nuclear Security Junior Faculty Fellow at the Belfer Center, following four years at the Center for the Study of Existential Risk at Cambridge, England. At the Belfer Center, he studies recovery from nuclear or radiological disasters as a joint fellow with the Project on Managing the Atom and the International Security Program.

Weitzdörfer, who spent three years in Japan, including in the wake of the Fukushima nuclear disaster, focuses his research on the law and policy responses of the Japanese government.

Among the foundations of risk management is the idea that “every risk has a probability side and an impact side,” he said. “If you want to reduce the risk, of course it’s good to reduce the probability, but you can also make progress by reducing the potential impact of the event.”

Triage, evacuation, resettlement, decontamination, and, if possible, returning to the site of a disaster, are all important for rebuilding communities and economies following a nuclear incident. The faster these steps happen, the better for everyone. In Fukushima, every year people have been unable to return has cost the country an additional \$10 billion. Weitzdörfer hopes policies can be established to better prepare for nuclear “error and terror” scenarios—wherever they happen.

“The atom is quite literally the smallest scale thing for a policymaker to think about... But on the other hand, the consequences of bad management of the atom—nuclear war—would be likely the most existential and largest scale issue a policymaker could think of.”

“Future generations will not forgive us,” Weitzdörfer said, “if we do not govern nuclear technologies responsibly and sustainably.”

“Every risk has a probability side and an impact side.”



COURTESY OF ZEITA MERCHANT

KEDAH RAY, U.S. COAST GUARD

Commander Zeita Merchant at the commissioning ceremony of the Coast Guard Cutter *Angela McShan*, named after the first African-American Master Chief in the history of the Coast Guard.

National Security Fellowship Program

Zeita Merchant Following a Passion for Service on Sea and Land

by **Shelby Grebbin**

When asked about her lengthy career in public service, National Security Fellow and active-duty member of the U.S. Coast Guard **Zeita Merchant** said she never did anything that she did not want to do.

“I allow my passion to drive what I do,” Merchant said of her desire to help people, which has taken her all over the world—from the Arctic to Capitol Hill, where she served on the staff of the late Representative Elijah Cummings.

In the unprecedented 2017 hurricane season, Merchant deployed as Incident Commander to Texas and Puerto Rico to oversee response operations and maritime transportation reconstitution.

As a Maritime Transportation and Emergency Management Specialist, Merchant was the first African-American woman to command a marine safety unit—Marine Safety Unit Chicago—in the city where she was born. Her outstanding service has been recognized through awards that include the 2019 Alumni Spotlight Award from the National Association of Schools of Public Affairs and Administration.

Merchant said her time at Harvard Kennedy School (HKS) will include outreach with the Belfer Center’s Arctic Initiative to inform the dialogue surrounding conservation and commerce in the Arctic regions from a national security perspective.

“Presence equals influence. And the Coast Guard provides the only surface asset (heavy ice breaker) in the Arctic,” Merchant said. The service oversees U.S. access to the Arctic’s vast energy, mineral, fisheries, and other commercial resources as well as search and rescue operations in the area.

Yet Merchant said the biggest threat the military faces going into the 21st century is the difficulty in adjusting to the needs of current members and prospective candidates. Her primary focus of research at HKS is on ways to improve military recruitment and retention, particularly of women and underrepresented minorities.

“The battlefields of today and tomorrow are totally different from the battlefields in which we have operated historically,” Merchant said. The same people the military wants to recruit to work in cybersecurity are the people corporate America wants. “So, we have to ask ourselves,” she said, “what drives people to join the military?”

**“Presence equals influence.
And the Coast Guard provides
the only surface asset (heavy
ice breaker) in the Arctic.”**



General (ret.) **Jim Mattis** with Professor **Graham Allison** during an event at the Belfer Center in November.

Former Secretary of Defense Mattis Visits Belfer Center

The Belfer Center was honored to host former Secretary of Defense **James Mattis** this fall for an afternoon of conversations related to applied history and statesmanship.

Mattis, a four-star General and former CENTCOM commander who served as President Trump’s first Secretary of Defense, spoke with Harvard Kennedy School faculty, fellows, and students about the right—and wrong—ways to apply analogs and precedents to illuminate policy choices.



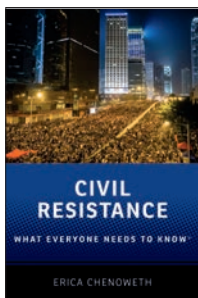
Gen. **Mattis** greets National Security Fellow **Yvett Nonte** during his October visit to the Belfer Center.

Mattis is known for his voluminous personal collection of works on statecraft, war, and diplomacy, and he drew frequently on such scholarship in his government service. Mattis recently published a memoir covering his decades of public service, titled *Call Sign Chaos: Learning to Lead*.

Former Belfer Center Director **Graham Allison**, who is building an Applied History program at Harvard Kennedy School, moderated events during Mattis’s visit.

Learn more about the Applied History project at belfercenter.org/AppliedHistory

Hot off the Presses



Civil Resistance: What Everyone Needs to Know

By **Erica Chenoweth**, Professor of Public Policy, Harvard Kennedy School

Oxford University Press
(Forthcoming 2020)

Civil resistance is a method of conflict through which unarmed civilians use a variety of coordinated methods (strikes, protests, demonstrations, boycotts, and many other tactics) to prosecute a conflict without directly harming or threatening to harm an opponent. Sometimes called nonviolent resistance, unarmed struggle, or nonviolent action, this form of political action is now a mainstay across the globe. If we are going to understand the manifold protest movements emerging around the globe, we need a thorough understanding of civil resistance and its many dynamics and manifestations.

In *Civil Resistance: What Everyone Needs to Know*, Erica Chenoweth explains what civil resistance is, how it works, why it sometimes fails, how violence and repression affect it, and the long-term impacts of such resistance. Featuring both historical cases of civil resistance and more contemporary examples, this book provides a comprehensive yet pithy overview of this enormously important subject.



Valuing U.S. National Parks and Programs: America's Best Investment 1st Edition

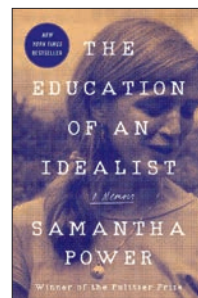
Edited by **Linda J. Bilmes**, Member of the Board, Belfer Center, and John B. Loomis

Routledge (2019)

Valuing U.S. National Parks and Programs develops a comprehensive framework to calculate the economic value of protected areas, with particular application to the U.S. National Park Service (NPS). The framework covers many benefits provided by NPS units and programs, including on-site visitation, carbon sequestration, and intellectual property such as in education curricula and filming of movies/ TV shows, with case studies of each included. The editors conclude with a chapter on innovative approaches for sustainable funding of the NPS in its second century. The framework serves as a blueprint of methodologies for conservationists, government agencies, land trusts, economists, and others to value public lands, historical sites, and related programs, such as education.

“Linda Bilmes, John Loomis and their collaborators have calculated a value of the priceless.... Their work makes an important case for supporting these irreplaceable assets not just for today, but to inspire generations to come.”

—**Sally Jewell**, U.S. Secretary of the Interior, 2013–2017



The Education of an Idealist: A Memoir

By **Samantha Power**, Anna Lindh Professor of the Practice of Global Leadership and Public Policy, Harvard Kennedy School

Harper Collins (2019)

The Education of an Idealist traces Power's distinctly American journey from immigrant to war correspondent to Cabinet official. In 2005, her critiques of U.S. foreign policy caught the eye of newly elected senator Barack Obama, who invited her to work with him on Capitol Hill and then on his presidential campaign. After Obama was elected president, Power went from being an activist outsider to a government insider, navigating the halls of power while trying to put her ideals into practice. She served for four years as Obama's human rights adviser, and in 2013, he named her U.S. Ambassador to the United Nations, the youngest American to assume the role.

“Honest, personal, revealing... about the development of a young woman's inner strength and self-knowledge.”

—**Colm Tóibín** author of *Brooklyn* and *Nora Webster*



Tough Love: My Story of the Things Worth Fighting For

By **Susan Rice**, Senior Fellow, Belfer Center

Simon & Schuster (2019)

Laying bare the family struggles that shaped her early life in Washington, D.C., Susan Rice also examines the ancestral legacies that influenced her. Her elders—immigrants on one side and descendants of slaves on the other—had high expectations that each generation would rise. And rise they did—in uniform and in the pulpit, as educators, community leaders, and public servants.

Rice served throughout the Clinton administration, becoming one of the nation's youngest assistant secretaries of state and, later, one of President Obama's most trusted advisors.

Rice provides an insider's account of some of the most complex issues confronting the United States over three decades. With unmatched insight and characteristic bluntness, she reveals previously untold stories behind recent national security challenges.

“... Rice achieved early success through disciplined hard work, intellectual brilliance, and friendships with the likes of Madeline Albright... Rice is able to look back on her experiences with pride, gratitude, and bracing realism.”

—**Booklist**, Starred Review

China in a World of Orders: Rethinking Compliance and Challenge in Beijing's International Relations

Alastair Iain Johnston

Rather than debating whether China is challenging a single, U.S.-dominated liberal order, scholars and analysts should consider China's actions in relation to multiple orders in different domains, where China is supportive of some, unsupportive of others, and partially supportive of still others.

Dangerous Confidence? Chinese Views on Nuclear Escalation

Fiona Cunningham and M. Taylor Fravel

Maintaining the liberal international order is central in the debate over U.S. security and foreign policy. Much of what the liberal order purports to explain, however, can be explained by other theories. Analyzing issues through a grand-strategic lens would provide broader options for achieving U.S. interests.

Home, Again: Refugee Return and Post-Conflict Violence in Burundi

Stephanie Schwartz

In post-conflict societies, divisions can emerge between returnee and nonmigrant groups, which can in turn lead to violence and destabilization when government institutions favor one group over another.

The Domestic Politics of Nuclear Choices—A Review Essay

Elizabeth N. Saunders

Domestic politics play a significant role in nuclear decision-making under two conditions: when uncertainty over the nature and intensity of a threat is high, and when leaders are incentivized to centralize nuclear policymaking.

The *International Security* journal is edited at Harvard Kennedy School's Belfer Center and published quarterly by the MIT Press. Questions may be directed to IS@hks.harvard.edu.

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Compiled by *International Security* staff



Tillerson Shares Experience, Insight as Secretary of State

Former Secretary of State Rex Tillerson shared a number of insights on negotiation and diplomacy while visiting Harvard on September 17 to participate in the American Secretaries of State Project (SOSP). Professors Nicholas Burns (HKS), Robert Mnookin (HLS) and James Sebenius (HBS), who launched the project in 2014, have now interviewed all living former U.S. Secretaries of State with the exception of John Kerry, who is expected to participate in the program in this academic year.

Secretary Tillerson discussed a wide range of topics, from negotiating with Vladimir Putin to his sometimes-contentious relationship with President Donald Trump to how his private sector experience informed his service as America's chief diplomat. "Every successful negotiation," the 69th Secretary of State argued, "is defined by both parties leaving with an acceptable outcome." Throughout his visit, Tillerson stressed how this approach to negotiations helped him during his tenure as CEO of ExxonMobil and as Secretary of State.

For example, Tillerson discussed his initial sense of cautious optimism that he could help lead the way to progress on the Israeli-Palestinian conflict. He believed that there was between the leaders in the Arab world and the Israelis a "willingness to actually talk to one another and, in very quiet ways, begin to try to overcome the long historical differences." Once President Trump appointed Jared Kushner to lead these negotiations, the Secretary of State's role became to assist Kushner and his team to "identify obstacles or gaps to the plan to give it the highest chance of success." On recognizing Jerusalem as Israel's capital, Tillerson observed that "I didn't necessarily agree with the timing of that. I felt like there was more



value to be had in a negotiation by using that once you were actually into the talks."

Tillerson noted that 80 percent of his time as chief diplomat was spent preparing for a negotiation—including intensively studying the social and cultural backgrounds of his interlocutors (the "journey" that these negotiators have "been on that brought them to this point"). This preparation, he explained, enabled him to build the kind of relationship with his negotiating partners that allowed him to understand their core interests: "What is it that they really are trying to get here [in addition to] what they put on the piece of paper?"

At the end of the event, Tillerson shared how the current polarization of the country was difficult to bear. He parted with a sense of hope, saying, "I go back and I read Lincoln's words, and my great hope is that [those words are] still defining of the American people, that we will call upon the better angels of our nature, that we are not enemies."

Read more about the project at
belfercenter.org/SOSP

The Robert and Renée Belfer Center for Science and International Affairs

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All photos by Belfer Center unless otherwise noted.

The Belfer Center has a dual mission: (1) to provide leadership in advancing policy-relevant knowledge about the most important challenges of international security and other critical issues where science, technology, environmental policy, and international affairs intersect, and (2) to prepare future generations of leaders for these arenas. Subscribe to Belfer Center publications at belfercenter.org/subscribe

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Belfer in Brief

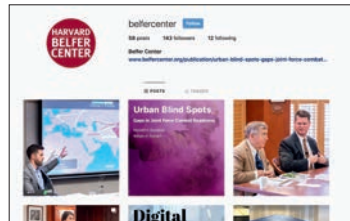


International Security Goes “Off the Page” with New Podcast

We are pleased to announce a new podcast by *International Security*, the quarterly journal edited and sponsored by the Belfer Center for Science and International Affairs at Harvard Kennedy School, and published by MIT Press.

The podcast, “*IS: Off the Page*,” will discuss recent research published in *International Security*, and more importantly, go beyond each article’s findings to engage in contemporary policy debate. To help move the conversation forward, each episode will feature the author of a recent IS article and 1-2 guests from the broader policy community.

Learn more about the podcast at belfercenter.org/OffThePage



Follow the Belfer Center on Instagram!

Keeps tabs on the Belfer Center’s events, announcements, and reports by following us on Instagram at [Instagram.com/belfercenter](https://www.instagram.com/belfercenter).

The goal of the new account is to share a glimpse of everyday life here at the Belfer Center, including official events, new publications, and a few lighter moments with the staff and faculty.

Recent posts give a glimpse of General **Jim Mattis**’s visit, the Arctic Initiative’s trip to Iceland with Harvard students **Clark Yuan, Alicia Nelson, Emily Fry, and Siddarth Shrikanth**, and a musical performance by **Daniel Lazour** and **Patrick Lazour**, writers of American Repertory Theater’s “We Live in Cairo.”



“We Live in Cairo” a Theater Hit

“*We Live in Cairo*,” a musical that premiered in the American Repertory Theatre in Cambridge this past summer, tells how social media, word of mouth, and impassioned activists used cameras and laptops to launch the 2011 uprising that deposed of long-time dictator Hosni Mubarak and led to the election of Mohammed Morsi. The musical was written by brothers and then-students **Patrick and Daniel Lazour**, who were inspired by a photo of activists poring over a computer screen above Tahir Square.

The Belfer Center’s Middle East Initiative, which provided research support for the production, hosted a live performance of songs from the musical in October. MEI Faculty Director **Tarek Masoud** joined the Lazour brothers in discussing the story of Egypt’s 2011 revolution and aftermath.



National Intelligence Meritorious Unit Citation

On October 10, the Global Cyberthreats to U.S. DoD Networks Team, led by Belfer Center National Security Fellow **Yvette Nonte**, was awarded the National Intelligence Meritorious Unit Citation in recognition of outstanding service from July 2018 to September 2018.

The team was composed of individuals in law enforcement and the Intelligence Community. Their ability to interpret the complex cross-regional and cross-functional issues allowed them to identify, sustain, and champion cyberthreats to the Defense Industrial Base.

Their groundbreaking collaboration and integration effort led to increased security to the United States Department of Defense networks and the Defense acquisitions process.