précis

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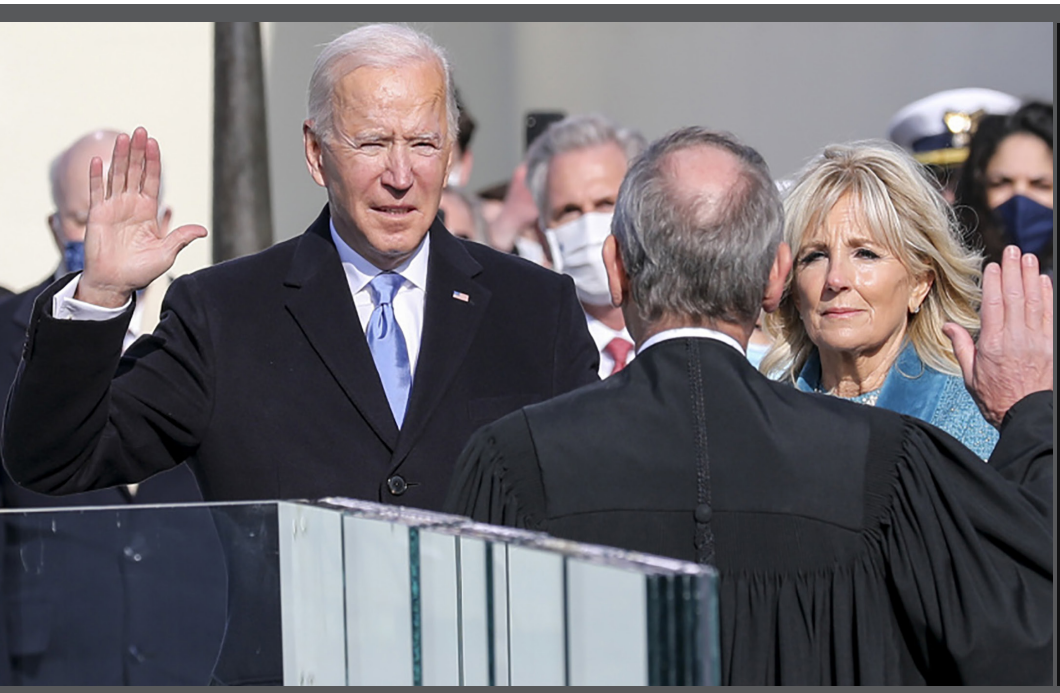

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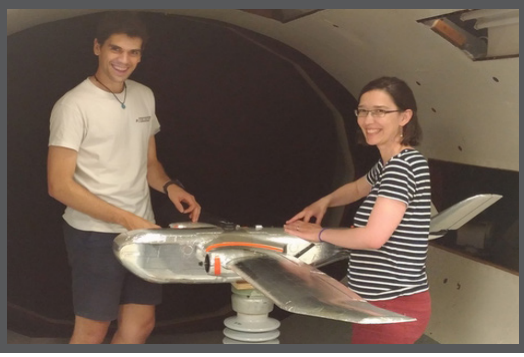
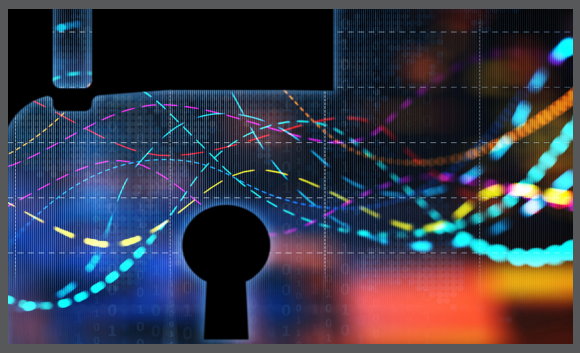


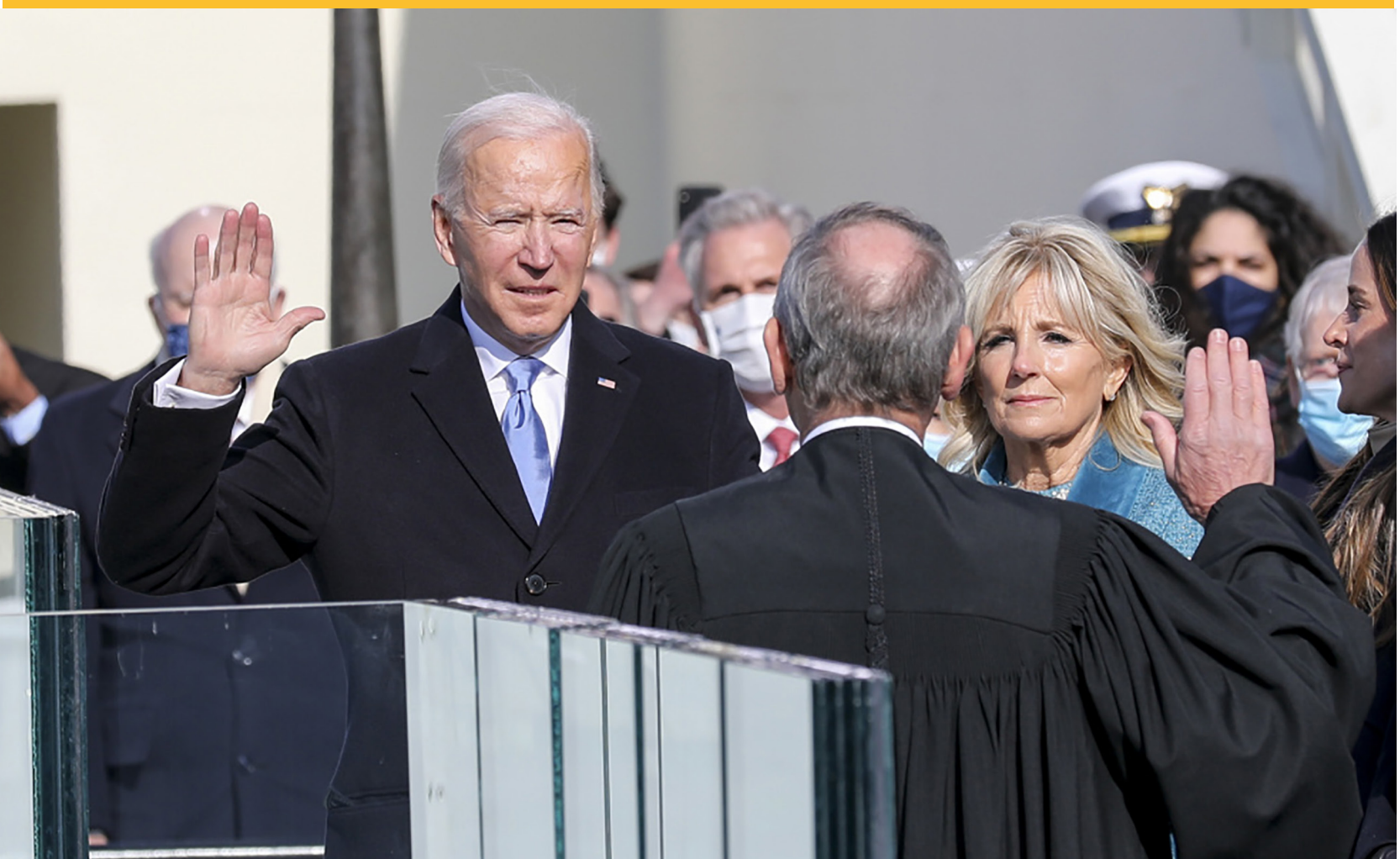


MIT CENTER FOR INTERNATIONAL STUDIES

facultyfeature

What's next? Challenges ahead for President Biden

Essays by scholars affiliated with the MIT Center for International Studies (CIS)



In this issue of précis, we look toward the future of America during a presidential transition that culminated in a constitutional crisis. President Biden will be flooded with advice as he leads our nation during what many argue is among the darkest chapters in our democracy's history. Here we offer fresh ideas on a range of policy issues.

Roger Petersen, Arthur and Ruth Sloan Professor of Political Science

Take emotions out of politics

Roger Petersen

Few would contest the belief that Americans are currently living through one of the most emotion-imbued political times in memory.

Theoretically, politics in a two-party system should be relatively straightforward. Both sides put forth a policy platform to address salient problems. After elections, the winning side implements its policies while the opposing side criticizes and develops its altnerative program. At the next election, voters decide whether to maintain the current party in power and its policies or take a chance with the competitor.

But we all know it is not this straightforward. Political competition, especially when it involves strong elements of ethnic, racial, or ideological identity is likely to go beyond simple calculations and the median voter theorem. Because this is a competition among human beings, it is likely to involve emotions.

Emotions can be used as strategic resources. For an example, let's consider the emotion of anger. Anger forms from the belief that an individual or group has committed an offensive action against one's self or group. Anger also involves appraisals of certainty—actor X did bad action Y against "us." The anger-imbued individual desires punishment and vengeance against a specific actor. Under the influence of anger, individuals become "intuitive prosecutors" specifying perpetrators and seeking vengeance. Anger distorts information in predictable ways. The angry person lowers the threshold for attributing harmful intent; the angry individual blames humans, not the situation. Anger tends to produce stereotyping. Anger shapes the way individuals form beliefs. Under the influence of anger, individuals lower risk estimates and are more willing to engage in risky behavior.

A political actor wishing to use anger as a resource will identify a clear perpetrator, a clear sense of the offense, a clear identification of the victim group ("us"), and will promote confidence that an effective and certain form of punishment can be carried out. But if the opposing side has the ability to strike back, anger is also the emotion underlying spiral models of conflict, potentially leading to emotions of contempt or even hatred.

In current US politics, anger is one of several emotions that actors could possibly "up-regulate" to mobilize a political base. One of the basic arts of politics, going back to Aristotle's *Rhetoric*, is in framing individuals' appraisals in a way to set off useful emotions. On the other hand, actors may wish to "down-regulate" emotions to diminish perceived negative effects. Political leaders could also try to "up-regulate" positive emotions. For example, recall Obama's famous "Hope" poster and rhetoric.

So we come to President Biden's choices. There are at least three options concerning the strategic use of emotion: downregulate negative emotions, upregulate positive emotions, or try to take emotions out of politics as much as possible. Although many emotions are at play, I'll focus on anger and hope here.

"Up-regulating" anger would help mobilize the Democratic base. It would also likely set off a spiral model. The Republicans just gained seats in the House; against odds they retained fifty seats in the Senate; seventy-four million people voted for Trump over the Democratic alternative. While impeachment is necessary, and action against certain Republican leaders desirable, any broader mobilization against Republicans or conservatives will produce a backlash by a capable opponent.

"Down-regulating" anger is also problematic. Telling people not to be angry when the cognitive antecedents of the emotion are already firmly in place is also likely to generate a backlash. While recognizing anger, leaders can often avoid acting on the action tendencies of anger. That is, they can quietly avoid widespread punishments. As emotion researchers have established, anger decays over time. Political actors can concentrate on the most pressing problems and avoid punishment while anger dissipates.

"Up-regulating" positive emotions is also problematic in a highly divided polity. Politics involves winners and losers and many zero-sum games. It is impossible to provide positive outcomes for everyone. Life itself does not produce positive outcomes for everyone. While Obama was trying to up-regulate hope, white working- class Americans were dying by unprecedented numbers of "deaths of despair" leading to a remarkable decline of life expectancy among a significant segment of the population. Political actors may be able to up-regulate positive emotions like hope and pride when the nation faces a clear common opponent such as a natural disaster or war. Religion offers ways to up-regulate emotions for all. Politics is not religion. In the current situation, US politics cannot avoid zero-sum contests. There will be perfunctory "up-grades" of positive emotions—see the theme of Biden's inauguration "America United." But given the realities of current US politics, that theme is more farce than fact.

Melissa Nobles, Kenan Sahin Dean of the School of Humanities, Arts, and Social Sciences and professor of political science

My suggestion is that President Biden try to take emotions out of politics as much as possible. The United States does face clear problems in Covid-19 and jobs. People are getting sick and dying and people have lost their jobs. The Biden administration should concentrate on touting specific policies that will have success on these two issues. The possibility for success is actually quite good. The goal is to take us back to the straightforward idea of a two-party system as much as possible. Policy success and electoral victory will force the other side to engage and develop its own policies. We might be able to leave the realm of the politics of performance art. Democratic successes will force the Republicans to actually come up with alternative policies that provide voters with a choice.

Address racism in our society and institutions

Melissa Nobles

If there is anything these four years have shown us, it is that the health and future of American democracy rests on finally contending with the persistence of racism in American society and institutions. I think it important that as the Biden administration takes on the big issue—eg, extreme disparities in wealth and income; access to quality public education and affordability of higher education quality housing and

healthcare; and climate change—that special attention be paid to their racial and ethnic dimensions. President Biden has given strong indications—through his cabinet appointments and their expertise—that he intends to do so, which is certainly encouraging.

However, I expect the intention will be unable to significantly confront either the enormity or depth of the issues. And we will not have the political will to develop policies that could. Let's take the racial income gap, for example. As has been well documented, nearly 40 years of wage stagnation has constrained accumulation and stifled upward mobility for millions of working-class and middle-class Americans. But for black Americans, this period of wage stagnation mostly compounds historical disadvantage, born of decades of discrimination in employment and education. Although we cannot alter our past, we can build a better future, with that history in view, and I am hopeful this recognition will guide Biden's policymaking across a range of domains.

President Biden's team must also focus specifically on criminal justice reform and voting rights. Of all of the major issues of the Civil Rights movement (ie, disenfranchisement, educational and residential segregation, and employment discrimination), abridgement of rights and abuses by law enforcement received relatively short shrift. The Black Lives Matter Movement has changed that, thankfully. Combating black voter suppression continues to be a serious problem. President Biden should immediately and persistently work for the passage of two crucially important bills currently wallowing in the Senate. The first is the George Floyd Justice in Policing Act of 2020. This bill has several important provisions, including revising federal law on criminal police misconduct and qualified immunity reform; establishing a national registry of misconduct by law enforcement officers; requiring states to report the use of force to the Justice department; and granting subpoena power to the Department of Justice's civil rights division to implement "pattern and practice" investigations of police department misconduct. The second is the John Lewis Voting Rights Advancement Act of 2019, which seeks to restore voter protections in states with storied histories of barriers to black voters.

Barry Posen, Ford International Professor of Political Science

Adopt a grand strategy of "restraint"

Barry Posen

Despite the appeal of President Biden's exhortation that "America is back," the implication that things can be as they were is unpersuasive. The Biden administration will face a range of serious domestic political, economic, and geopolitical constraints that will likely limit its freedom of action. To address these constraints, the administration should adopt a grand strategy of "restraint," which focuses on only the most serious threats to US security, and only the most cost-effective remedies for those threats. In particular, the administration must not return to policies of armed nation building pursued by both Democratic and Republican administrations since the end of the Cold War. It should end existing efforts of this kind, particularly the effort in Afghanistan. The administration also should work energetically to increase the contributions to their own security of the US's wealthy allies in Europe and Asia. In particular, the transatlantic relationship must be thoroughly overhauled to place the bulk of responsibility for European military defense on the shoulders of Europe-

Eric Heginbotham, principal research scientist at CIS; and Richard Samuels (below), Ford International Professor of Political Science and director of CIS

ans who are well able to bear it. Finally, the US should beware of treating the China challenge as a new Cold War, in which all aspects of the relationship are drawn into a comprehensive model of conflict. Rather, the US should carefully pick and choose those issues upon which it must stand firm, those issues where it can compromise, and those issues where it must compromise.

Adjust the Asia strategy

Eric Heginbotham and Richard Samuels

This piece was adapted from their forthcoming essay in Washington Quarterly (Spring 2021).

Despite rising threats and challenges in Northeast Asia, the US commitment to its allies there has become less certain. President Trump's inconsistent signaling led Japanese and South Koreans to consider alternatives to the status quo. Confronted with uncertainty, Japan and Korea have increased defense budgets, a welcome development. But they also have taken measures that may complicate alliance dynamics and undermine crisis stability. Edging away from the "roles and missions" based specialization of military labor that enhances alliance efficiencies, they now focus instead on offensive systems.

Most striking has been the widening discussion of nuclear weapons in both Japan and Korea. While this option could strengthen their own self-defense, indigenous nuclear programs could be destabilizing and would not necessarily enhance balancing. Indeed, given the overall balance of power, it is more likely to lead to "turtling," producing well-armed neutrals that accommodate Chinese power.

The Biden administration has pledged to improve alliance relations, but US domestic politics, particularly surrounding overseas commitments and the defense budget, could undermine allies' trust in new ways. With this in mind, we offer four prescriptions. First, since maintaining a regional balance of power is in the US interest, America's alliances should be reaffirmed and sustained. The much-maligned "hub and spokes" model in East Asia should be adjusted in order to do so.

Second, the United States should change its approach to burden sharing. Demands for inflated transfer payments engender resentment and invite instability. But proportional increases to defense spending will yield larger gains to overall alliance resources than would any plausible increase in host nation support.

Third, the United States and its allies should reinvigorate discussions of conventional roles and missions and their divisions of labor based on the different relative advantages of each partner. Given the different peacetime location of forces and time to theater, it stands to reason that their force structures should not mirror those of the United States.

Finally, the Biden administration should address allies' nuclear insecurities. Since growing doubts about extended deterrence are unlikely to subside—and since US interests are better served without proliferation—Washington should consider how to prevent its allies from viewing nuclear breakout as their best choice. The Biden administration might establish nuclear planning groups with Seoul and Tokyo and

prepare for the wartime sharing of nuclear weapons (under US control and within Non-Proliferation Treaty limits).

America's Asia strategy has served the United States well but has always required adaptation. Now, when allies are coping with new uncertainties about America's commitment and the rise of China by hedging in understandable ways—and when they still recognize that their US alliances are their best security option—it is time again for adjustment. This may entail measures that were once anathema, but a policy that adapts to new regional equities will go farther toward achieving US national interests than the abandonment of threatened allies.

Six propositions for China

Taylor Fravel

Taylor Fravel, Arthur and Ruth Sloan Professor of Political Science and director of the MIT Security Studies Program

First, determine the hierarchy of US national interests. The legacy of the Trump administration's approach to China was a broadly confrontational approach in which confrontation had become an end in itself and not a means to end. Thus, the Biden administration should identify a clear hierarchy of US national interests, distinguishing those that are vital to the security and prosperity of the United States from those that are important to varying degrees. This will enable policymakers to determine where to cooperate, where to compete, and where to confront China, if necessary.

Second, rebuild at home. Many of the long-term challenges posed by China are economic in nature. China's continued economic dynamism fuels its growing influence around the world, military modernization, and other tools of influence. Thus, to remain competitive, the single most important task will be to rebuild the foundations of American power at home, from education to infrastructure, while ensuring that America remains open to the best and brightest from around the world.

Third, invest in diplomacy. Presence matters. China now has more diplomats posted around the world than any other country, including the United States. Yet, the State Department has been weakened during the past four years. Thus, the Biden administration should seek to increase the department's budget and to double the size of the Foreign Service, thereby reinvigorating this essential tool of statecraft.

Fourth, work together with like-minded states. China poses a variety of challenges, in multiple domains, to many states around the world. China's economic heft is now so great that many states face the same concerns regarding China. China also often pursues divide-and-conquer strategies. Yet by working together, on whatever the issue, groups of states, acting in concert, can present China with a united front, thereby much more effectively shaping China's behavior.

Fifth, pursue a military strategy of active denial. The retention of primacy, the ability to dominate militarily all states in East Asia, is now untenable. The tyranny of distance, and China's two-decades plus of modernizing the People's Liberation Army, are transforming the balance of power in the region. Rather than seek to restore primacy, the United States should adopt a military strategy of active denial that seeks to deny China quick victories and raises the cost of military action.

Sixth, maintain the status-quo across the Taiwan Strait. No issue is more central to US-China relations than Taiwan. Taiwan is the one issue over which a major war between China and the United States could erupt. Taiwan is also a vibrant democracy and an important trading partner, especially in critical areas of high technology. Thus, the Biden administration should seek to maintain the status quo across the Strait, which has maintained stability while creating conditions for Taiwan and China to prosper.

Elizabeth A Wood, professor of history and faculty director of the MIT Russia Program

For better rivalry with Russia, rebalance US economic priorities

Elizabeth A Wood

In light of the Solar Winds attack that targeted major branches of the US government and military, Senator Angus King, co-chair of the Cyberspace Solarium Commission, has estimated that the Kremlin can hire 8,000 hackers for the price of one jet fighter. That raises the question: is the US spending its money where it should?

Today Russia and the US are at loggerheads over issues ranging from cyberhacking to the Kremlin's poisoning of its enemies, control of the Arctic, and competition for foreign energy markets. While there is one military hardware issue–the burgeoning and dangerous arms race in tactical nuclear weapons, none of the rest of these hot button issues involve actual military weapons. Yet in fiscal year 2020, the Department of Defense has had a budget authority of approximately $724.5 billion (half of which is allocated to outside contractors). The US military also maintains almost 800 military bases in more than 70 countries and territories abroad. A recent Scientific American report has argued that the Pentagon's excessive spending encourages the production of poor-quality and overpriced weapons, exacerbates climate and environmental issues, and siphons money away from other domestic issues that urgently need attention.

In the hacking war in particular, we are losing to the Russians because we aren't investing enough in human capital. When the USSR launched Sputnik in 1957 and Yuri Gagarin's flight in 1961, John F Kennedy responded by creating the first Presidential Commission on the Status of Women, which launched extensive training programs in STEM for girls and women. Schools began giving more homework in order to compete with the Soviets. Rivalry with Russia today should lead us to rebalance our economic priorities so that we can have a more robust, flexible economy that can more easily pivot to deal with external threats and opportunities. Moving money out of the military budget into the domestic economy can directly increase job production in key spheres of green infrastructure, health, and education.

At the same time we have to end the posturing that stimulates the nuclear arms race, fully rejecting Donald Trump's 2016 bluff: "Let it be an arms race. We will outmatch them at every pass and outlast them all."

President Biden should also end the practice of running American foreign policy through secret proxy connections meeting in offshore waters (as Jared Kushner tried to do in the transition period before Trump came into office). This is also an excellent moment to consider the exact mix of US nuclear and non-nuclear forces, with particular attention to reducing nuclear weapons, while, of course, extending the New Start Treaty.

President Vladimir Putin has reached out to President Biden, arguing that the two countries "bear special responsibility for global security and stability." This should not be ignored. The two leaders should work to repair their poor relations from the Obama era, cooperating on issues of Covid-19, climate change, the Arctic, military dialogue, and extending educational contacts, as well as reopening US Embassies inside Russia.

Of course, the US must show that cyberhacking, invading neighboring countries, offering bounties on US troops, poisoning regime enemies, and trying to influence foreign elections are all unacceptable. Economic and political sanctions continue to be the best weapon we have. But their purposes must be carefully delineated and made more targeted by building in rewards for good behavior in particular contexts such as the Donbas. And they must have expiration dates so that Congress is forced to consider carefully whether they should be extended. US political vocabulary should eliminate all rhetoric based on "regime change." And Congress must take back from the executive branch the authority and the will to declare—and not declare—foreign wars.

US military superiority, including the fact that we spend ten times what the Russians do, has been one factor pushing Russia to more devious cyber hacking and back-channel attempts at influence. US-Russian competition is obviously here to stay, but the US budgetary decisions should focus on increasing domestic knowledge and labor sectors, not military ones.

John Tirman, executive director and principal research scientist, CIS

Engage in inventive diplomacy with Iran

John Tirman

President Joe Biden has vowed to return the United States to the Joint Comprehensive Program of Action—the nuclear deal signed in 2015 and from which President Trump withdrew in 2018. The JCPOA prohibits Iran from producing and weaponizing highly enriched uranium or plutonium. Iran's supreme leader Ali Khamenei indicated late last year that Iran would accept a re-entry of the United States into the JCPOA, expecting the lifting of sanctions in return, as the deal originally promised. Iran has violated some terms of the agreement following the US withdrawal, and would need to return to full compliance for the sanctions to go.

All well and good. Trump's attempt to undermine the deal (widely believed to derive from his obsession with Obama's achievements) was reckless. The CIA has determined that Iran does not have a nuclear weapons program, yet the deal provided reassurances and could blunt an arms race in the region. Israel has a large nuclear arsenal and states like Saudi Arabia and Turkey have hinted that they would develop nuclear weapons if Iran proceeded toward a bomb.

The attack on the nuclear peace includes several covert operations, including the assassination of nuclear scientists in Iran, a malware attack called Stuxnet, and explosions at nuclear facilities. Israel and the United States are widely believed to be cooperating on these attacks. At the same time, several former officials in Israel have endorsed the JCPOA as a boon to Israeli security.

Other bumps in the road to a reinvigorated nuclear pact include some hopes for a set of broadened talks that would address Iran's (legal) ballistic missile program, its destructive role in Syria and Yemen, and human rights issues in Iran. This is a fool's errand: Iran would resist, and America's own role in destabilizing Iraq, Syria, Palestine, Yemen, and Egypt undermines its credibility.

After the JCPOA is functioning as intended, however, a regional dialogue would be an important step to transform the benefits of the agreement into something more durable and expansive. As I have suggested with respect to Iraq, the difficult history of American involvement in the region and the many festering conflicts call for inventive diplomatic engagement. A multilateral forum for addressing these problems, free from big power preconditions or favoritism, might bear fruit. Many if not most of the region's most deadly conflicts are interconnected. The results have been catastrophic for human security. A bold if discreet diplomatic endeavor by President Biden, patiently pursued, could be a major foreign-policy triumph.

Vipin Narang, associate professor of political science

Make shifts in nuclear policy

Vipin Narang

The Biden administration is unlikely to drastically change or alter American nuclear posture or strategy, which has enjoyed largely bipartisan support for decades. The Biden administration is likely to recommit to the modernization of each leg of the triad, as both the Obama and Trump administrations did. This means replacing American nuclear submarines, nuclear bombers, and ICBMs with a new generation of capabilities and refurbishing American nuclear weapons to ensure they are safe and effective. The thirty-year cost of the modernization program is non-trivial, at approximately $1.7 trillion, but small as an overall percentage of American defense spending over that period. The Biden administration may have some flexibility within each of those categories to save some costs—such as extending the life of the current

Minutemen ICBMs, rather than committing to a new generation of missiles, known as the Ground Based Strategic Deterrent (GBSD) right now. But most of the tweaks will likely be at the margins.

There are two areas where we may see some debate early in a Biden administration. The first may be on the capability side, litigating whether the United States will retain the low-yield submarine launched ballistic missile warhead, the W76-2, which the Trump administration fielded this past year. It places a single low-yield warhead in the tube of a nuclear submarine, alongside dozens of thermonuclear warheads in the other tubes. Critics, including myself, argued that this created a so-called "discrimination problem" where the adversary would not know which of the warheads was launched—the low yield warhead would be indistinguishable from a massive thermonuclear warhead (they are not color coded!), and an adversary such as Russia may not wait to find out which it is before responding. This "discrimination problem" is in fact a deterrence problem, because the adversary's inability to distinguish the low-yield from the high-yield variant renders the capability essentially unusable, undermining any deterrent aim the warhead may have. The Biden administration may remove the W76-2 from service and would be wise to do so. That said, because capability is already fielded, removing it may prove to be difficult.

The second issue related to nuclear policy that may arise early in a Biden administration is in declaratory policy. When he was vice president, Biden pushed the Obama administration to consider something akin to a No First Use policy for the United States—that the US would not be the first to use nuclear weapons in any conflict, even if the adversary used massive conventional, chemical, biological, or cyber weapons. This would be a significant shift in American declaratory policy, which has always retained the option to use nuclear weapons first in a variety of (usually extreme) circumstances. This language is known as a "sole purpose" declaration, meaning that the sole purpose of America's nuclear weapons are to deter, and if necessary retaliate against, nuclear use against the United States or its allies. Although "sole purpose" is not the same as a No First Use pledge in most formulations—it is a guiding philosophy rather than a commitment on an employment constraint, leaving open a sliver of possibility that in the most extreme circumstances the United States may still use nuclear weapons first, whatever the purpose of those weapons may be—allies especially would view the two as essentially equivalent and balk at any effort to declare a "sole purpose" formulation. But the Biden administration may attempt to go further than the Obama administration in declaratory policy. It may state that not only is the fundamental role of American nuclear weapons to deter nuclear use against the US or its allies, but it is US nuclear weapons' sole purpose. Such an effort is likely to meet with resistance from the Pentagon and from allies but is worth watching closely as a major shift in US's declaratory policy. ■

Photos courtesy MIT Department of Political Science; Pablo Castagnola Fotograf & Einstein Stiftung, Berlin; MIT History Section; & Allegra Boverman Photography.

briefings

A World Bank Refresh

Steven Koltai, CIS

"As the Biden-Harris administration reintroduces America to the world stage, it may discover the greatest opportunity for global leadership lies … in reinvigorating a different 'world' institution: The World Bank."

Steven Koltai is a research affiliate of CIS working with MIT International Science and Technology Initiatives (MISTI). He is also senior advisor for entrepreneurship at MIT D-Lab, non-resident senior fellow in Governance Studies at the Brookings Institution, and managing director of Koltai & Co, an entrepreneurship development consultancy that has worked in over three dozen countries, and for the past four years exclusively in Sub-Saharan Africa.

Multilateral institutions have had a hard go of it over the past four years, partly of their own doing, partly due to a White House bent on bi-, uni-, and no-lateral engagement. As the Biden-Harris administration reintroduces America to the world stage, it may discover the greatest opportunity for global leadership lies not in rapprochement with jilted bodies like the World Trade Organization or World Health Organization (or reaffirmation of NATO and Paris Climate Agreement solidarity), but in reinvigorating a different "world" institution: The World Bank. No global group is better positioned to tackle the US's most pressing international conundrums and yet more in need of American-led strategic renewal.

The World Bank—that primordial symbol of globalization—somehow passed the Trump years relatively unscathed. While the Trump administration soiled NATO relationships, declared outright withdrawal from WHO over COVID-19 fumbles (and the Paris Agreement "just because"), and injected gridlock into the WTO's already-contentious struggle for direction and relevance, the World Bank merely got stuck with a skeptic as its president (a position traditionally nominated by the US). David Malpass, a veteran of Republican administrations, came to the role with anti-multilateralism credentials and an on-the-congressional-record quip that the World Bank's work largely benefited "the people who fly in on a first-class ticket to give advice to governments."[1]

Yet Mr Malpass's word choice deserves sympathy—and, as discussed below, attention. As an entrepreneur and long-time businessperson—and, later in a life, a contractor on several World Bank-sponsored projects—I too feel that, especially in its private-sector approaches to development, the World Bank has wasted billions and misspent on a bloated bureaucracy, fancy offices, luxurious tax-free salaries, and lavish (by American standards) employee benefits. These overhead costs, sometimes more than half of project spending, are outrageous and do nothing to "end extreme poverty" and "promote shared prosperity."

Nonetheless, the World Bank remains an ideal vehicle for, as President Biden has put it, a "foreign policy agenda [that] will place the United States back at the head of the table, in a position to work with its allies and partners to mobilize collective action on global threats."[2] There are overlapping political and substantive reasons for this. For one, when it comes to multilaterals, the World Bank is both the elephant in the room (its core activities tally disbursements of some $50 billion each year,[3] dwarfing the WHO and WTO budgets) and a bureaucratic beast over which the US should have few reservations cracking the whip. In addition to controlling the Bank's presidency, the US is its largest and most powerful shareholder.

Flush, influential, and more or less hewn to America's worldview, the Bank also engages hosts of issues traditionally subject to American leadership and, importantly, traditionally of bipartisan interest. Take China. The World Bank remains a key American bulwark against China's various investment-cum-influence plays, from the Belt and Road Initiative to its Bank-rivaling Asian Infrastructure Investment Bank.

Then there are the global threats of which President Biden speaks: mass migration; extremism; cyber security; inequalities of income and welfare; climate change; and infectious disease. And it is here I would propose the World Bank offers the US a special entrée—a special opportunity to return to "the head of the table" with a refreshing, new strategy that plays well internationally and on both sides of the American political divide. The Bank is where the US can leverage its all-American, world-famous, bipartisan special sauce: Entrepreneurship.

I have waved this flag before, pre-2016. Back then, inspired by President Obama's 2009 foreign policy address on "A New Beginning" in Cairo, I joined Secretary Clinton's State Department and helped launch programs aimed at supporting entrepreneurs in poor and fragile countries, starting with Muslim communities suffering from devastatingly high youth unemployment rates. The premise was simple: Joblessness begets economic despair, instability, extremism, and threats to America; entrepreneurship begets jobs, hope, and peace.[4]

The ensuing years saw many efforts from many players along these lines—some successful, some not—and plenty of learning on what kinds of advisory services and investment schemes best help innovators and young ventures (not to mention further evidence that entrepreneurship=jobs=growth=stability). Governments, bilaterals, non-profits, and private firms alike championed the role of startups, SMEs (small and medium enterprises), and SGBs (small and growing businesses) in alleviating poverty, spreading opportunity, and improving social welfare.

So did the World Bank, but it mostly just talked the talk and rarely walked the walk.

The Bank has done precious little on this score. It has "studied" and "strategized" and "reorganized" countless times, but spent hardly any of its own money. Project spending on entrepreneurship amounts to a fraction of other, more conventional World Bank budgets and often winds through ad hoc, indirect arrangements sometimes called "Trust Funds" and raised outside of member state core contributions. Worse, the Bank's top-heavy bureaucracy ensures that of the funding that does arrive, very little finds its way into meaningful programs and venture investments, which surveys agree is the single biggest impediment to spurring startups in the usually brutal investment environment of the poorest countries.

At the same time, global threats remain, as always, rooted in economic despair and unemployment—and/or require the innovative and disruptive solutions that entrepreneurship seeds in markets and economies. From refugees and migration to extremism to misinformation to climate distress to the COVID-19 pandemic, what the world needs now—what the World Bank needs to support now—is entrepreneurs.

Such a strategy involves more money and more expertise from real practitioners focused on job creation through entrepreneurship. It builds on what Silicon Valley and the $500-billion impact investing industry has learned about bolstering entrepre-

neurship. It would include grants and "at risk" investment funds—managed by expert fund managers outside the Bank—significantly backing early-stage investment funds. It is a strategy of tailoring due diligence and documentation processes to the circumstances of African, Latin American, and Asian innovators; developing concessionary lending products; and laying claim as the investor of *first* resort.

For Mr Malpass, who saw in multilaterals the threat of "global government in which elites would instruct people around the world in how to set up their economies" and thought "there were too many conferences and not enough focus on people doing well in developing countries,"[5] entrepreneurship just might be multilateralism at its most palatable. Indeed, putting entrepreneurship at the center of American policy efforts at the World Bank satisfies a Biden-Harris administration priority—bipartisanship. Both Republicans and Democrats should be able to agree on the power of entrepreneurship, which has created more wealth and more jobs in American economic history than any other single force.

Global economic development as means to further US foreign interests is not new. (The Brookings Institution's George Ingram recently made the case for President Biden to revitalize US development tools like USAID and the Foreign Assistance Act.[6]) But the Biden-Harris administration should take this moment of American global reentry to refresh the US's "point of view" vis-à-vis the World Bank and do so with a strategic emphasis on entrepreneurship, a field of unquestioned American know-how and pride. Indeed, entrepreneurship made America great. Now, at the World Bank, it could fast-track the US to respected global stature and simultaneously meet its most serious global challenges head on. ■

1 Baker, Peter, "Trump to Nominate David Malpass to Lead the World Bank," *New York Times*, 4 February 2019, https://www.nytimes.com/2019/02/04/business/world-bank-david-malpass.html.

2 Biden Jr., Joseph R., "Why America Must Lead Again," *Foreign Affairs*, March/April 2020, https://www.foreignaffairs.com/articles/united-states/2020-01-23/why-america-must-lead-again.

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précisinterview

Erik Lin-Greenberg

Erik Lin-Greenberg '09, SM '09, joined MIT in fall of 2020 as an assistant professor in the Department of Political Science. He returns to MIT after receiving his PhD from Columbia University, and his MS and BS in political science from MIT. In this interview, he describes what it's like to be back at MIT, his research on emerging military technology, war gaming, and the role of food in international politics.

Erik Lin-Greenberg, assistant professor of political science, was named to the 2020 National Security and Foreign Policy LGBTQIA+ Out Leadership List. A collaboration of New America and Out In National Security, the list honors 40 experts in US national security and foreign policy currently serving in government, the military, think tanks, academia, non-governmental organizations, and the media.

He received the American Political Science Association's 2020 Merze Tate Award for his dissertation, "Remote controlled restraint: The effect of remote warfighting technology on crisis escalation." The annual prize is awarded for the best dissertation successfully defended during the previous two years in the field of international relations, law, and politics.

Photo courtesy MIT Department of Political Science

précis: Tell us about your journey from and back to MIT. How did your undergraduate experience here inform the work you are now doing as a faculty member?

ELG: One of the greatest things about being a MIT political science undergraduate student is that the class size is incredibly small. I received a lot of attention from faculty that I probably wouldn't have gotten at a university where hundreds of students majored in political science. This enabled me to sample what it was like to be a graduate student as an undergrad and made me interested in pursuing political science in an academic sense.

However, I had a commitment to the Air Force since I did ROTC. As part of my military service, I became an intelligence officer where I leveraged lessons learned at MIT, especially from the Security Studies Program (SSP). Intelligence training discussed concepts like counterinsurgency, US military capabilities and the different services. I had already been exposed to these concepts from courses taught by Barry Posen, Taylor Fravel, and Fotini Christia.

While serving on active duty, I worked with systems—like remotely piloted aircraft or drones—and saw them used in an operational setting. This experience started triggering questions about what happens if we're using these systems, not against groups like the Taliban and Al Qaeda, but against peer competitors. Also, during my deployment to the Middle East, I had the opportunity to meet Jason Lyall, an academic who was working on research related to air power and airstrikes. Jason and I had great conversations about political science in a more formal sense. I thought, okay, this is really cool! I want to go back to graduate school.

I initially thought I would stay in the Air Force and it would sponsor my PhD. I would then have three years to finish and then return to duty. I applied and was accepted to graduate schools but was picked up as an alternate for the Air Force program. I made the decision to transfer into the reserve and go to graduate school full time. I think that was the right decision for me. I don't think I would have been able to finish a dissertation in three years. And it allowed me to explore and do field work that I wouldn't have been able to do on a compressed schedule.

I finished my PhD at Columbia and spent some time as a pre-doc and a post-doc before joining MIT. It is very humbling to be back. With the exception of Vipin Narang, I think most of the faculty members in SSP were faculty members when I was an undergraduate. I am still learning from everyone and having an absolute blast!

précis: You began teaching during the Covid-19 pandemic. How has that been for you?

ELG: Students, faculty, administrators, and staff have just been absolutely wonderful. Although, I wish these were normal times. The best and most exciting part about being a professor is working with graduate students and especially the graduate students at MIT and SSP. The students here are interested in a set of important policy- relevant topics and doing work in innovative and robust ways. So not getting the opportunity to see graduate students and colleagues in the hallway is unfortunate, and there's a real barrier to having a conversation on Zoom.

Erik Lin-Greenberg

"At the end of the day, any military technology is a tool of policymakers...You essentially are increasing the menu of options that policymakers have when they ask whether we are going to carry out military operations against a rival."

That being said, our graduate students are doing an impressive job and watching them excel is rewarding for me. The senior students are either planning or working on their dissertations and figuring out ways to do their research in an era of Covid.

précis: In regard to your research on emerging technologies' effect on conflict, how do you see remote escalation changing the nature of war?

ELG: Whether it be cyber warfare or acquiring drones, we're seeing more and more states developing these capabilities. These systems have the potential to shift conflict dynamics. In most cases, IR theories tell us that technologies capable of making offensive activity cheaper, and more likely to succeed will result in a less stable and more dangerous world. To a certain extent, parts of that argument may be true. Especially when you consider remote warfighting technologies that allow states to initiate activity they might not have otherwise.

But these technologies also have the potential to create unique off-ramps and ways to control escalation dynamics. Imagine a manned aircraft versus a drone is shot down. You're probably not going to have the same type of pressures, whether it is from military leaders or from the domestic public, to escalate after a drone is lost as opposed to a manned aircraft. There are elements in escalation dynamics that are overlooked by theories that we've learned in graduate school and are pretty dominant in our field.

I am also interested how the notion or the nature of escalation changes. If we think about all of the datasets political scientists use to measure escalation as a dependent variable, they're often not very nuanced. They don't necessarily take into account the type of military technology used. They make distinctions between conventional and nuclear weapons, but we need to rethink how we measure escalation. That's something I'm hoping to do down the road.

At the end of the day, any military technology is a tool of policymakers. It's an intervening variable. You essentially are increasing the menu of options that policymakers have when they ask whether we are going to carry out military operations against a rival. It creates new ways of war fighting. If we look at the recent conflict between Azerbaijan and Armenia, you see drones being used in conflicts between state actors. Bottom line, I think this has the potential to fundamentally reshape how, and, in some cases when, conflicts escalate.

précis: You are using innovative methods to study these topics, such as wargaming. You are also one of the advisors to the MIT Wargaming Group formed in Fall 2019. Could you explain the methodology and the developments in the field?

ELG: There's been a shift in IR over the past few decades to broaden our scope beyond traditional observational methods. I think of research as trying to complete a puzzle by answering different parts of the question. Observational research can tell us a lot of really great information. But in many cases, when you're dealing with emerging technologies, information isn't publicly available. So what I've done in some of my work is to recruit national security practitioners and military officers to essentially simulate crisis decision-making settings with a bit of experimental methodology added.

This allows me to do a few things. It creates a venue where we can create rare events. It allows us to see the interaction between players and how this interaction ends up shaping decision outcomes and behavior. You don't get this information from other methods—even survey experiments.

There's disagreement as to whether or not my wargames are actual experiments because their sample size is pretty small. But I manipulate the variable of interest and see how the presence or absence of that variable changes behavior across teams. I try to repeat these games as many times as possible to identify trends.

I am working with Reid Pauly, who is a recent MIT PhD and now a faculty member at Brown University, and another good friend and colleague of ours, Jackie Schneider. Schneider was a fellow Air Force officer and is now a fellow at the Hoover Institute. We are trying to expand the use of wargaming as a method and working on a paper that is under review. We also hope to write a methods book on wargaming.

précis: You are also working on a project regarding food and food in diplomacy. Could you tell us a little bit about that?

ELG: As many people know, I'm an aspiring foodie. Every time I go do archival work or sometimes interview work, I'll try to find additional documents on the role of food and international politics and international security. Food obviously plays an enormously important part in our lives from a cultural standpoint. It is also a requirement to live. It shouldn't be surprising that it also plays an enormous role in international politics.

I view food through three lenses. First, it is something that states fight over—as a resource that one seeks to control. Second, as a bargaining chip—a literal carrot or stick to win friends and punish adversaries. And, finally, as an instrument of soft power.

There are a lot of very fun examples, such as this great story about kimchi being used by the US to help convince South Korea to provide additional troops to the war effort in Vietnam. The US also delivered food boxes to East Berliners during the Cold War as a means of generating soft power and a token of goodwill. This led to tensions between the US and the British and French. The British and French essentially said, "Hey, you've got to stop distributing chocolate, lard, and butter. You're going to cause World War III."

This project is a back-burner fun thing that I do whenever I need a break from my main research.

précis: Speaking of back-burner fun things, what is your most fun quarantine activity? Runs count!

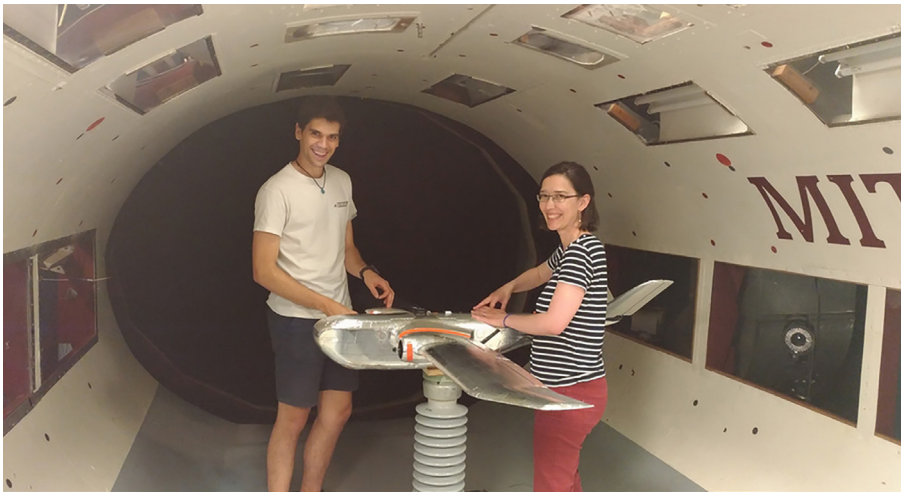
ELG: Runs are fun, but runs come as the result of me doing a lot of cooking. My spouse and I really, really enjoy cooking. Since we're not able to go to restaurants as frequently as we would in the past, I'm doing a ton of cooking at home and also buying one too many cookbooks! ■

briefings

Faculty seed projects grow into pandemic research opportunities

MISTI

Alicia Goldstein-Raun, assistant director, MISTI



"The events of this year have shown exactly how critical it is for our research collaborations to cross international borders," says Alicia Goldstein-Raun, MISTI assistant director.

Global partnerships are a fundamental component of research at MIT—even during this time of suspended travel. MIT International Science and Technology Initiatives (MISTI) supports those connections via MISTI Global Seed Funds (GSF).

GSF enables participating faculty teams to collaborate with international peers, either at MIT or abroad, to develop and launch joint research projects. MISTI GSF comprises a general fund open to any country, as well as numerous country, region, or university-specific funds. This year, there are 26 funds across Belgium, Brazil, Chile, China, Colombia, France, Germany, India, Israel, Italy, Japan, Jordan, Korea, Mexico, Spain, and the United Kingdom.

"The events of this year have shown exactly how critical it is for our research collaborations to cross international borders," says Alicia Goldstein-Raun, MISTI assistant director. "The goal of MISTI GSF is to enable our researchers to build lasting collaborations that tackle global problems."

GSF-funded projects unite teams of faculty and students with international peers, combining their individual strengths to address challenging issues that may have a worldwide impact. Every year, the program gives over $2 million to faculty from every school across the Institute, awarding $20 million to 948 projects since its inception in 2008. Over three-quarters of MIT faculty have submitted at least one MISTI GSF proposal.

Typically, MISTI GSF projects have researchers traveling the globe year-round, with many trips happening during the summer. When Covid-19 spread across the world this spring, it quickly became evident that the GSF projects would be impacted. Consequently, MISTI extended fund availability beyond the typical 20-month window for all current recipients. And while the new GSF cycle typically launches in the spring with a deadline in the fall, MISTI postponed the launch this year to September be-

cause of the pandemic. The call for proposals closed December 14. Applicants will be informed of the results in mid-April 2021.

MISTI seed fund projects often have an impact far beyond their original scope, and a number of MISTI GSF projects have contributed to efforts to combat the pandemic. Hadley Sikes, associate professor of chemical engineering and Esther and Harold E Edgerton Career Development Professor, translated some of the findings from her funded project to her coronavirus research, developing a rapid Covid-19 test.

GSF through the years: Pol Fontanes (left), a student at the Universitat Politècnica de Catalunya, and MIT Assistant Professor Carmen Guerra-Garcia are seen in the MIT Wright Brothers Wind Tunnel working on a past MIT-Spain La Caixa Foundation Seed Fund Project.

"GSF supported two extremely talented students from Tec de Monterrey, Daniela Cavazos-Elizondo and Alejandra Martínez-Dibildox, to come work in my lab over the summer last year. Their research visit resulted in two manuscripts that were finished up for submission to peer-reviewed journals during the academic year. One of the MISTI Mexico students, an undergraduate at the time, is the first author of one," says Sikes. "We are using what they learned in our paper-based Covid-19 tests now—their contributions are important for enabling manufacturing and scale-up."

Alex K Shalek, a core member of the Institute for Medical Engineering and Science, an associate professor of chemistry, and an extramural member of the Koch Institute for Integrative Cancer Research, has also leveraged MISTI GSF research to address the pandemic. He and his team are currently looking at how Covid-19 targets cells in the body and have benefited from the jump start they received from their GSF-funded project.

"There are several important considerations [to this research]. A critical one is identifying which host factors the virus uses to infect cells and the cells that express them (and hence are likely targets of infection). This is something that we were able to begin exploring with data in-hand that we had collected thanks, in part, to GSF support," says Shalek.

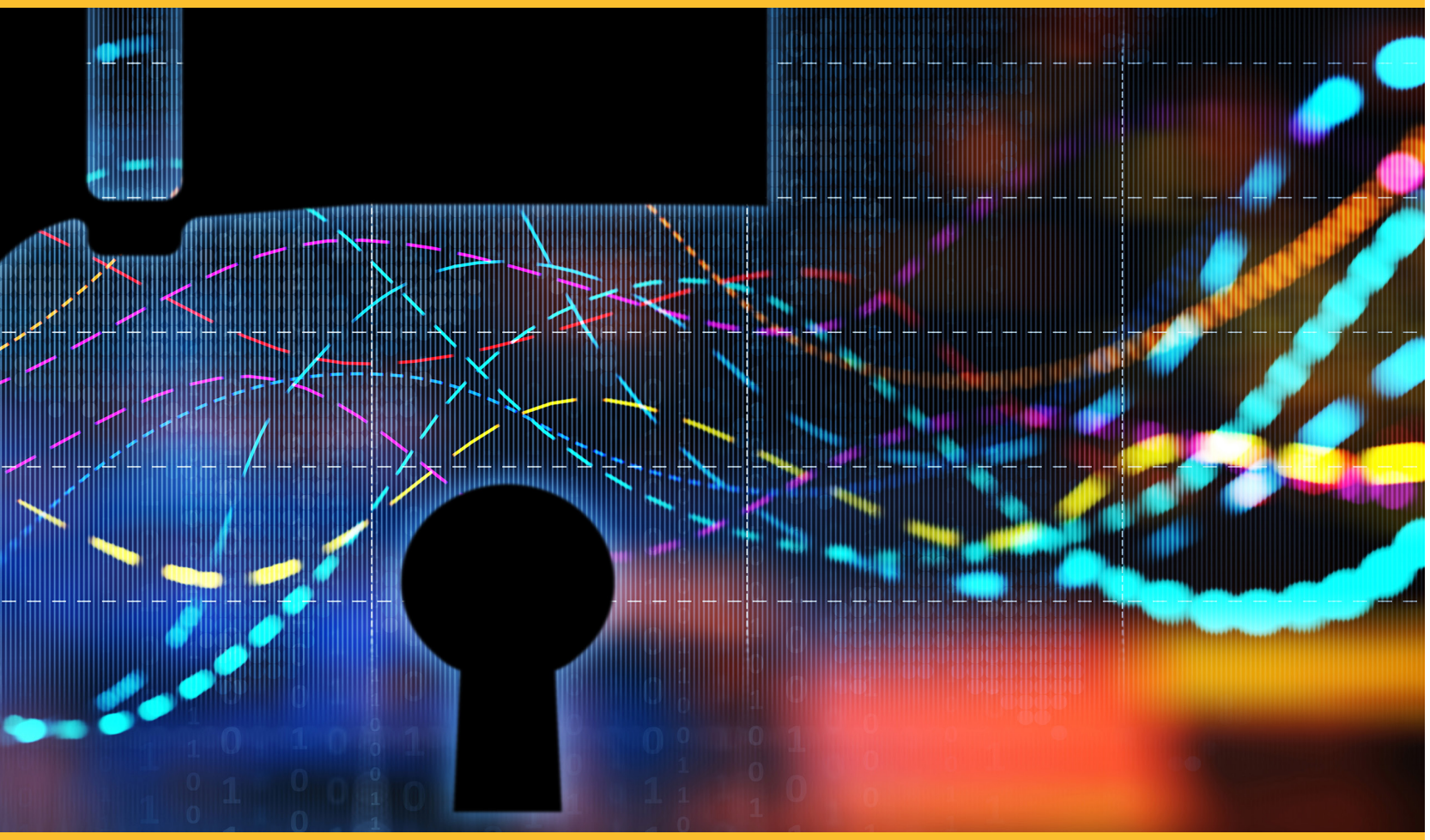
"The GSF supported collaborative work with partners in South Africa, which helped us generate high-resolution single-cell datasets from tuberculosis (TB) infected human lung and HIV-1 infected human gut tissues. This data enabled us to identify cells that express, at the RNA level, ACE2 and TMPRSS2, and thus represent likely viral targets. It also revealed potential associations with co-infections (here, HIV and TB) and provided valuable information pertinent to HIV and TB."

MISTI GSF projects have had a meaningful impact on the trajectory of faculty research. Many of these collaborations have led to published papers, subsequent grants, and lasting connections between MIT and other leading research institutions. On top of supporting faculty, these funds also provide meaningful educational opportunities for students. The majority of MISTI GSF teams include students from MIT and international collaborators, bolstering both their research portfolios and global experience.

studentfeature

Defining success and mapping the road ahead for public-private partnership and critical infrastructure cybersecurity

Sean Atkins, PhD Candidate, Department of Political Science



"With talk of cyber Pearl Harbors or digital 9/11s, some of the attention paid to critical infrastructure cybersecurity might border on alarmism, but there is real reason for concern."

Sean Atkins is a PhD candidate in security studies and international relations. His research focuses on national defense in cyberspace and cyber statecraft. He is also an active-duty US Air Force officer whose service ranges from national cyber policy development to multiple counterinsurgency operations deployments.

Photo courtesy MIT Department of Political Science

The recent discovery of the SolarWinds cyber attack offers yet another example of the significant cyber risk America's critical infrastructure faces.[1] In particular, it raises questions about US cybersecurity policy for critical infrastructure, a policy that is founded on voluntary partnership between government and industry. Despite its importance, however, the government has yet to clearly articulate in strategic terms what its policy aims to achieve.

Defining what "success" looks like can guide the massive public and private efforts in this approach. In its absence, the result has been a policy patchwork, pieced together over time in response to newly discovered vulnerabilities and threats like those of the SolarWinds incident. Strategic direction is essential to get ahead of dynamic security challenges and it appears to be lacking in an area critical to the nation.

On December 10, the Center for International Studies (CIS) brought together MIT's Internet Policy Research Initiative (IPRI), Cybersecurity at MIT Sloan (CAMS), and CyberPolitics@MIT to host a panel discussion aimed at defining long-term "success."[2] The panelists combined deep expertise on this issue derived from practice and policy experience within both industry and government.[3] Their distinct (though generally not opposing) ideas about what constitutes "success" in critical infrastructure cybersecurity policy included:

- elevating thinking above the mechanics of the problem to develop a more sophisticated strategy that engages the "broader state of affairs";
- shifting focus from the technological details to address the economic and behavioral foundations of cyber insecurity;
- a deeper partnership between government and industry that is more mature in its operation; and
- stronger and better-organized government leadership.

The ensuing discussion outlined a more holistic vision for government-industry partnership to secure the critical functions that US national and economic security relies on.

Background

With talk of cyber Pearl Harbors or digital 9/11s, some of the attention paid to critical infrastructure cybersecurity might border on alarmism, but there is real reason for concern. The US has already seen foreign cyber operators conduct significant disruptive attacks on its financial services sector and virtually place themselves at the controls of electricity distribution points.[4] Last year's National Intelligence threat assessment noted that cyber adversaries were postured to disrupt natural gas pipelines and were actively mapping other critical systems to be able to cause substantial damage.[5] Furthermore, increasing reliance on new connected technologies (such as those associated with the growing Internet of Things), and cross-sectoral interdependence (such as the financial services sector's dependence on the energy and information technology sectors) bring new vulnerable surface area and greater risk for cascading failures. The trend line in terms of both scope and scale of risk is clear, bringing US cybersecurity policy under well-deserved scrutiny.

Since the late 1990s, US policy to secure critical infrastructure from cyber threats has been based on a semi-voluntary partnership between government and private industry.[6] Its voluntary component primarily takes the form of coordination and information sharing between government agencies and firms. In some sectors, policy also involves regulation or other purposive government intervention to compel, induce, or help firms to take certain actions on cybersecurity. This approach makes sense considering that the vast majority of critical infrastructure, from financial services to pipelines and from the power grid to telecom networks, is owned and operated by private industry.

The policy regime has evolved significantly over the last two decades, often in response to a continuing flow of emerging threats, realized vulnerabilities, and changes in technology that affect both of these. When stepping back to examine its evolution and consider its future, a striking realization is that a clear definition of success has yet to be articulated. A guiding vision of what "good" would look like for these efforts, beyond broad ideas of information sharing and coordination, is absent.

Defining success

During an hour-and-a-half discussion moderated by political science professor Chappell Lawson, panelists offered their visions of "success," detailed its key elements, and highlighted requirements to achieve it. For Mark Montgomery, executive director of the Cyberspace Solarium Commission and former US Navy rear admiral and Senate Armed Services Committee policy director, success is a better organized and higher-functioning public-private partnership. More specifically, this first involves correcting and building consistency in interagency performance across critical infrastructure sectors. For instance, the water sector's relationship with the Environmental Protection Agency (the sector's lead agency) is not nearly as high-functioning as that between the financial services sector and the Treasury or the electricity sub-sector and the Department of Energy. Consistency in lead agency engagement and risk evaluation for their sectors is essential. Furthermore, government agency turf wars that continue to impede progress and complicate relations with private industry in some sectors must be eliminated. Second, "success" involves conducting combined preplanning for potential significant cyber events. This includes federal, state, and local governments working with critical infrastructure owner-operators to develop and exercise playbooks and processes. Third, resilience in the public-private collaboration itself is also a component of "success." Having a robust vehicle to facilitate flexible and effective collaboration, especially in response and recovery from significant events, is vital.

Montgomery emphasized that achieving these aims would require stronger government leadership. Government must be better organized and this will require an "Admiral Rickover" type of leadership that takes hold of an issue and rigorously applies a standard to it.[7] For Montgomery, creation of a national cyber director (a Cyberspace Solarium Commission recommendation) would be a step in that direction.[8] Much of the director's potential rests on selecting the right person, however. It must be someone who can walk in with strong relationships in Congress and that CEOs will want to engage.

In contrast, Joel Brenner (CIS senior research fellow[9], author of *America The Vulnerable*, and former National Security Agency lead counsel) argued that the US needs to elevate its thinking beyond its largely procedural improvement focus to develop a definition of success that accounts for the "broader state of affairs." This procedural orientation is inward looking, directing effort and measuring progress based on how one used to be. This, Brenner notes, is a recipe for self-deception. Instead, the guiding aimpoints for success include first that attacks on critical infrastructure would fail (because of an inability to get through or to produce effects) and would be punished when conducted. Next, there would be liability for firms who knowingly sell insecure goods that made critical systems more vulnerable. Liability is an important driver of behavior and this is one of the only places where knowingly placing defective goods into the stream of commerce is without consequences. Finally, effective security standards would be in place, implemented partly through suasion as well as regulation where needed. Achieving these aims relies on creating positive and negative incentives to address the fundamental challenges to cybersecurity, which are primarily economic, legal, and behavioral in nature, not technical.

Similar to Brenner, Larry Clinton, president of the Internet Security Alliance and co-author of The Cybersecurity Social Contract, defines success in a way that accounts for the broader state of affairs, particularly those associated with the economics of cyber insecurity. Success for Clinton is the United States having a comprehensive strategy that is as integrated and sophisticated as its top cyber competitors. The basics of US strategy have not meaningfully changed since they were established in the 1990s: primarily standards development and information sharing. In comparison, China has a comprehensive digital strategy that was developed with a much broader scope and pursued with substantial investment. The strategy appears to be the product of a holistic analysis of how to exploit the digital world not only for short-term competitive advantage but for long-term technological and commercial superiority. Expressions of this strategy range from China's industrial espionage campaigns to its trillion-dollar digital silk road initiative, designed with broader geopolitical ambitions in mind. Measured against this bar, current US cyber strategy and even the Cyberspace Solarium Commission's recommendations are too narrowly focused to be strategically competitive.

According to Clinton, three things need to happen to move toward an improved strategic framework. First, the relationship between government and industry must become a true partnership. The current public-private partnership is largely rhetorical in nature with the government treating firms as "stakeholders," or worse as unruly children. The strategic challenge is not corporate malfeasance (although some likely exists). It is that we have an inherently vulnerable system protecting valuable things and government and industry are tied together in this problem. A more fulsome and equitable partnership structure is needed to build unity and to develop and run an effective digital strategy. Second, a shift in thinking needs to occur, from over-focus on technology to the economics that drive behavior of both attacker and defender. At its foundation, the cyber insecurity problem is not that technology is bad, it is that technology is under attack because the economic incentives favor the attacker. It is impossible to make systems invulnerable through better technology or standards;

therefore, the underlying economic calculus for attackers and defenders must be addressed. For instance, there is a gap between a commercial and national level of security. Government should not expect firms defending against national security level threats to make uneconomic investments in cybersecurity to close that gap.

Adjusting the economics to address this gap requires building incentives, tailored to each industry sector. Tax incentives might be appropriate in some markets, procurement incentives in others, and creative no-cost to government forms in still others (such as safety record preferencing as is done with pharmaceutical companies). Finally, stronger government leadership is necessary and Clinton argues for an Office of Digital Security Strategy (ODSS) positioned within the White House. In contrast to the Cyberspace Solarium's recommendation for a National Cyber Director, the ODSS would have a broader mandate and be equipped with greater staff, budget, and authorities.

For Tony Sager, a former National Security Agency Information Assurance leader who now runs the Center for Internet Security's global cybersecurity best practices initiative, "success" is a more mature approach to critical infrastructure cybersecurity. This involves first a shift from technology-focused strategies and policies to ones grounded in risk decision-making. Shifting strategic thinking away from the mechanics of the problem and onto developing mechanisms for effective decision-making in a high risk environment is essential. A second component is moving from talk about sharing information to serious discussions about what to do with it. Information sharing is important but it is the means to an end, not the end itself. The aim of information sharing should be improved risk decision-making but most sharing today only provides redundant information, telling recipient decision-makers what they already know. A third element of "success" is changing to a "security built-in" model for infrastructure technology producers. The current security model involves infrastructure owner-operators acquiring after-market security products to build security on top of their systems after purchase. While this may work for a handful of large well-resourced firms it is unsustainable for others, particularly for medium and small businesses. With a shift to building security into infrastructure up front, market forces begin to take effect to increase security and the government's role switches to one of helping private actors become smarter buyers with security considerations.

Achieving this level of maturity requires a different kind of leadership from government. It will take more than acting as "the grand convener," imparting requirements from on high, or coming in with a big bag of money. The cybersecurity challenge to critical infrastructure is dispersed and interwoven across the economy and this means the government needs to organize the various capabilities and talent that exist across the nation, in the private sector, within government, and in non-profits like Center for Internet Security.

In aggregate, the panelists sketched the outlines of an improved strategic vision for US critical infrastructure cybersecurity policy. It drew attention away from the technical details of the challenge to focus instead on its economic and behavioral foundations. In doing so, the discussion pointed toward a more sophisticated and holistic

strategy that engages the "broader state of affairs," develops a more mature partnership between government and industry, and builds stronger and better organized government leadership. ■

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2 This event was part of a continuing research project led by Chappell Lawson and Sean Atkins.

3 The four panelists included: Mark Montgomery, Executive Director of the Cyberspace Solarium Commission; Joel Brenner, CIS Senior Research Fellow; Larry Clinton, President, Internet Security Alliance; and Tony Sager, Senior Vice President of the Center for Internet Security.

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5 Coats, Daniel. 2019. Statement for the Record: Worldwide Threat Assessment of the U.S. Intelligence Community. Senate Select Committee on Intelligence. January 29. Accessed August 23, 2019: https://www.intelligence.senate.gov/sites/default/files/documents/os-dcoats-012919.pdf.

6 PDD-63 (Presidential Decision Directive/NSC-63). 1998. Critical Infrastructure Protection. May 22. Accessed July 23, 2018; https://fas.org/irp/offdocs/pdd/pdd-63.htm.

7 Admiral Hyman G Rickover served in the US Navy from 1918 – 1982 and is known as the "Father of Nuclear Navy". His stringent safety and quality control standards ensured the Navy's record of zero reactor accidents.

8 U.S. Cyberspace Solarium Commission. Official Report. March 2020. Accessed 30 Dec 2020: https://www.solarium.gov/report.

9 In 2017 Brenner led a CIS sponsored study on securing critical infrastructure networks, which can be found here: https://cis.mit.edu/sites/default/files/documents/Report-IPRI-CIS-CriticalInfrastructure-2017-Brenner.pdf.

briefings

The sound of a global MIT

MISTI

Ari Jacobovits (above left), MIT-Africa Program managing director, transformed his MISTI Radio program into a podcast. The podcast features student interviews, international music, intriguing facts, and curious anomalies about our world. Sinai Sampson-Hill (above right), MISTI communications assistant, is the host.

MISTI Radio is available on Spotify and other popular podcast platforms.

Every year MISTI generates thousands of stories.

Students pack their bags and board planes heading anywhere from Beijing to Bogota. Their experiences are often life-changing; they engage in experiential learning opportunities with the world's leading companies, organizations, and research groups. For MIT-Africa program managing Director Ari Jacobovits, capturing the voices behind these stories was critical. The answer was a relatively low-tech solution in the basement of Building 50.

Originally a radio show hosted by Jacobovits on 88.1FM WMBR, *MISTI Radio* focused on student interviews, international music, intriguing facts, and curious anomalies about our world. While Covid-19 took WMBR out of the studio, its shows were able to record asynchronously and stream online in addition to airing on 88.1 FM. Jacobovits took advantage of this pivot to turn MISTI Radio into a podcast and fellow MISTI staff joined this new initiative as collaborators.

"The show began as somewhat of a passion project, but when the pandemic hit, my colleagues at MISTI and I recognized that the show is a great platform to stay connected to students and partners around the world," Jacobovits says. "We now have a team of contributors and editors that have greatly elevated the show's quality and reach."

Since most of the podcast team were first-time producers, they consulted with Ari W Epstein, associate director of and lecturer at Terrascope. Epstein teaches a class in the Terrascope first-year learning community in which students learn to produce radio stories on topics related to their MIT studies. Epstein shared resources and best practices for transforming MISTI Radio into a series of compelling audio stories for a wider audience.

"It's been great having the chance to work with MISTI staff as this project comes into being," says Epstein. "There are so many great possible MISTI stories out there, and the staff has been very enthusiastic about exploring creative ways to bring those stories to life for listeners."

Through this new podcast format, *MISTI Radio* focuses on current international affairs and showcasing the international work of the MIT community. It has expanded its programming to present interviews with MISTI alumni and partners, as well as excerpts from digital events with MISTI's country programs.

"MISTI is a treasure trove of international connections," Jacobovits says. On a regular basis—and even during Covid we are interacting with literally hundreds of partners across dozens of countries." The podcast team discovered that these connections were the seeds of great radio programming.

"While one colleague may be in a meeting with the Welsh ministry of education to discuss a STEM education program, another colleague may be in a meeting with a university research lab in Peru using drones to map Machu Picchu," Jacobovits says. "The goal of the show is to capture these connections in a user-friendly format, make them accessible to students, and share our approach to international studies with the MIT community at large."

MISTI Radio is now hosted by MISTI communications assistant Sinai Sampson-Hill. Jacobovits is still involved as a producer and content creator along with colleagues Nureen Das, program manager for MIT-India, and Rosabelli Coehlo-Keyssar and Marco de Paula, the program manager and program assistant respectively for MIT-Brazil, along with many others.

In the episode titled, "What Makes a Country Trust Their Government?, *MISTI Radio* covered a Starr Forum from the Center for International Studies. MIT faculty Suzanne Berger (Institute Professor), and Yasheng Huang, (Epoch Foundation Professor of International Management), explained how cultural differences in France and East Asia correlated with country-specific responses to the Covid-19 pandemic. In another episode, MIT-France's program assistant Brigid McMahon interviewed Kevi Donat, a French tour guide who shares the often-overlooked Black history of Paris.

Students have also submitted their own pieces. Rahul Ramakrishnan '20 produced a segment based on his experiences interning in India through MISTI, going in-depth on how Indian-Americans at MIT experience the country as professionals, often traveling to India for the first time without their immediate families. In conversation with Pooja Reddy '20 and Pramoda Karnati '20 (both traveled to India with MISTI), the students reflected on questions of identity and heritage and how their experiences in India enhanced their personal and professional aspirations.

"Student-created pieces have been excellent and are reminiscent of stories told on award-winning public radio programs," Das says. "Ari Epstein's training and Terrascope have been instrumental helping contributors find their voice as storytellers.

The scope of content continues to grow for the MISTI Radio podcast. "For the time being, we will continue to publish new episodes as we work from home. We have been engaging with an increasing number of various collaborators, both within the Institute and abroad, since we started this project," says Sampson-Hill. "The team is looking forward to sharing even more stories in 2021. "Episodes are aired bi-weekly on Thursdays at 7pm on WMBR. They are also archived and available to stream on various podcast platforms. ■

"We have been engaging with an increasing number of various collaborators, both within the Institute and abroad, since we started this project," says Sampson-Hill. "The team is looking forward to sharing even more stories in 2021."

briefings

Seminar XXI finds opportunity in virtual programming

Seminar XXI

Seminar XXI faculty director Kenneth Oye and associate director Tisha Gomes Voss

Photos courtesy MIT Department of Political Science and Tisha Gomes Voss

Since its inception as an MIT program in 1986, Seminar XXI has inspired its graduates to apply the compelling insights of social science to the most pressing challenges of our times.

Seminar XXI is an educational program run by MIT's Center for International Studies (CIS). Its principle objective is to provide future leaders of the national security and foreign policy communities with the perspectives and analytical skills required to evaluate and formulate effective policy options for the United States. The 2020–21 Class has 85 fellows from the military services, other governmental organizations, and nongovernmental organizations.

Like other programs, Seminar XXI moved from physical to virtual sessions during the academic year 2020-21. Seminar XXI director Kenneth Oye, associate director Tisha Gomes Voss, program assistant Jennifer Kempe and graduate research assistant Rachel Tecott modified the program curriculum and format to fit more comfortably within the requirements of online learning.

"While sorely missing the sustained face-to-face interaction that is a trademark of the program, faculty and fellows have adapted reasonably well. In many respects, the quality of questions and comments from Seminar XXI fellows and their interactions with faculty have been at or above the level in conventional years," said Oye, who holds a double appointment at MIT as professor of political science (School of Humanities Arts and Social Sciences) and Data Systems and Society (School of Engineering), and is director of the CIS Program on Emerging Technologies (PoET).

The program leadership saw opportunity in the challenges. In addition to translating Seminar XXI's conventional topics of international security affairs to fit virtual formats, they added new sessions, including:

A session on pandemic security featured Gigi Gronvall of Johns Hopkins University with a brief history of pandemics and economic, political and military consequences, Nancy Connell, also of Johns Hopkins, on COVID-19 and the development of tests, treatments, and vaccines; and Murray Lumpkin of the Gates Foundation, formerly

FDA, with an evaluation of national policies and collective international and transnational responses.

A session on climate change and security featured John Deutch of MIT on climate change and national security, David Keith of Harvard on risks, benefits and uncertainty associated with technical responses including solar radiative management, and Maria Zuber of MIT on fights over scientific and technical knowledge and the role of research.

A session on cybersecurity and biosecurity featured R David Edelman of MIT CSAIL and CIS on conflict and restraint in cybersecurity and Edward You of the FBI and the US Department of Health and Human Services (HHS) on biosecurity, with consideration of malevolent misapplications of rapidly evolving technologies and of international rivalry over cybertech and biotech industrial base.

These new sessions supplemented the program's regular itinerary of topics and speakers that also went online due to the pandemic. In normal times, Seminar XXI holds all of its sessions in the Washington DC area.

Seminar XXI director Kenneth Oye, associate director Tisha Gomes Voss, program assistant Jennifer Kempe and graduate research assistant Rachel Tecott modified the program curriculum and format to fit more comfortably within the requirements of online learning.

briefings

Donald Blackmer, professor emeritus of political science and longtime leader at MIT, dies at 91

Michelle English, CIS

Donald L M Blackmer, professor emeritus of political science at MIT, died on August 14, 2021. He was 91.

A highly regarded scholar in international studies, he was also a longtime leader at MIT, serving variously as executive director of the Center for International Studies, head of the Department of Political Science, associate dean of the School of Humanities and Social Sciences (now the School of Humanities, Arts, and Social Sciences), director of the Program in Science, Technology, and Society, and head of MIT Foreign Languages and Literatures (now MIT Global Studies and Languages).

Blackmer received his bachelor's degree from Harvard College, where he graduated magna cum laude in history and literature. He continued his studies at Harvard University, where he received a master's in regional studies on the Soviet Union and a PhD in political science.

He began his career at MIT as executive director of, and eventually served as assistant director of, the Center for International Studies (CIS). The Center was created in 1951 to aid the United States in its Cold War battle against the Soviet Union. Blackmer later chronicled CIS's beginnings in a fascinating book, *The MIT Center for International Studies: The Founding Years 1951 to 1969*, to mark the Center's 50th anniversary.

Donald L M Blackmer, professor emeritus of political science, died on August 14.

Photo courtesy of the Department of Political Science

"Don was a steady mentor, academic advisor, listener ... and, ultimately, friend. His humility, kind humor, patience, intellect, and elegant behavior were examples to me of what I could become."

"Don was a fine scholar," said Richard Samuels, director of CIS and Ford International Professor of Political Science. "He wrote a widely cited book on the international relations of the Italian Communist Party, and co-authored a book with Max Millikan on US foreign aid. He also published on the French Communist Party and on the Soviet Union. But, on his own account, scholarship was not his primary calling. He was an institution builder. In 1956, he turned down a job offer to work as an assistant to McGeorge Bundy at Harvard, to come down-river to MIT to serve as a deputy to Max Millikan and Walt Rostow—the dynamic and powerful founders of the MIT Center for International Studies. As executive director of the young CIS, he made it possible for them, and those he helped them recruit, to light up the scholarly landscape."

"A man of uncommon good sense and warmth," said Eugene Skolnikoff, professor of political science emeritus, of Blackmer. "In some ways, Don was a curious fit to be successful in an MIT setting. He had a strong literature and humanities background, with little exposure to science and technology. His success in his role at CIS, and in subsequent positions he was asked to fill, showed to the MIT leadership how able Don was to lead and build in an environment that was foreign to his original education or experience. It was a record of stable and often imaginative stewardship in an institution focused on subjects I'm sure Don never expected to be a part of."

Blackmer, a steward of institutions, was also a steward of people.

"Don was a steady mentor, academic advisor, listener ... and, ultimately, friend. His humility, kind humor, patience, intellect, and elegant behavior were examples to me of what I could become," said Astrid S Tuminez PhD '96. Tuminez serves as president of Utah Valley University and was a former executive at Microsoft.

Brian Taylor PhD '97 credits Blackmer for encouraging him to complete his dissertation. "I think it's fair to say that he played the biggest role of my committee in making the final project stronger and in helping me get done. It was Don who closely read each chapter as I produced it and gave me detailed and actionable recommendations on how to revise the chapter. This feedback gave me the confidence to keep pushing ahead on a project that at times seemed unmanageable and never-ending. Don was there throughout—even after he retired to make sure the dissertation was in 'good enough' shape." Taylor is professor of political science at the Maxwell School at Syracuse University.

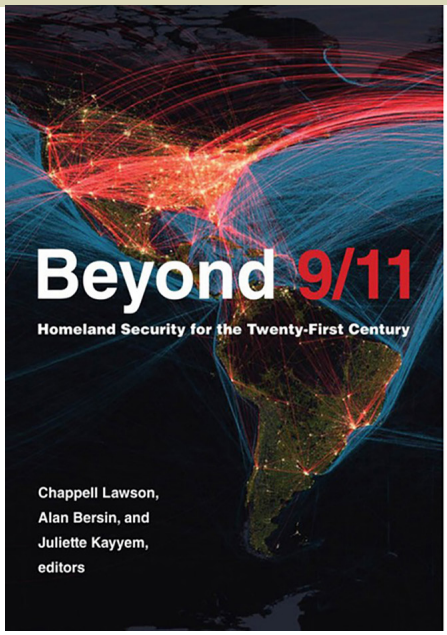
Blackmer authored four academic books, including "The Emerging Nations: Their Growth and United States Policy," with Max F Millikan (Little, Brown & Co., 1961). The book was cited in *Foreign Affairs* as a significant source for US policy. He also served as chair of the Council for European Studies and member of the Council on Foreign Relations.

"Don was not only an immensely productive scholar and administrator, he was also a sweet and generous colleague. He will be dearly missed in the department," said David Singer, Raphael Dorman-Helen Starbuck Professor of Political Science and head of the Department of Political Science.

briefings

3 Questions: Chappell Lawson on US security policy

Peter Dizikes, MIT News Office



"More recently the issue of cyber threats against critical infrastructure, including election infrastructure, raises a whole new set of challenges, and Covid-19 has highlighted the importance of preventing and addressing deadly pandemics."

The year 2020 has featured an array of safety and security concerns for ordinary Americans, including disease and natural disasters. How can the US government best protect its citizens? That is the focus of a new scholarly book with practical aims, "Beyond 9/11: Homeland Security for the Twenty-First Century," published by the MIT Press. The volume features chapters written by 19 security experts, and closely examines the role of the Department of Homeland Security (DHS), which was created after the September 2001 terrorist attacks on the United States. *MIT News* talked with Associate Professor Chappell Lawson, co-editor of the book.

Q: If homeland security is moving "beyond 9/11," what does that entail?

A: It's hard to imagine a functioning government without homeland security, which means protecting the country from nonmilitary threats: responding to global pandemics, managing borders, counterespionage, and protecting critical infrastructure from cyber attacks. It's also hard to imagine these things being done without the federal government. The aspiration is to do them more efficiently and coherently.

The 9/11 terrorist attacks crystallized a particular notion of homeland security. But that focus on counterterrorism obscured almost everything else. Hurricane Katrina was a course correction, highlighting the fact that many other threats deserved attention. More recently the issue of cyber threats against critical infrastructure, including election infrastructure, raises a whole new set of challenges, and Covid-19 has highlighted the importance of preventing and addressing deadly pandemics. All of those are homeland security issues, and the effort the government puts into them has to be proportional and balanced.

The book is co-edited by Chappell Lawson (left), an associate professor of political science at MIT, who has served at DHS as executive director of policy and planning, and senior advisor to the commissioner, US Customs and Border Protection. His two co-editors are Juliette Kayyem, faculty director of the Homeland Security Project at the Belfer Center for Science and International Affairs at the Harvard Kennedy School, who was previously an assistant secretary for Intergovernmental Affairs at DHS; and Alan Bersin, Inaugural Fellow at the Belfer Center's Homeland Security project, who was previously commissioner of US Customs and Border Protection, and later head of policy at DHS. MIT News talked with Lawson about the book.

Photo courtesy Department of Political Science

Q: Okay, speaking of balance, what's the right balance of power between the federal government and states? The book explores this, and we can grasp—for instance—that there are clear benefits to distributing election oversight among states, counties, and even towns. But it might be harder for those smaller administrative entities to accumulate the cybersecurity knowledge they need to protect elections.

A: It's a mess. When it comes to immigration, it's clear the federal government has the leading role. But there are places where the roles themselves are not clear, including management of pandemics and cybersecurity. So, nobody's solved the issue of homeland security in a federal structure. For instance, the Constitution allocates responsibility for election administration to the states, and the states then decentralize further. Yet it's very clear that a breakdown in one or two particular counties in swing states could disrupt the entire system. If a determined adversary were trying to accomplish this goal, with relatively modest and focused effort they could call into question the legitimacy of the entire system. And that makes it a homeland security issue. We haven't sorted that out yet.

We wrote this book imagining how to improve the homeland security enterprise. The analogy is Berlin in 1990: You could look at the city and see some blighted areas and some beautiful areas that showed what the city might be 30 years later, the gleaming capital that Berlin is today. The book is providing a roadmap for getting from Berlin in 1990 to Berlin in 2020. But we can also see from earlier history that without proper oversight, there are real dangers of politicization.

Congressional oversight is cluttered and capricious—fragmented among different committees. I think there's a consensus that oversight should be streamlined. Of course, every congressional committee would like to streamline oversight in its own hands. Still, there are plenty of people on Capitol Hill who care about homeland security being executed properly, so there should be an opportunity to create better oversight.

Q: What have you learned about security issues from the Covid-19 pandemic?

A: I think everything we predicted about homeland security was borne out in the context of the pandemic. If the right relationships are not built between the federal government, the states, civil society, and the private sector, you will reap a very poor harvest.

A slightly different revelation from Covid-19 is that homeland security has distributional consequences. We're used to thinking of homeland security as what economists call a pure public good [enjoyed equally by all], but some people suffer more from the measures that are needed to secure all of society. In the pandemic, the self-employed and the hospitality sector, among others, have borne the brunt of social distancing measures. That's something the whole homeland security apparatus has not wrestled with yet: Society as a whole can be better off, but some are doing so much better than others, that we're inadvertently recapitulating the inequality in society. That's a good lesson for other disasters. ■

briefings

MISTI pilots conversations in energy

Christina Davies, MISTI

Manya Ranjan SM '10 of Sterlite Power and the MISTI Career Conversations: Energy cohort

The initial series of conversations focused on Denmark and India, two countries making critical strides in the movement toward green energy, but with their own methods and targets. Future series will expand to other topics and regions.

Image courtesy MISTI Career Conversations

While fall typically sees MIT International Science and Technology Initiatives (MISTI) programs gearing up to facilitate international summer internship and research experiences for MIT students, this year's changing global circumstances presented challenges to making in-country internships happen—but they also offered new opportunities for students to engage with organizations and leaders overseas.

Combining MISTI's network of hosts, students' interests in energy, the broader energy community at MIT, and the ease of connecting internationally via remote platforms, the inaugural run of MISTI Career Conversations: Energy was born.

MISTI operates in over 25 different countries, offering a number of programming options to the MIT community, including internships and research, faculty research, and teaching programs. Many of these provide the opportunity to collaborate with industry or research institutions on energy topics.

"Our aim was to give our students the same opportunities to build their networks and share ideas with industry leaders through a virtual platform, as they would have during a MISTI internship," says April Julich Perez, MISTI's executive director. "While the Covid-19 pandemic has put a damper on international travel, programs such as MISTI Career Conversations have made it possible to bring our students and global partners together in exciting new ways."

As an emerging economy with a rapidly growing population, India has set a target of 175 gigawatts (GW) of renewable energy capacity by 2022. The current areas of focus are wind and solar energy, with a strong emphasis on building out the transmission infrastructure. Indian organizations represented in this series included: Sterlite Power; Shell Research Technology Center; Tata Power; and ReNew Power.

While it faces different challenges than India, Denmark has set ambitious goals for itself to offset the progression of climate change. By 2050, Denmark aims to be fossil fuel-free, and already around half of Denmark's energy needs are being met by renewable energy, most of that from wind power. Three companies represented Denmark during the first MISTI Career Conversations: Energy series: Ramboll, the international engineering consultancy with a focus on the green transition; Ørsted, a global leader in wind power and the largest energy company in Denmark; and GreenLab, a green industrial park and power-to-x facility.

Each company shared their unique and innovative approaches to the energy sector and the transition to renewable energy, both within the context of their country and the world. This allowed participants to ask questions related to their academic interests and future career goals.

"As an alum, it was rewarding to connect with current students and reconnect with the latest updates from campus," says Manya Rajan SM '10, chief asset officer at

MISTI and MITEI will continue to provide students with an opportunity to engage with leaders in the energy sector through robust programming and field trips that capitalize on the pressing issues both in the US and around the world.

Sterlite Power. “I felt very comforted by the fact that the energy ecosystem is as thriving and dynamic as it can be in context of today's situation. I look forward to staying in touch with the students through MISTI's various platforms and learning about the amazing work they are doing, and will do.”

A cohort of dedicated students, comprising undergrad and graduate students from a variety of disciplines, was formed. All shared an interest in energy and the desire to network with professionals while discussing real-world issues.

“I was very keen on learning about the different energy solutions being deployed in different parts of the world, and the type of expertise, thinking, and experience it takes to make an impact in the field,” says Awele Uwagwu, a senior pursuing a BS in chemical engineering and minor in energy studies. “Throughout the series, I did get this insight. It was clear to see that a country like India has significantly different challenges than a country like Denmark. I also learned about the different types of energy solutions deployed based on context, and I’m getting a better picture of where I want to fit into this.”

Titan Hartono, a PhD student in mechanical engineering, reflected on being able to connect her research on photovoltaics to the “bigger picture” of energy challenges we are facing globally. “Working in a lab and conducting experiments created this sense of disconnection with what is actually going on in the electricity power market,” she explains. “Getting connected with different companies in India and Denmark was exactly the opportunity I was looking for.”

“I've always loved engaging with fellow MIT students about topics of energy and sustainability as a materials science major and energy studies Minor, and I'm very glad I was able to do so as part of the MISTI Career Conversations series,” says Anthony Cheng '20, who interned with GreenLab through MIT-Denmark and later joined their team in Skive, Denmark. “Through MISTI's excellent connections and support, I've been working at the Danish green industrial park startup GreenLab for the past few months, and it was exciting to be able to help share GreenLab's vision for making an impact on industrial energy transitions and development.”

Anurit Kanti, deputy manager sustainability at ReNew Power, notes the value of industry-academia collaboration: "Engaging with MIT students from diverse backgrounds on various aspects of the energy transition, including digitization of the energy sector, was extremely fruitful. The discussion with the students was stimulating and it makes us hopeful for top talent to be involved in this sector, which in turn will catalyze the energy transition.

Providing students an opportunity to connect their focus of study to real-life approaches in the energy sector and the energy transition conversation embodies the MIT spirit of “mens et manus,” (“mind and hand”). Antje Danielson, director of education at MIT Energy Initiative (MITEI), notes, “It is important for the outlook of our students to showcase companies that have clear strategies to achieve set climate goals. Our students want to know that they will have opportunities to contribute to a meaningful, visionary effort like the energy transition once they graduate.” ■

cis activities

Experiencing the culture from afar

In the absence of international travel, MISTI's MIT-India Program organized numerous opportunities to help interns learn about their host country's culture at home. Nureen Das, MIT-India program manager, said the MIT India students met every few weeks for virtual check-ins with program staff. In these sessions, staff discussed with students how to prepare a quiet remote workspace, and how to excel in cross-cultural, virtual communication. Before the pandemic, the MIT-India office didn't schedule regular group check-ins. However, these meetings proved successful enough that the office hopes to continue them even once international travel has resumed. "During those sessions, we asked people to just reflect a little bit on what they were learning," said Nureen Das, MIT-India program manager. "We weren't sure if students would want to meet as often as we did. But from our experience, it turns out that they did really enjoy these meetings."

Starr Forums explore a range of topics

The Center hosted multiple virtual Starr Forums that explored both domestic and global issues, including: "President Biden's Foreign Policy Challenges: Views From Abroad," featuring former CIS Wilhelm Fellows Naomi Chazan (Israeli academic, activist, and politician), Paul Heer (Center for the National Interest), Shivshankar Menon (Indian diplomat), Lourdes Melgar (Baker Institute Center for Energy); and Richard Samuels (MIT); "Democracies on the Rocks?" with Susan Hennessey (Lawfare), Neeti Nair (University of Virginia), Steven Levitsky (Harvard), Daniel Ziblatt (Harvard); and Richard Samuels (MIT); "Deaths of Despair and the Future of Capitalism," with Anne Case (Princeton), Angus Deaton (Princeton), and John Tirman (MIT); "Russia's Information War on America, " with Nina Jankowicz (Wilson Center), Peter Pomerantsev (London School of Economics), Elizabeth Wood (MIT), and Carol Saivetz (MIT); "Beyond 9/11: Homeland Security for the 21st Century," with Juliette Kayyem (Harvard), Alan Bersin (Harvard), Stevan E Bunnell (Libra Association), Chappell Lawson (MIT), Admiral Peter Neffenger (Northeastern), Amy Pope (Atlantic Council) and Seth Stodder (Holland & Knight LLP).

Human Rights and Technology Program fellowships

Eight students, including one two-person team, have been awarded Human Rights & Technology Fellowships. Three undergraduates and five graduates will be exploring human rights issues that are either aided or exploited through the use of technology, including cryptotechnology, surveillance technology, social media, and internet censorship. The program is in its third year and intends to produce new knowledge about the relationship between human rights and technology. It is co-directed by CIS Research Affiliate Anat Biletzki and John Tirman, CIS executive director and principle research scientist.

Visit our website and events calendar for a complete listing of fall 2020 and winter 2021 activities. Many of our events are captured on video and available to view on YouTube.

FEATURED

Program on Emerging Technologies

This multidisciplinary program, referred to as PoET, examines the nature and effects of emerging technologies; conducts research on key areas of uncertainty on these issues; and offers recommendations for improving the capacity of public and private institutions to address risks in the face of uncertainty. The program applies theories and methods of political economy to issues in science and technology policy. It is headed by Kenneth Oye, a professor of both political science and engineering systems at MIT.

PoET presents its research in meetings with governmental and intergovernmental representation such as AAAS, the United Nations, World Health Organization, National Research Council, European Union, and International Risk Governance Council.

It also convenes small closed meetings and workshops with participation from the FBI, the Departments of Defense and State, Lincoln Laboratories, the UN Biological Weapons Convention Implementation Support Unit, and other organizations.

IAP activities

The Independent Activities Period (IAP) is a special four-week term at MIT that runs from the first week of January until the end of the month. The Center's programs offered a wide variety of activities this year from remote internships through MISTI to contemporary military topics through the Security Studies Program. Other offerings included a course on Ikebana: Japanese flower arranging organized by the MIT Japan Program; a Swahili language course co-organized by the MIT Africa Program; and workshops on Capoeira, dance and percussion co-organized by the MIT-Brazil Program.

Emile Bustani Middle East Seminar

Each semester the Bustani Seminar invites scholars, journalists, consultants, and other experts from the Middle East, Europe, and the United States to MIT to present recent research findings on contemporary politics, society and culture, and economic and technological development in the Middle East. Fall 2020 lectures included "Goodbye to all? Lebanon Turns One Hundred," with Maha Yahya PhD '05 (Carnegie Middle East Center) and "Contesting the Iranian Revolution: The Green Uprisings," with Pouya Alimagham (MIT).

Myron Weiner Seminar Series on International Migration

The International Migration Committee's seminar series explores global population movements and their impact on upon sending and receiving countries and relations among them. The fall events included: "Future Aspirations among Refugee Youth in Turkey between Integration and Mobility," (Ayşen Üstübici, Koç University); "Immigration and Epidemics: An Historical Perspective," (Alan Kraut, American University); "Offshore Citizens: Permanent Temporary Status in the Gulf," (Noora Lori, Boston University); and "One Mighty and Irresistible Tide," (Jia Lynn Yang, The New York Times).

Twenty years of cultivating tech entrepreneurs

Administered by MIT International Science and Technology Initiatives (MISTI), Global Startup Labs (GSL) empowers young technology entrepreneurs in developing regions of the world to realize their business goals, leveraging MIT-designed curricula and the enthusiasm and expertise of MIT student instructors. Since 2000, nearly 2,500 students have taken advantage of 84 GSL classes. Many of them gain the skills to translate their ideas into one or even multiple startups, creating jobs and forging new avenues of economic development.

end notes

PEOPLE

SSP PhD Alumnus and Assistant Professor of Political Science at Georgia State University **Dan Altman** won the University of Pennsylvania's Perry World House and *Foreign Affairs* Magazine's Emerging Scholars Global Policy Prize in October.

SSP Military Fellows LTC **John Black**, LTC **Molly Solsbury**, LTC **Brian Novchich**, Col **Scott Synowiez** and Commander **Trevor Prouty** presented a five-day series on "Contemporary Military Topics" in January. Presentations include "Marine Corps Tips for Peak Performance," "Afghanistan Negotiations 2019-2020," "Fighter Fundamentals," "Perspectives from a Military Advisor: Advising the Iraqi Army, Kurdish Peshmerga, and Saudi Army," and "Freedom of Navigation Operations (FONOPS): Brinkmanship from a Bird's-Eye View."

Professor of Political Science **Nazli Choucri** was elected a fellow of the American Association for the Advancement of Science (AAAS) in November.

Professor of Political Science **Fotini Christia** was named Director of the MIT Sociotechnical Systems Research Center (SSRC) in October. Additionally, she, postdoctoral fellow **Kiran Garimella** and PhD student **Erin Walk**, received a $25K grant from UKAID, UNHCR and the World Bank for their research on Refugee Return in the Internet Era: Social Media Narratives from North Syria.

Arthur and Ruth Sloan Professor of Political Science and Director of SSP **Taylor Fravel** gave the following talks: "Debate: China Will Not Use Significant Force Against A Neighbor in the Next Five Years," hosted by the Center for Strategic and International Studies in December; "The India-China Border Dispute: Past, Present, and Future," hosted by the University of San Francisco in November; "China's Military Strategy and US-China Relations," hosted by the University of Albany in November; "China and the Challenge of Maritime Disputes," hosted by the Association of Chinese Political Science Annual Conference, keynote, in October; "The Current Situation in the South China Sea," hosted by the National

Committee on US-China in October; "Active Defense: China's Military Strategy Since 1949," hosted by the John Quincy Adams Society in October; and "The India-China Border Clash," hosted by the Brown-Harvard-MIT South Asia Symposium in September.

The MIT Wargaming Working Group (WGWG) hosted a wargame to simulate a possible conflict in the Taiwan Strait for MIT graduate students and fellows, and students at the Naval Postgraduate School on November 12–13. The game was organized by CIS Principal Research Scientist **Eric Heginbotham**; Ford International Professor of Political Science and CIS Director **Richard Samuels**; Assistant Professor of Political Science **Erik Lin-Greenberg**; PhD students **Suzanne Freeman** and **Ben Harris**; and SSP alumnus and Associate Professor of National Security Affairs at the Naval Postgraduate School **Christopher Twomey**.

SSP alumnus and Director of the International Security Program at the Center for Strategic and International Studies **Kathleen Hicks** (PhD'10) was nominated by President Joe Biden to be Deputy Secretary of Defense.

Associate Professor of Political Science at Boston College and SSP Research Affiliate **Peter Krause** presented "Field Research in the Middle East Before and After the Pandemic" at the Brandeis University's Crown Center for Middle East Studies in October.

Associate Professor of Political Science and Director of the MIT International Science and Technology Initiatives (MISTI) **Chappell Lawson** and PhD candidate **Sean Atkins** organized and participated in a CIS-sponsored event on "Defining Success and Mapping the Road Ahead: Public-Private Partnership and Cybersecurity for Critical Infrastructure" in December. **Joel Brenner**, a senior research fellow at CIS, was among the panelists.

Total Professor of Political Science and Contemporary Africa and Faculty Director of the MIT Africa Program **Evan Lieberman** presented a virtual talk on "Whose Pandemic? The Politics of Race and Danger" at Harvard's Weatherhead Center in December.

Assistant Professor of Political Science **Erik Lin-Greenberg** was named the recipient of the American Political Science Association's 2020 Merze Tate Award, awarded annually for the best dissertation successfully defended during the previous two years in the field of international relations, law, and politics.

end notes

Associate Professor of Political Science **Vipin Narang** was interviewed in "There is No Legal Way to Stop Trump from Ordering a Nuclear Strike If He Wants to, Expert Says" by the *Washington Post* in January. He was also interviewed in "Vipin Narang on the Global Nuclear Landscape: Hype and Reality" by *The Diplomat* in October.

PhD Candidates and Students **Sara Plana**, **Rachel Tecott**, **Eleanor Gladding-Freund**, **Suzanne Freeman**, and **Emma Campbell-Mohn** partnered with Center for Strategic and International Studies at the Johns Hopkins School of Advanced International Studies, Bridging the Gap, and two other graduate students to present the third annual Future Strategy Forum on Cooperation and Conflict in the Time of Covid-19.

Ford International Professor of Political Science **Barry Posen** took part in a debate hosted by the Kissinger Center for Global Affairs at John Hopkins on "Is it time for a grand strategy of restraint?" in October.

Ford International Professor of Political Science and Director of CIS **Richard Samuels** gave virtual books talks on *Special Duty: A History of the Japanese Intelligence Community* at Princeton University, University of Central Florida, the US-Japan Leadership Program, and George Washington University. He also moderated a Starr Forum event "Democracies on the Rocks?" in October. In December, he was a speaker at the roundtable on Japanese foreign policy honoring Okamoto Yukio at University of Toronto. In January, he moderated a Starr Forum event on "President Biden's Foreign Policy Challenges: Views from Abroad."

PhD Candidate **Meicen Sun** was featured in a podcast with the Denver Law Review in November on "Regulating Big Data."

PhD Candidate **Rachel Tecott** became an adjunct fellow at the CNAS Defense Program's Wargaming Lab Team.

PhD Student **Raymond Wang** presented at the Center for Strategic and International Studies Project on Nuclear Issues (PONI) Virtual Winter Conference 2020 on "Organizational Challenges to AI Adoption: Implications for Strategic Forces" in January.

SSP Senior Research Associate **James Walsh** presented, "The Future of Nuclear Weapons," on January 25, during the Independent Activities Period at MIT. His talk was one of three in a series on *Nuclear Weapons: Past, Present, and Future*, sponsored by the Lab of Nuclear Science at MIT.

Stanton Nuclear Security Fellow **Heather Williams** presented "After New START: Engaging Other Nuclear-Armed States in the Disarmament Enterprise" to the Arms Control Association Annual Conference in December.

Professor of History and Faculty Director of the MIT Russia Program **Elizabeth Wood** explored the history of infectious disease in her Fall 2020 course, "History of Now." The weekly class was made available to the public as a live webinar.

PUBLISHED

MIT PhD alumnus **Marsin Alshamary**, "Important Iraqi Archives are Now Back in Baghdad. Where Were They, and What Happens Now?" *Washington Post* (September 15, 2020).

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