



# précis

n. a concise summary of essential points, statements, or facts

## précis Interviews Frank Gavin

Frank Gavin, Frank Stanton Chair in Nuclear Security Policy Studies and professor of political science at MIT, discusses his interest in diplomatic history, nuclear studies at MIT, as well as upcoming projects. He also describes goals and challenges of bridging the gap between students of political science and policymakers.

Before joining MIT, Gavin was the Tom Slick Professor of International Affairs and the director of the Robert S. Strauss Center for International Security and Law at the University of Texas.



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## A SUSTAINED DEBATE

by Barry Posen

Politically, the United States must do less. It must focus on the most important dangers to its security. The greatest danger to U.S. sovereignty is a hegemon on the Eurasian land mass. This danger is low now, but the United States must always be prepared to counter it should it reemerge.



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## Exploiting U.S. Control of the Commons in a U.S.-China Conflict

by Fiona Cunningham

China's investments in military technology designed to keep great power militaries out of its maritime periphery are viewed with increasing concern by the U.S. foreign policy community. How can the United States maintain its freedom of action in the Western Pacific while minimizing the risk of escalation with China?



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Louisa Reynolds, based in Guatemala, is the tenth recipient of the annual fellowship, which gives a woman journalist the opportunity to develop expertise while focusing on human rights journalism and social justice issues.

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Joel Brenner, former inspector general and senior counsel at the NSA, will be working on intelligence and security issues related to foreign affairs.

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## Frank Gavin

Frank Stanton Chair in Nuclear Security Policy Studies  
Professor of Political Science at MIT



Frank Gavin

**précis:** Why did you become interested in diplomatic history?

**FG:** I was an undergraduate in international relations at the University of Chicago and I had the extraordinary experience of being John Mearsheimer's research assistant when he was doing a lot of archival work. He was an amazing mentor, who got me interested and passionate about the study of international relations and security. But I graduated right before the fall of the Soviet Union and, after watching this extraordinary event unfold, it struck me that if I really wanted to understand how international politics worked I would need to understand the past. So, I went to Oxford to get a degree in history, after which I was able to work with Marc Trachtenberg while getting my doctorate. Marc was another extraordinary mentor, who in his work and in his mentorship showed how an understanding of the past could be married with international relations. When I entered the field it was assumed that there would continue to be lots of work done in this great field of diplomatic history but, unfortunately, that's not what ended up happening.

**précis:** Were you disappointed by the decreased emphasis on diplomatic history in the historical world?

**FG:** Yes, in fact, there is a great story about this. Some years back, Harvey Sapolsky and Michael Desch, two political scientists, put together a conference on the future of diplomatic history, and I was asked to participate. There were a few prominent diplomatic historians involved, and all of them talked about how the future of the field was bright, and argued that there were good prospects for people doing diplomatic history. But I disagreed with them. In fact, as I pointed out, it was a political science department that had sponsored the conference on the future of diplomatic history. I have since

tried to find ways to revive, support, and encourage the sort of international history that people like Marc Trachtenberg, Walter McDougall, and Bruce Kuklick taught me to do, but it is difficult. That's why I am so happy to be at MIT, where there is the historical work being done on topics of substance that have, unfortunately, fallen out of favor elsewhere.

**précis:** What led you to become involved in the policymaking community and environment?

**FG:** Teaching and working at the LBJ School of Policy at the University of Texas was a great experience because most of the students there were interested in public service broadly, including government, the private sector, NGOs, etc., and they wanted to understand how things worked. They weren't interested in history for its own sake, so I was forced to think about how history could be used to help better understand contemporary policy. And given the subjects that I worked on—international monetary relations and foreign policy—I found a natural audience in the policy and international relations community. Being at the LBJ School, I also had the good fortune of working with great leadership, who showed a deep commitment to national security issues. For example, Jim Steinberg, the former deputy national security advisor and deputy secretary of state under President Clinton, was very interested in history and thought it had great advantages in understanding policy. Jim gave historical study a platform, which is somewhat rare in a policy school. There was also a variety of other projects that I got involved in, like the Next Generation Project, which consciously set out to shape the future policy agenda and to seek ideas from nontraditional sources, and got me actively engaged in the policy process.

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**Center for International Studies**  
Massachusetts Institute of Technology  
1 Amherst St, E40-400  
Cambridge, MA 02139-4307

T: 617-253-8093  
cis-info@mit.edu

Richard J. Samuels, *Director*  
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Rebecca Ochoa, *précis Web Coordinator*

**précis:** What do you think historians can add to the study of political science? And what can historians learn from political scientists?

**FG:** Political scientists are very helpful to historians in that they are explicit about their assumptions, they are very rigorous about research design, they are very clear about what methods they use and how they select evidence, and what theories are animating their narrative. Historians are good at not just uncovering and revealing the facts of the past, but also at increasing the sense of complexity, unintended consequences, interactive effects, and uniqueness in the study of past, and they are clear about the challenges of generalizing. So, a good historian can add some humility and caution to the social scientist looking to predict and generalize, whereas the social scientists can help the historian leave the particulars of their subject and make an effort to establish larger connections. In that way, I think it is a mutually beneficial relationship.

**précis:** Substantively, you have done a lot of work on nuclear proliferation and the Cold War. What lessons can the world take from studying this history?

**FG:** I think that a lot of the earlier work on proliferation was done either through deductive theorizing or with an absence of any evidence about what was actually going on, which is understandable given that the documents involved in these decisions are some of the most difficult to get declassified. But, as archives have opened, we've found that the proliferation story was far more complicated and interesting than previously known. We now see more nuance. We see that the decision to go nuclear is a lot more complicated for many states, and that the U.S. was very interested in halting proliferation. While a primary concern in political science has been whether nuclear weapons are stabilizing, we have seen that the United States often didn't care about general stability, but was more focused on its own interests. History complicates things, generates new puzzles, challenges some of our assumptions, and certainly

doesn't make things easier. But these are hard questions, and answering them shouldn't be easy.

**précis:** What do you think are the biggest holes in the study of nuclear weapons today? Where is there future research to be done?

**FG:** Scholars need to think about nuclear weapons both in terms of deterring war and with regard to questions of proliferation. For many reasons, during the Cold War we spent a lot of time studying nuclear strategy, but not a lot of time studying proliferation. Since the end of the cold war, we have spent a lot of time studying proliferation and far less studying strategy. But, if you look at the historical record, there are deep linkages between strategy and proliferation, which are only just being uncovered. Also, I think we had a stylized narrative of nuclear weapons in the Cold War that has become less certain over time. Great international relations theorists like Robert Jervis, Bernard Brodie, and some of our own analysts like Steve Van Evera, argued that nuclear weapons and mutual vulnerability created, in certain circumstances, mutually assured destruction, which was impossible to escape. But we have found in documents that the United States went to extraordinary lengths to escape it. We don't have good theoretical explanations of why the U.S. pursued policies that are puzzling from a strategic standpoint, and what the implications of these policies were.

**précis:** We have seen a resurgence of nuclear studies here at MIT—what do you think accounts for this shift? What do you see as the dividends of returning to this type of work?

**FG:** MIT and CIS are wonderful environments because they drive scholarship on important policy issues in a way that is inherently interdisciplinary, so that people can come together and cross-fertilize their knowledge. As a result, MIT is the ideal place to do nuclear work. To understand nuclear weapons, a scholar has to understand the science and history of the weapons, as well as their policy implications. For example, we recently

brought R. Scott Kemp from the Nuclear Science and Engineering department over to speak to the Political Science audience, which generated a great discussion. In addition, we have great PhD students who have terrific contributions to make to this field. More generally, as long as we have nuclear weapons, the study of them will be a critical question because the consequences of getting it wrong are catastrophic. The study of these weapons is very worthwhile even at times when we think we have the right answers, because we don't know what circumstances could arise that might change the equation. We have a duty and an obligation to think about the consequences of nuclear weapons, and MIT has always been a leader on thinking about this from the beginning of the nuclear age.

**précis:** You recently received a major grant from the Carnegie Foundation to bridge the gap between students of political science and policymakers. What are the main goals of this initiative? What do you see as the major challenges?

**FG:** Importantly, this project is not just geared toward political science. In general, it is our sense that young people who are interested in international affairs start their graduate education not seeing a divide between the world of ideas and the world of action. These students want to contribute in many ways—through teaching, public service, research, etc.—and they don't see why it wouldn't be helpful to their career to do all of these things. But, increasingly, we see students getting discouraged because they feel forced to make a choice between the world of ideas and the world of practice. Though some of this is simply a natural and healthy division of labor, some of it is also suboptimal. So, the grant was given in order to assess the extent to which the curricula used to train graduate students match the skills necessary to make policy contributions. We have no preordained view of what is the best method of training, but we also don't see prima facie evidence that the current curriculum is the best way to train graduate students interested in international affairs. We would like to

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# Whither U.S. Grand Strategy? *Debating the Future of American Policy*

by Lena Simone Andrews

*“Whither U.S. Grand Strategy?” was moderated by Kenneth Oye and featured commentary from Francis Gavin, Jacqueline Hazelton, Barry Posen, and Stephen Walt.*

What should the grand strategy of the United States be in an era of unique challenges and widespread global conflict? On Thursday, October 9, four scholars of American grand strategy and foreign policy came together to discuss this and related questions in a public forum, leaving the audience with some answers and many questions about the wisdom of current U.S. grand strategy.

As defined by Barry Posen, Ford International Professor of Political Science at MIT, grand strategy is best understood as a “state’s theory of how to create security for itself” that includes a political–military means ends chain, which prioritizes and justifies national goals. It was this concept that provided the fodder for the October Starr Forum, “Whither U.S. Grand Strategy?” hosted by MIT’s Center for International Studies (CIS), moderated by Kenneth Oye, Associate Professor of Political Science and of Engineering Systems at MIT, and featuring commentary from Francis Gavin, Frank Stanton Chair in Nuclear Security Policy and Professor of Political Science at MIT, Jacqueline Hazelton, Assistant Professor in the Department of Strategy and Policy at U.S. Naval War College, Barry Posen, Ford International Professor of Political Science at MIT and Stephen Walt, Robert and Renee Belfer Professor of International Affairs at Harvard Kennedy School.

## **Restraint: The Dark Horse of American Grand Strategy?**

Among the views presented, Posen and Walt agreed that the United States would be best served by pursuing a grand strategy of “restraint.” Arguing that the U.S. occupies a uniquely secure position in the world with its wealth, geographic isolation, and overwhelming military superiority, Posen and Walt agreed that the United States would be best served by minimizing its overseas commitments.

Posen argued that it is precisely these commitments that serve to radicalize foreign populations, and encourage moral hazard and free riding by allies. Therefore, Posen argued, the United States should dramatically reduce its involvements abroad and, instead, focus on three major priorities: (1) monitoring the rise of China; (2) preventing the proliferation of nuclear weapons to nonstate actors; and (3) continuing to fight radical terror groups.

Despite making a strong argument for restraint, both Posen and Walt were pessimistic about the likelihood of the concept taking root in the broader foreign policy community. Instead, both scholars agreed that among DC foreign policy elite—including not just formal government agencies, but also think tanks, membership organizations, special interests, and many others—there has emerged a self-serving consensus that supports global activism.

Walt, in particular, noted that this global activism is perpetuated the foreign policy elite in the United States through a variety of mechanisms, including: threat inflation, manipulating in the marketplace of ideas, concealing costs, and failing to hold individuals accountable. As a result of these reinforcing mechanisms, Walt argued that the incentives for global engagement within the U.S. foreign policy community would continue to persist well into the foreseeable future.

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*Despite making a strong argument for restraint, both Posen and Walt were pessimistic about the likelihood of the concept taking root in the broader foreign policy community.*

### **The Utility of the Grand Strategy Framework**

The panel, however, was not uniform in its support of a more restrained American grand strategy. Gavin and Hazelton, for their part, raised a number of important questions about the basic premises of grand strategic thought both historically and today.

In Gavin's view, a shift toward restraint would be based on a faulty reading of the empirical record. As Gavin points out, despite a persistent record of global engagement since the end of the Cold War, there have been few of the negative ramifications predicted by advocates of restraint—the United States remains the strongest state in the world, and looks poised to retain that position for many years to come.

In addition, Gavin pointed out that grand strategy is an oft-used but ill-understood concept in International Relations. Accordingly, he argued that the concept deserves closer historical study and contextualization to better inform current debates.

The panel concluded with comments from Hazelton, who raised important questions about the practicality of realist approaches to grand strategy, asking if “the United States is strong enough that it doesn't have to be smart?” More specifically, Hazelton challenged the panel and the audience to consider what the appropriate way forward would be, given that restraint is unlikely to gain much traction in Washington, and global engagement remains the grand strategic position of choice. In doing so, Hazelton questioned how academia could more effectively influence policymakers, whose incentives might otherwise push them in strategically unwise and uninformed directions.

Hazelton concluded by encouraging the audience to consider the difficult questions facing policymakers today, asking: “What are the must dos for the United States internationally, what are the can dos, what are the things that can wait, and how do you start deciding?” ■

# A Sustained Debate

By Barry Posen



*Barry Posen is Ford International Professor of Political Science at MIT and director of the MIT Security Studies.*

The grand strategy of restraint was first conceptualized in the mid-1990s, the early years of the post-Cold War world. This was the “unipolar moment” when the United States was indeed the most capable state in international politics by a wide margin. Restraint advocates saw the momentum building for an activist U.S. foreign and security policy and argued that such a policy was unnecessary and unprofitable. It was, however, possible. The policy was driven forward by overwhelming American power. There was simply nothing to stop the United States. But this was not the only cause. Liberalism was victorious in the Cold War, so the United States, along with its democratic allies, succumbed to a kind of triumphalism. Democracy and free markets would be the order of the day, and U.S. power would protect and nurture this long expected evolution. George Herbert Walker Bush coined the phrase “new world order,” which sounds incongruous coming from a Cold War realist and spymaster.

Activist policies were supported by a wide coalition of interests. The United States had built a huge organizational infrastructure for the Cold War in its foreign and intelligence services, the military, defense industry, and a network of think tanks. All of these institutions had a way of looking at the world, and they agreed with Secretary of State Madeleine Albright that the United States was the “indispensable nation.” These institutions also needed new projects in order to thrive. A combination of great power, luck, and at least at the outset, prudent diplomacy, permitted the United States several relatively inexpensive early successes—the first Gulf War, the enlargement of NATO, and the interventions in Bosnia and in Kosovo. The Restraint “critique” did not get much traction, though advisors to George W. Bush such as Dr. Condoleezza Rice, later secretary of state, suggested at his election that U.S. grand strategy could be a bit more focused on great powers, and a bit more humble, than in the Clinton years. The terrorist attack on September 11, 2001, changed this; the second Bush administration embraced Liberal Hegemony.

The last decade has not been kind to Liberal Hegemony. Though the United States remains the strongest power in the world, the margin is shrinking. China’s capabilities are growing; soon its economic output may outstrip that of the United States. Other states, particularly India, may briskly pursue China. Meanwhile, the financial crisis of 2008 and concomitant recession have slowed U.S. growth and reduced U.S. global influence. The Global War on Terror has been costly and undisciplined. Though Osama Bin Laden is dead, Al-Qaeda, in some form, survives. The two demanding counterinsurgencies that the United States took on to reform the politics of Iraq and Afghanistan have produced mixed results at best.

Many analysts believe that the unipolar moment is over, or soon will be. The basic distribution of global capabilities is changing, as the National Intelligence Council’s *Global Trends 2025: A Transformed World* famously predicted, and as its more recent effort *Global Trends 2030: Alternative Worlds* reiterates. We may soon confront a new bipolar competition with China, or we may face a new multipolar world, in which several nation-states or confederations of great capability stand together at the top of the global pecking order, each warily eyeing the other and simultaneously calculating one another’s potential utility as allies. Whichever future we encounter, Liberal Hegemony is a poor answer. It depends too much on a U.S. power advantage that is disappearing. And it did not work very well even when the United States had such an advantage. Unfortunately, this strategy is deeply rooted in the U.S. national security community. Liberal Hegemony serves the interests of many institutions, and it matches the worldview of the U.S. establishment, and even the broader public. The continued pursuit of this policy without

the real power to match it, however, will likely prove not merely costly and counterproductive, as it has been in the recent past, but disastrous.

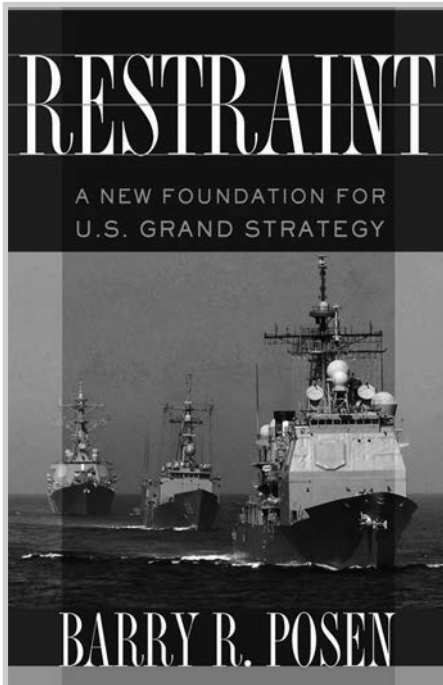
In this book I have explained why Liberal Hegemony has not worked particularly well. The strategy has precipitated some balancing by other nation-states and will likely precipitate more as the relative power advantage enjoyed by the United States wanes, and others feel more capable of tilting against the United States. The strategy has made the United States the center of political attention in a world undergoing rapid social, political, and economic change. The United States is sufficiently strong and omnipresent to be blamed by the losers but not strong enough to do much affirmatively to alleviate the stresses and strains that rapid development often causes. The strategy underrates the enduring power of nationalism and the inclination of self-aware peoples to resist direction by outsiders. And the strategy overlooks the extent to which the capacity for organized violence has diffused, rendering even relatively small counterinsurgency efforts hugely expensive. Finally, the strategy leads directly to the issuance of blank security checks to U.S. allies. Some cash the check for increased welfare spending in their own societies, as do the European allies and Japan; they cheap ride. Others cash the check to pay for their own extravagant security adventures; clients as different as Afghanistan and Israel drive recklessly. For all these reasons, Liberal Hegemony has proven an expensive and counterproductive grand strategy.

I have outlined an alternative grand strategy, military strategy, and accompanying force structure. Restraint sketches a more limited set of political objectives abroad and more limited means to achieve them. The objectives are best supported by a more focused military strategy and force structure—a maritime strategy underpinned by a strong navy, a smaller but more agile marine corps, and a long armed air force. A global network of access agreements and carefully chosen but largely unmanned base infrastructure would facilitate the movement of these forces. This would provide a sound defense against current threats, an insurance policy against sudden changes in international politics, and a firm foundation on which to construct additional military power if that ever proves necessary. The force structure to support this strategy provides the ability to police the legal and harass the illegal trade in nuclear materials. It allows the United States to interdict the movements of nonstate actors, and to organize disruptive raids against them should they find havens in ungoverned or undergoverned spaces. Finally, should major security threats emerge, command of the sea would permit the United States to organize coalitions, assemble military power from disparate contributors, and even facilitate the mobilization of allied economies for war, while complicating the efforts of adversaries to do the same. The termination of U.S. wars and the paring of U.S. force structure should make it possible to sustain this military strategy for the long term for 2.5 percent of GDP or less, barring a major increase in global tensions. This would save a great deal of money, which the country could use to address other pressing problems.

Politically, the United States must do less. It must focus on the most important dangers to its security. The greatest danger to U.S. sovereignty is a hegemon on the Eurasian land mass. This danger is low now, but the United States must always be prepared to counter it should it reemerge. If such a challenge does reemerge, however, the United States ought not manage it like it did the Cold War, shouldering the bulk of the burden, because the U.S. relative power position is unlikely to be as favorable. The United States will need real allies, not the security dependencies it has now. Moreover, it would be foolish to reenact the riskiest aspect of the Cold War, the effort to extend nuclear deterrent guarantees to nonnuclear countries threatened by a great power. Paradoxically, to have capable allies later, preparations must start now. The only way to prepare them is to renegotiate and reduce the current level of U.S. commitment.

The greatest short-term dangers to the United States are to be found in the diffusion of the ability to produce weapons of mass destruction, especially nuclear weapons, and

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*Restraint, by Barry Posen.  
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## A Sustained Debate

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the possibility such weapons could fall into the hands of nonstate actors of a type that cannot be deterred from using them. These twin problems are difficult to address, and perfect insurance is unavailable. Nevertheless a strong nuclear retaliatory force can deter nation-states from attacking the United States or from giving nuclear weapons away. A sustained and measured policy to retard the spread of nuclear weapons technology, and to encourage new nuclear states to adopt best practices to secure their materials, can buy a great deal of security at modest cost. Finally, sustained attention from U.S. intelligence agencies, and sustained cooperation with the intelligence agencies of like-minded states, all of whom have a very strong collective interest in not being victims of nuclear terrorism, should permit the suppression of nihilistic groups and help deny them access to nuclear weapons.

The United States will need to give up some objectives. The coercive reform and political reorganization of other countries has proven expensive and “success” has proven elusive. The often asserted connection of these projects to the elimination of groups such as Al-Qaeda is tenuous. If the United States forgoes the objective of coercive reform, it can forgo many of the ground forces retained for this purpose. This is where the biggest savings are to be found. The United States will also need to give up or reduce its military guardianship of rich countries that are well able to defend themselves. The relationship with Europe must be transformed entirely. The relationship with Asian allies, especially Japan, must be reformed significantly. Japan can make a much bigger contribution to its own defense. Giving up these objectives means that some nuclear proliferation would be tolerated. Preventive nonproliferation wars that depend for their ultimate success on deep changes in the politics and government of target states will often prove to be more costly than they are worth. And trying to keep Germany, or Japan, or the Republic of Korea from getting nuclear weapons if they ever feel truly threatened will implicate the United States in extended deterrence commitments that in the past have had an unfortunate property. They have pushed the United States to pursue conventional and nuclear capabilities that are ultimately destabilizing. ■

## Interview with Frank Gavin

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start a broad conversation about what we are doing right and where there is room for change.

**précis:** *How do you see your work evolving here at MIT? What are some of your future projects?*

**FG:** I am especially interested in the intellectual history of international relations and security studies, particularly since 1945. I am very interested in how the study of war and great power politics, nuclear weapons, etc. evolved in the way it did, and how we arrived at where we are now. In addition, I am also interested in thinking about, in a more rigorous way, how historical analysis can be used in political science and policy-making. Most people recognize that using the past is useful, but historians have not been explicit about their tools and methods. I'd like to think about how we can explicitly make the case for historical methods and their application to policy. And finally, I'd like to explore how the United States has thought about nuclear weapons and grand strategy since the end of World War II. The U.S. has made many policy choices that few people predicted, and I think the nuclear threat has driven a lot more of grand strategy than we have realized. ■



## British Journalist Joins CIS

Louisa Reynolds, an independent journalist based in Guatemala City, Guatemala, has been selected as the 2014–15 IWMF Elizabeth Neuffer Fellow. The award is offered through the International Women’s Media Foundation (IWMF) and is sponsored in part by CIS.

Reynolds is the tenth recipient of the annual fellowship, which gives a woman journalist the opportunity to develop expertise while focusing on human rights journalism and social justice issues.



Louisa Reynolds, 2014–15 Neuffer Fellow

Reynolds, 33, covers human rights cases, femicide and gender-based violence in Guatemala. “I strongly believe that journalism can act as a powerful instrument for change by highlighting injustice and also by finding stories that prove that a transformation is possible,” she said. Reynolds has contributed regularly to *Latinamerica Press / Noticias Aliadas*, *Inter-Press Service*, *Plaza Pública*, *Proseco*, *El Periódico*, and other publications since 2011. Previously, she was a reporter for *El Periódico* and an editor for *Inforpress Centroamericana*.

Reynolds arrived in September and will spend the seven-month fellowship as a research associate in residence at CIS. She will also complete internships at *The Boston Globe* and *The New York Times*.

Ellen Clegg, president of the Boston Globe Foundation and Globe spokeswoman, said, “Each Neuffer fellow embodies the core principles that our beloved colleague, Elizabeth Neuffer, held dear: courageous journalism, boundless curiosity, and a burning desire to shine a light on injustice. Ten years out, we’re proud to see how the fellows have made their mark on the world.”

“It’s truly an honor for CIS to host the Neuffer fellows each academic year. Louisa is yet another example of a courageous journalist whose work is transforming lives. We look forward to her time at MIT,” said Richard Samuels, Ford International Professor of Political Science and director of CIS.

The Elizabeth Neuffer Fellowship is a project of the Elizabeth Neuffer IWMF Fund, which is generously supported by Peter Canellos, Mark Neuffer, Carolyn Lee, the John S. and James L. Knight Foundation, the Boston Globe Foundation, The New York Times Company Foundation, Boston Scientific, MIT Center for International Studies and friends and family of Elizabeth Neuffer. ■

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# 3 Questions: Kenneth Oye on the Regulation of Genetic Engineering

by Peter Dizikes, MIT News Office



Kenneth Oye

Imagine a scientific technique that would alter the genes of mosquitos to render them unable to transmit malaria. Some day, you may not need to: Scientists have made notable progress in recent years in editing the genomes of organisms, substituting in variants of certain genes; these variants could then propagate throughout a population. While such changes could have benefits—such as limiting malaria transmission—it’s also possible to imagine unintended negative consequences. Kenneth Oye, an associate professor of political science and engineering systems who studies government regulation and directs the Center’s Program on Emerging Technologies, is lead author of an article in *Science* making the case that the U.S. government, and international groups, need to adapt their procedures to enable more robust discussion and evaluation in this field. *MIT News* asked him to discuss the topic.

**Q.** What are “gene drives”?

**A.** Genes in sexually reproducing organisms typically have a 50 percent chance of being inherited. Some naturally occurring genes have evolved methods of significantly improving these odds: These selfish genes can increase in relative frequency in a population, even while reducing the likelihood that an organism will reproduce. These “gene drives” can spread through an entire population of sexually reproducing animals or plants. The genomes of almost every sexually reproducing species contain either an active gene drive or the broken remnants of gene drives.

Ten years ago, Austin Burt of Imperial College London suggested that gene drives might be purpose-built to alter natural populations by adding, deleting, or editing genes in target species, such as mosquitos. But practical problems—especially the difficulty of precisely editing genomes to create engineered drives—stymied realization of Burt’s vision. This is about to change. The recent development of a powerful genome-editing tool called CRISPR/Cas9, by a team at Harvard University, MIT, and the University of California at Berkeley, allows scientists to insert, replace, delete, or regulate genes in many different species.

The application of CRISPR/Cas9 is likely to enable development of purpose-built gene drives in the next few years. Potential gene-drive applications include reprogramming insects to limit malaria and other insect-borne disease; reversing pesticide and herbicide resistance; and controlling invasive species. Gene drives might even be developed to “undo,” in part, genetic alterations that produce unwanted side effects.

**Q.** What are some regulatory challenges in dealing with a powerful new technique like this?

**A.** Simply put, engineered gene drives do not fit comfortably within existing regulatory frames.

Animal applications of gene drives would fall under Food and Drug Administration [FDA] purview as “veterinary medicines.” Current FDA guidance defines genetically engineered DNA constructs intended to affect the structure and function of an animal as veterinary medicines and requires developers to demonstrate that such constructs are safe for the animal. It is not clear how this requirement can be reconciled with projected uses of drives including the local suppression of invasive species.

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Or consider a hypothetical security case: In theory, gene drives could be developed to harm populations of commercial animals and plants. However, the development of such gene drives would not fall within the scope of oversight of U.S. policy on Dual Use Research of Concern, which calls for oversight of research with potential security concerns. The shipment of such drives would not be covered by current U.S. export-control regulations or Australia Group guidelines on standardization of national biosecurity export controls. All rely on lists of infectious bacteriological and viral agents to define their operational scope, not sexually reproducing plants and animals.

Finally, the potential environmental effects of gene drives are global. But the U.S. and Canada are not signatories to applicable instruments, including the Cartagena Protocol on biosafety [an international agreement]. And other mechanisms for managing environmental effects are not in place.

The prospective development of gene drives highlights the need for regulatory reassessment and reform at both domestic and international levels.

**Q.** What do you propose as a better way to address potential risks of this form of genetic engineering?

**A.** We favor early engagement with risks to provide time for research, regulatory reform, and discussion.

First, our initial take on risks suggests that drives have limited potential to harm humans and that risks to animals and plants will be specific to species and alterations. But this assessment is provisional. Our *Science* article recommends 10 actions that should be taken in advance of release. These include research to improve understandings of gene-drive properties and effects, measures to address identified risks, and hedges in case our initial assessments are wrong.

Second, security regulations should move beyond lists of infectious bacteriological and viral agents toward a functionally defined approach. The threat posed by select agents is serious and should remain a focus of policy. However, regulations and conventions constructed to address these threats do not provide a framework for addressing security implications of gene drives and other advanced biotechnologies.

Third, effective risk governance requires informal partnerships as well as official regulation. Our workshops have included synthetic biologists, evolutionary ecologists, risk analysts, and social scientists from MIT, Harvard, Boston University, Arizona State University, the Woodrow Wilson International Center for Scholars, the Environmental Protection Agency, the National Science Foundation, as well as nongovernmental organizations and biotechnology firms. Other informal, multidisciplinary partnerships cutting across organizations with diverse interests can play a constructive role.

Finally, the idea that discussion of benefits and risks should be tightly controlled is not the right model. The implications of development and use of gene drives extend far beyond the academy. We see our *Science* article as an open invitation to broader public discussion, not as the last word. ■

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# Exploiting U.S. Control of the Commons in a U.S.–China Conflict

by Fiona Stephanie Cunningham



*Fiona Cunningham is a PhD student in international relations and comparative politics focusing on nuclear strategy, Chinese foreign policy, and Asian security.*

China's investments in military technology designed to keep great power militaries out of its maritime periphery are viewed with increasing concern by the U.S. foreign policy community. As these investments mature into a Chinese "anti-access/area denial" (A2AD) capability, one of the most pressing questions being asked is: how can the United States maintain its freedom of action in the Western Pacific while minimizing the risk of escalation with China? Though two competing views have emerged in this debate, both positions agree on one thing: exploiting U.S. control of the commons through a blockade of Chinese merchant shipping would be central to any strategy. For advocates of one option, known as the "AirSea Battle Concept," a distant blockade would be coupled with an offensive campaign to neutralize Chinese A2AD.<sup>1</sup> On the other hand, proponents of the alternative "offshore control" option argue that a blockade could be used to choke Chinese commerce beyond the range of the A2AD threat.<sup>2</sup>

Despite the contribution of a blockade to either U.S. strategy, little work has been done to evaluate the feasibility of such a campaign. Indeed, existing analyses of blockade options caution that the campaign would only be useful under very limited circumstances,<sup>3</sup> if ever,<sup>4</sup> as it is too disruptive to third party shipping, too reliant on allies, too ineffectual, or too escalatory. My research examines the viability of a U.S. blockade of Chinese shipping in a limited future conflict in Northeast Asia, for example on the Korean Peninsula. But, taking into account the criticism of the blockade option in existing analysis, I consider a scenario in which all Southeast Asian countries choose to remain neutral and the United States minimizes the disruption to third party shipping. I then ask a straightforward, but critical question: in such circumstances, does the United States currently have the capabilities to implement an effective blockade for long enough to hurt China?

Although it would be a stretch, I find that United States could execute such a finely calibrated blockade. The United States could blockade the Malacca Strait and the three other alternative straits used by China to move between the Indian Ocean and the South China Sea. It could do so from outside of the South China Sea, with minimal disruption to third party shipping, and China would be virtually powerless to stop the blockade. Of course, the blockade option is even more viable if the U.S. is able to operate within the South China Sea, with the assistance of allies, or if it is willing to close the straits to third party shipping as well. However, if China is powerless to contest an effective, distant economic blockade, it will find other ways closer to home to press the United States to lift the blockade.

## Chinese Dependencies and Blockade Objectives

China imports a large proportion of oil, natural gas, and minerals to fuel its economy, and relied on exports for between 10 and 20% of its GDP in the past decade.<sup>5</sup> Chinese resource imports from the Middle East—mainly oil and gas—must pass through one of three straits to pass from the Indian Ocean to the South China Sea.<sup>6</sup> Taking into account Chinese daily oil consumption, domestic production and strategic reserves, but not rationing, overland suppliers, and the effect of a blockade on other essential commodity imports, the United States would need to sustain a blockade for at least a month and a half to hurt China economically.

The Malacca, Lombok, and Sunda Straits are natural shipping bottlenecks at which the U.S. Navy could deploy a blockade, along with an alternative route around the east coast of Australia. If the United States wishes to minimize disruption to third party shipping, it would need to identify commercial vessels of any flag with cargo coming in or out of

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China through any of the four waterways. Ideally, it would then send these ships back to where they came from, while allowing all other vessels to continue on to their destinations outside of China.

### **Blockade Precedent**

Given these parameters, the question arises: has the U.S. done anything like this before? Indeed, the multilateral maritime interception operations in the Persian Gulf, which enforced sanctions on Iraq from 1990 until 2003, provide some critical insights into the feasibility of this type of blockade. During the first seven months of those operations, multilateral forces questioned nearly 8000 vessels for items prohibited by UN sanctions (nearly a quarter of all the vessels passing through the straits). Each day, the UN coalition conducted on average 36 queries or boarded and searched five merchant vessels, and occasionally diverted a vessel that was carrying contraband and refused to return to its origin. Special forces teams conducted 11 “takedowns” of vessels that resisted boarding.<sup>7</sup>

Based on these metrics, the United States would need 20 surface ships to query a quarter of the Malacca Strait’s daily traffic of just over 200 ships, and an additional nine surface ships to cover the other straits.<sup>8</sup> In addition, the United States would need to deploy the following capabilities at each of the four straits: an aircraft carrier to provide air support for the blockade, an attack submarine to protect the surface forces from hostile submarines, special forces teams for takedowns, and supply ships and oilers to sustain the operation. P-8 maritime patrol aircraft, essential for querying vessels in the Persian Gulf, could cover the airspace over the straits from airfields in northern Australia, with tanker support.

The Southeast Asian blockade would, however, differ from the Iraqi campaign in important ways. In some respects, the process of querying merchant ships should be simpler and more efficient. U.S. forces would only need to identify and turn away ships with cargo bound for or coming from China, without conducting the time-consuming searches for hidden contraband required for the Iraqi campaign. Commercial shipping may also decline dramatically due to the primary conflict in northeast Asia. On the other hand, the Chinese-owned merchant fleet is much larger than the Iraqi fleet.<sup>9</sup> China should be expected to use creative means such as small vessels or third party vessels to circumvent the blockade, making the interceptions more complicated and less effective. Diverting a recalcitrant vessel to a friendly port, which could be as far away as Australia, could take over a week.

### **The Chinese Response**

For the next few years, the only capabilities that China is likely to be able to deploy to the Southeast Asian straits to contest the blockade directly are its submarines. A Chinese submarine campaign to deter the United States from continuing the blockade would, at least, need to disable an aircraft carrier or a handful of surface warships, depending on what is at stake in the conflict. China’s prospects in such a campaign would depend on the readiness, quality and quantity of its submarines, their ability to evade U.S. anti-submarine warfare (ASW) efforts, and their ability to accurately fire and evade the defenses of their U.S. targets. The People’s Liberation Army Navy currently has a fleet of 61 submarines.<sup>10</sup> Location and readiness would likely constrain the number of submarines China could dispatch to attack the blockading forces to 20. Depending on the effectiveness of U.S. ASW barriers, anywhere from two to 15 of those boats could have the opportunity to fire upon the U.S. blockading forces, although none may survive the return voyage to China.<sup>11</sup> Each boat would have the opportunity to fire at most two torpedoes or their eight anti-ship cruise missiles. U.S. forces could therefore face a substantial amount of Chinese firepower. Although their defenses may be highly effective, one successful hit with a torpedo or a handful of cruise missiles could be enough to put a carrier or destroyer out of action.<sup>12</sup> Moreover, if China receives some

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## U.S. Control of the Commons

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warning of the blockade fleet and U.S. forces are unwilling to fire the first shot, the Chinese submarine force could inflict significant damage on the blockade.<sup>13</sup>

### Policy Implications and Conclusion

Taken together, my research indicates that the U.S. alone would be able to blockade Chinese merchant shipping in the Southeast Asian straits, and would effectively force Chinese submarines into a suicide mission if they wanted to contest the blockade directly. Moreover, the campaign would become even more viable if the U.S. had allied support in Southeast Asia. Diverting recalcitrant ships to a Singaporean port or flying maritime patrol aircraft out of a Philippine airfield would significantly reduce the force requirements and time taken for the U.S. to implement a blockade. In other words, an American-led blockade is a militarily feasible and effective means of pressuring China economically, while staying beyond the reach of both its A2AD and naval forces.

However, this analysis necessarily focuses on the military element of a confrontation, and says little about the political choices that such a blockade might induce in China. As Thomas Schelling noted, a blockade is a particularly effective form of coercion as it forces one's adversary to make the decision to escalate.<sup>14</sup> But if China is both unable to contest the blockading forces and unwilling to capitulate to U.S. demands, it may instead attack those U.S. or allied targets that are within range of its conventional missiles, aircraft or naval assets. Thus, despite the military feasibility of a blockade, policymakers and analysts would need to be equally careful in designing the diplomatic demands attached to it. ■

### REFERENCES

- 1 Jan Van Tol et al, "AirSea Battle: A Point-of-Departure Operational Concept," Center for Strategic and Budgetary Assessments, May 18, 2010.
- 2 See T X Hammes, "Offshore Control: A Proposed Strategy for an Unlikely Conflict," INSS Strategic Forum No. 278, June 2012; Douglas C Peifer, "China, the German Analogy, and the New AirSea Operational Concept," *Orbis*, Vol. 55, Issue 1 (Winter 2011), pp. 114–131.
- 3 See Sean Mirski, "Stranglehold: The Context, Conduct and Consequences of an American Naval Blockade of China," *The Journal of Strategic Studies* (2013) Vol. 36, No. 3, pp. 385–421.
- 4 Gabriel B Collins and William S Murray, "No Oil for the Lamps of China?" *Naval War College Review*, Vol. 61, No. 2 (Spring 2008) pp. 79–95.
- 5 Elizabeth C Economy and Michael Levi, *By All Means Necessary: How China's Resource Quest is Changing the World* (Oxford University Press, 2014) p. 23, 33.
- 6 In 2013, 86% of Chinese crude imports passed through these three straits (see U.S. Office of the Secretary of Defense, *Military and Security Developments Involving the People's Republic of China: Annual Report to Congress* (2013), p.80.)
- 7 "Conduct of the Persian Gulf War," Final Report to Congress, April 1992, p. 101.
- 8 Daily shipping data is drawn from Centre for the Straits of Malacca, "Frequently Asked Questions," Maritime Institute of Malaysia, Mohd Hazmi bin Mohd Rusli, "Maritime Highways of Southeast Asia: Alternative Straits?" RSIS Commentary No. 024/2012 (2012) <http://www.rsis.edu.sg/publications/Perspective/RSIS0242012.pdf>.
- 9 In 2010 China had 3209 merchant ships, while Iraq had only 40 vessels in 1990. *Shipping Statistics Yearbook 2010* (Institute of Shipping Economics and Logistics, 2010) p. 240.
- 10 International Institute of Strategic Studies (IISS), *Military Balance 2013* (Routledge, 2013) p. 289.
- 11 The figure of 15 assumes that the ASW barriers are only 10% effective in tracking Chinese submarines, while the figure of two assumes that those barriers are 50% effective. 10% effectiveness is a conservative Cold War estimate, which is extremely conservative given the advances in U.S. ASW technology since the Cold War, while Chinese submarines are not yet as quiet as Soviet submarines at the end of the Cold War. Barry R Posen, *Inadvertent Escalation* (Cornell University Press, 1989), p. 174. The 50% effectiveness figure is an optimistic assessment for U.S. ASW forces hunting Chinese ballistic missile submarines today, which are noisier than the Chinese submarines that would be deployed in this scenario. See Toshi Yoshihara and James R

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Holmes, *Red Star Over the Pacific: China's Rise and the Challenge to U.S. Maritime Strategy* (Naval Institute Press, 2010) p. 141.

12 Wayne P. Hughes, *Fleet Tactics and Coastal Combat* (2nd ed, Naval Institute Press, 2000) p. 159–60; John C Schulte, “An Analysis of the Historical Effectiveness of Anti-Ship Cruise Missiles in Littoral Warfare,” Master’s Thesis, Naval Postgraduate School, Monterey CA, September 1994, p. 31.

13 The effectiveness of U.S. ASW barriers depends on the speed with which detection points are manned by ships to track and destroy Chinese submarines, and whether those ships are authorized to destroy Chinese submarines when they detect them. Presumably, the United States would wait for a Chinese submarine to fire on U.S. blockading forces before authorizing ASW forces to destroy submarines on detection. If China received any strategic warning of the blockade it could surge its forces into the open ocean before the US is able to deploy the forces necessary for an ASW barrier. Even assuming that Southeast Asian states wished to remain neutral in such a campaign, U.S. surface ships are currently deployed in the region, such as the four Littoral Combat Ships in Singapore, and could not be prevented from leaving port to establish an ASW barrier at the outset of the campaign. It would otherwise take over a week to deploy sufficient capabilities for ASW purposes at each strait from Guam. It would only take two or three days for Chinese submarines traveling at top speed to exit into the Indian Ocean. Protecting U.S. forces from the first shots in a Chinese submarine counter-coercion campaign therefore hinges on the U.S. ability to keep its forces in the region, or the campaign quiet.

14 Thomas C Schelling, *Arms and Influence* (Yale University Press, 1966) p. 69.

## In Memoriam JoAnn Carmin

JoAnn Carmin, an associate professor of environmental policy and planning at MIT, died on Tuesday after an extended illness. She was 56 years old.

Carmin had been on the faculty of MIT’s Department of Urban Studies and Planning since 2003 and she was the founding director of the Center’s Program on Environmental Governance and Sustainability. Her work broke new ground in examining the relationship between environmental problems and governmental actions. In particular, over the last decade Carmin studied the process through which cities around the world were responding to climate change.

Carmin’s research relied on intensive fieldwork in cities, and on pioneering global surveys about the responses of urban leaders. She conducted extensive research on urban planning for climate change in Durban, South Africa, and Quito, Ecuador, among other places, describing in detail how local officials either found effective new ways of pushing climate planning forward, or ran into significant challenges.

Carmin was an active and energetic teacher who created classes at MIT on subjects including environmental justice; disaster vulnerability and resilience; urban climate adaptation; and rebuilding New Orleans in the aftermath of Hurricane Katrina. She served as a thesis advisor or reader for dozens of graduate students.

“JoAnn was a great colleague, smart, savvy, and deeply committed to doing good in the world. She came to us with an idea for a new program, which she headed and made into a success—the Program on Environmental Governance and Sustainability. It was focused on student research, and I’m sure she made a huge difference in many students’ lives,” said John Tirman, executive director and principal research scientist at CIS.

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### **African Technology and Innovation Leaders Visit MIT**

High-ranking African leaders in science, technology and innovation gathered at MIT on September 23 and 24 to explore areas for mutual cooperation. The visit is a reflection of the rising interest among African countries in putting science and technology at the center of their development process. As part of their visit, the African leaders participated in a Starr Forum event “Africa Rebooted: Science Technology, and Innovation in Development.” This public event was hosted by the Center for International Studies and the Department of Urban Studies and Planning.

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### **CIS Welcomes Mohamed ElBaradei**

The Center welcomed Mohamed ElBaradei on December 8 for an off-the-record conversation about Egypt and the Middle East, as well as nuclear issues. ElBaradei was director general of the International Atomic Energy Agency from 1997 to 2009. He and the agency shared the Nobel Peace Prize in 2005. After his tenure at IAEA, he became involved in the politics of his homeland, Egypt, serving as a leading advocate for democratic reform, and, briefly as acting vice president in 2013. During the period 2011-2013, ElBaradei played a prominent role in the Egyptian uprising and quest for democracy. He holds a doctorate in international law from New York University Law School where he was also an adjunct professor.

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### **Malachy Sumaila on Boko Haram**

Malachy Sumaila, a lecturer from Ahmadu Bello University in Northern Nigeria and currently at MIT as a distinguished MIT-Empowering the Teachers fellow, shared his experiences with Boko Haram from the perspective of his university, community and family. The talk was hosted by the MIT Africa Program.

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### **Bustani Middle East Seminars**

The Emile Bustani Middle East Seminar hosted two talks: “The Islamic State and the Future of Iraq: Terrorism, Sectarianism, and Democracy,” with Eric Davis (Department of Political Science, Rutgers University); and “Gaza: Inventions and Illuminations,” with Sara Roy (Center for Middle Eastern Studies, Harvard University).

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### **SSP Wed Seminars**

The Security Studies Program’s lunchtime lectures included: Nora Bensahel, Center for a New American Security, on “Iraq, Syria, and the Role of the U.S. Military”; Shai Feldman, Brandeis University, on “The IDF’s Doctrine and Force



Structure: The Effects of the Gaza War”; Paul Staniland, University of Chicago, on “Governing Coercion: Armed Politics and the State in South Asia”; and Angela Kane, UN High Representative for Disarmament Affairs, on “The United Nations and Disarmament: Old Problems, New Opportunities, and Challenges Ahead.”

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### **Starr Forums**

The Center hosted multiple Starr Forums this fall, including: a screening of *Documented* and a conversation with the filmmaker Jose Antonio Vargas; a discussion on U.S. grand strategy with the following scholars: Barry Posen, Ford International Professor of Political Science at MIT and the director of MIT’s Security Studies Program; Frank Gavin, Frank Stanton Chair in Nuclear Security Policy studies and professor of political science at MIT; Stephen Walt, the Robert and Renee Belfer Professor of International Affairs at Harvard; and Jacqueline Hazelton, assistant professor at the Naval War College. The forum was moderated by Ken Oye, who holds a joint appointment in political science and engineering systems. A talk on “Palestine Now” with Husam Zomlot, a Palestinian and specialist on Middle East affairs. And a book talk with the author Mary Sarotte, a professor of history at the University of Southern California, on her recent monograph, *The Collapse: The Accidental Opening of the Berlin Wall*. Introduction and commentary was made by Noam Chomsky.

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### **MISTI Excellence Awards**

Each year MISTI presents three types of awards to outstanding students who embody the mission and spirit of MISTI. MISTI provides a \$1,000 award to the honorees. The 2014 awards and recipients are: the MISTI Ambassador Award went to the following students: Akanksha Midha, Sloan MBA, Global Startup Labs (Sri Lanka) Camille Richman, junior in MechE, MIT-Israel and MISTI 2.0 Programs. The MISTI Achievement Award, presented to an MIT student or recent alumnus who has made a particularly noteworthy contribution to his or her host organization in the course of his or her internship, went to Joseph Chism, Sophomore in Management Science and Mathematics, MIT-Russia Program. The Suzanne Berger Award for Future Global Leaders, which is presented to a graduating senior who, through his or her coursework and practical experience abroad, has demonstrated his or her potential to become a global leader went to Jellimo Maswan, junior in EECS, MIT-Germany Program; and for the first time, MISTI honored a student with the Clarisse Lebel Internship in 2014. This award went to Sasha Churikova, sophomore in Physics, MIT-France Program.

## People

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Assistant Professor in the Department of Political Science **Regina Anne Bateson**'s dissertation *Order and Violence in Postwar Guatemala* won APSA's 2014 Gabriel A. Almond Award for the best dissertation in comparative politics and was presented at the American Political Science Association annual conference in August. She also presented a paper on vigilantism at CIDE (in Mexico City) in August, and participated in a workshop on Socialization and Organized Political Violence at Yale in October.

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PhD candidate **Mark Bell** presented "Beyond Emboldenment: The Effects of Nuclear Weapons on State Foreign Policy" at the Belfer Center for Science and International Affairs at Harvard University, and at the Center for International Security and Co-operation at Stanford University, both in December.

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PhD Candidate **Fiona Cunningham** presented a paper, "Calculating Dependence: Soviet Security Guarantees and China's Pursuit of Nuclear Weapons," at the Joint Annual Conference of the International Security Studies Section of ISA and the International Security and Arms Control Section of APSA in Austin in November.

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Security Studies Program Alumnus **Eugene Gholz** presented "The Defense Industry and the Strategic Pivot to Asia" at the Tower Center's 7th annual National Security Program at Southern Methodist University. He also presented "Rare Earth Elements: Simple Commodity of Strategic Vulnerability" at the USAsia Center at the University of Western Australia, and "Emerging Technologies and Strategic Balance in Asia" at the Australian National University. In October, he spoke on "Organizations for Science and Technology Advice: Lessons from the U.S.?" at the University of Manchester Business School Conference on Mission-Oriented Science and Technology Systems.

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Security Studies Program Research Affiliate **Kelly Greenhill** gave talks on her research at the University of Oxford, the University of Cambridge, the Swedish Institute for International Affairs, the University of Texas-Austin, the University of California-San Diego, and SSP's Seminar XXI. She also participated in a meeting on the meaning of the nuclear revolution at the former "Continuity of Government" facility in West Virginia.

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Senior Adviser **Jeanne Guillemin** was an invited panelist at a meeting on the history of the Biological Weapons Convention organized jointly by the University of Sussex (SPRU, Brighton, UK) and University College London, Department of Science and Technology Studies in October. She was also an invited panelist at the MIT Global Health and Medical Humanities Initiative inaugural session on "Experiencing Ebola."

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Security Studies Program Alumnus **Robert Haffa** presented "Joint Intelligence, Surveillance and Reconnaissance in Contested Airspace" at the Defense IQ-sponsored conference on Airborne ISR and C2 Battle Management.

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Security Studies Program Alumnus **Phil Haun** has been appointed Professor of Aerospace Studies at Yale University.

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CIS Research Fellow **Jerome Klassen** delivered a guest lecture entitled, "From Permeable Fordism to Transnational Neoliberalism: Canada and the World Economy," to a conference organized by the University of Toronto's Latin American Studies Program.

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Security Studies Program Alumnus **Greg Koblentz** was interviewed on the Ebola outbreak by *Ming Pao Daily*, CTV, and “Background Briefing with Ian Masters.”

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Security Studies Program Research Affiliate **Peter Krause** presented “The Impact of Education on Attitudes about Terrorism” at the Society for Terrorism Research Conference in September. He also spoke at the Chilton Club on “Syria and U.S. Foreign Policy in the Middle East.”

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Security Studies Program Alumni **Jennifer Lind** (PhD '04) and **Daryl Press** (PhD '01) spent the fall on sabbatical in Tokyo. Lind was a visiting fellow in the Japan–U.S. Opinion Leaders Forum at the Sasakawa Peace Foundation, and a visiting scholar at Waseda University. Press held the Council on Foreign Relations Hitachi Fellowship and was based at the National Institute for Defense Studies.

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CIS Research Affiliate **Tom Neff** was profiled in “A Farewell to Arms” in the *MIT Technology Review*, and in “The Power of a Transformative Idea” in Lewis and Clark’s *Chronicle Magazine*.

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Security Studies Program Alumna **Olga Oliker** assumed the role of Director, RAND Center for Russia and Eurasia in November.

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Security Studies Program Alumnus **Michael Ottenberg** (MS '79) has been elected to the Military Operations Research Society Board of Directors.

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PhD student **Reid Pauly** presented a campaign analysis paper, “Cold and Alone: A Norwegian and Russian Sea Control Campaign in the Arctic,” at a Conference of Defence Associations Institute symposium at the Royal Military College in Kingston, Ontario in October.

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Ford International Professor of Political Science and Director of the MIT Security Studies Program **Barry Posen** presented a book talk for *Restraint: A New Foundation for U.S. Grand Strategy* at the Tower Center, Southern Methodist University, the U.S. Army War College, the Koch Foundation in Washington, D.C., Notre Dame University, and the Woodrow Wilson Center for Scholars. In September, he was a panelist at the Conference on U.S. Foreign Policy at the London School of Economics and, in October, spoke at the CIS Star Forum “Whither Grand Strategy.” He also debated the grand strategy of Restraint with Robert Kagan at the Brookings Institution in Washington, DC and was a speaker at the Stanton Foundation Nuclear Fellows Conference. He delivered the Kenneth Waltz Memorial Lecture at Columbia University. In November, he was a participant at the Conference on Cross Domain Deterrence, hosted by the Institute for Global Cooperation and Conflict at the University of California, San Diego.

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Senior Advisor at the Security Studies Program **Robert Ross** was a distinguished speaker at the Rajaratnam School of International Studies in Singapore.

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# EndNotes

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PhD candidate **Amanda Rothschild** received the Harry Middleton Fellowship in Presidential Studies. The fellowship, created by Lady Bird Johnson to support scholarship in presidential studies and to honor Harry Middleton, is awarded to up to two scholars annually whose research highlights how history can inform current and future policy issues. Rothschild also presented “Tipping Theory: The Origins of Great Britain’s Suppression of the Slave Trade and the Implications for Today’s Collective Action Problems,” at the 2014 ISA International Security and Arms Control Section and International Security Studies Section Conference in November.

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Security Studies Program Alumnus **Josh Rovner** received a National Science Foundation award for “Exploring Trade-Offs in Cyber Offense and Defense through the Lens of Computer and Political Science”. He presented “Cross-Domain Deterrence and the Peloponnesian War” at UC San Diego and ISSS/ISAC in November. He also presented “Hegemony, Force Posture, and the Provision of Public Goods” at the ISSS/ISAC, and spoke at the Hatton Summers Foundation on “America Abroad: Examining U.S. Foreign Policy and Current World Crises.” In October, he presented “The Way Forward: Reform and the Future of Intelligence” at the University of Texas, “Debating the Obama Administration’s Foreign Policy” at the Alexander Hamilton Society, “Cybercrime and Cyberattacks” at the North Texas Crime Commission, and was interviewed by NPR’s Think with Krys Boyd on “Al Qaeda Diminished.”

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Security Studies Program Research Affiliate **Carol Saivetz** presented “Russia and its Neighbors After the War in Ukraine” at the Association for Slavic, East European, and Eurasian Studies in November. In October, she was a participant in “Conversations on Europe: 1914 Revisited? The EU-US-Russia Triangle” at the University of Pittsburgh and “Geopolitics in the Caucasus 2014” at Northeastern University. In September she presented “Black Sea Security Challenges After Ukraine” at Tufts University and “Ukraine in Crisis: Impact on the Jewish Community” at the American Jewish Joint Distribution Committee.

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Ford International Professor of Political Science and Director of the Center for International Studies **Richard Samuels** was named Albert Einstein Visiting Fellow at the Free University of Berlin, where he will lead a research group focused on East Asian Security. He has also been named a member of the US-Japan Eminent Persons Group, Chaired by former US Senate Majority Thomas Daschle, former Speaker of the US House of Representatives Dennis Hastert, former Prime Minister Yasuo Fukuda, and former Keidanren Chairman Fujio Mitarai, 2014–2015. In November, he presented “Evaluating Japan’s New Secrecy Law,” to the Council on Foreign Relations’ Working Group on Japanese Nationalism in Washington, DC and “Paths to Constitutional Change in Japan,” at the Reischauer Institute Symposium on the Japanese Constitution, Harvard University. In October, he delivered the keynote speech “Using History in Contemporary Japan,” to the annual Japan conference at the Australian National University, and delivered the dinner address at the annual meeting of the Harvard University Reischauer Institute. He also presented “Japanese Grand Strategy: The Moving Parts,” at the US Naval War College, Newport, RI, the Kennedy School of Government, the USAsia Centre, University of Western Australia, the United States Studies Centre, The University of Sydney, and George Washington University. In September, he presented “Political Change in Japan” to the annual meeting of the National Association of Japan America Societies, San Diego.

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Former Security Studies Program Military Fellow, Air Force Colonel **Karl Schloer**, pinned on his new rank effective October 2014 in a ceremony at Wright Patterson Air Force Base, Ohio.

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Security Studies Program Senior Advisor **Joel Sokolsky** returned to his position as Professor of Political Science at the Royal Military College of Canada, after stepping down as Principal of the Royal Military College of Canada and spending the year at the Killam Visiting Professor of Canadian Studies at Bridgewater State University.

## *Published*

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**Noel Anderson**, PhD candidate

“Peacekeepers Fighting a Counterinsurgency Campaign: A Net Assessment of the African Union Mission in Somalia,” *Studies in Conflict & Terrorism* Vol. 37, Iss. 11, 2014.

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**David Blum**, Security Studies Program Alumnus

*Counterterrorism and Threat Finance Analysis During Wartime* (Lexington Books, 2015).

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**Eugene Gholz**, Security Studies Program Alumnus

“Military Innovation and the Prospects for Defense Led Energy Innovation” *Issues in Science and Technology* Vol. 30, No. 2 (Fall 2014), pp. 41–54.

“Rare Earth Elements and National Security” Council on Foreign Relations (October 2014).

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**Jeanne Guillemin**, Security Studies Program Senior Advisor

“Taking Lives: An Intellectual Confronts the Problem of Genocide” *Journal of Scholarly Publishing* (July 2014), dedicated to “Remembering Irving Louis Horowitz.”

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**Jerome Klassen**, CIS Research Fellow

*Joining Empire: The Political Economy of the New Canadian Foreign Policy* (University of Toronto Press, 2014).

“Hegemony in Question: US Primacy, Multi-polarity, and Global Resistance,” in *Polarizing Development: Alternatives to Neoliberalism and the Crisis* (Pluto Press, 2014).

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**Greg Koblentz**, Security Studies Program Alumnus

*Strengthening Strategic Stability in the Second Nuclear Age*, Special Report No. 71, Council on Foreign Relations (November 2014).

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## Published

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**Alan Kuperman**, Security Studies Program Alumnus

“FSA Supports Syria Air Strikes” *NewsHour* BBC World Service (September 2014).

*Nuclear Terrorism and Global Security: The Challenges of Phasing Out Highly Enriched Uranium* (Routledge, 2013) [Paperback Edition].

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**Erik Lin-Greenberg**, Security Studies Program Alumnus

“Top Gun with Chinese Characteristics: Time to Clip the Wings of China’s Mavericks” *The National Interest* (September 2014).

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**Rich Nielsen**, Assistant Professor

(with Beth A. Simmons) “Rewards for Ratification: Payoffs for Participating in the International Human Rights Regime?” in *International Studies Quarterly*. Findings summarized by *MIT News* and *Slate.com*.

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**Ken Oye**, Professor of Political Science and Engineering Systems

“Regulating Gene Drives,” Kenneth A. Oye, Kevin Esvelt, Evan Appleton, Flaminia Catteruccia, George Church, Todd Kuiken, Shlomiya Bar-Yam Lightfoot, Julie McNamara, Andrea Smidler, James P. Collins, *Science* 8 August 2014; Vol. 345 no. 6197 pp. 626-628; Published Online July 17 2014; DOI: 10.1126/science.1254287.

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**Robert Ross**, Senior Advisor at the Security Studies Program

“The Revival of Geopolitics in East Asia: Why and How?” *Global Asia*, Vol. 9, No. 3 (Fall 2014).

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**Josh Rovner** and **Caitlin Talmadge**, Security Studies Program Alumni

“Less is More: The Future of the American Military in the Persian Gulf” *The Washington Quarterly* (Winter 2014).

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**Josh Rovner**, Security Studies Program Alumnus

“Never Mind ISIS and Putin—Asia Matters More to U.S. Strategy” *Dallas Morning News* (November 2014).

“The Strategic Value of Threat Deflation” *Lawfare Blog* (September 2014).

“For America’s Military, Less is More in the Persian Gulf” *Dallas Morning News* (September 2014).

“Review of Hal Brands’ What is Good Grand Strategy?” *H-Diplo* Vol. VII, No. 2

---

**Mansour Salsabili**, CIS Research Fellow

“Iran and Weapons of Mass Destruction: The Military Dynamics of Nonproliferation” *Geopolitics, History, and International Relations*, Volume 6, No. 2, (2014), pp. 13–36.

---

**Joshua R. Itzkowitz Shifrinson**, Security Studies Program Alumnus

“Put It In Writing: How the West Broke Its Promise to Moscow” *Foreign Affairs* (October 2014).

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**Joel Sokolsky**, Security Studies Program Senior Advisor

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## Former NSA Inspector Joins CIS

Joel Brenner, former inspector general and senior counsel at the National Security Agency (NSA), has joined CIS as a 2014–2015 Robert E. Wilhelm Fellow.

Brenner specializes in cyber and physical security, data protection and privacy, intelligence law, the administration of classified information and facilities, and the regulation of sensitive cross-border transactions. He is the author of *America the Vulnerable: Inside the New Threat Matrix of Digital Espionage, Crime, and Warfare*, available in paperback as *Glass Houses: Privacy, Secrecy, and Cyber Insecurity in a Transparent World*.

While at MIT, Brenner will be working on intelligence and security issues related to foreign affairs. He is particularly interested in intelligence collection, privacy, and secrecy as emerging issues in international relations and in the potential for curbing state-sponsored theft of intellectual property.

“Dr. Brenner is a thoughtful and deeply engaging policy intellectual, and we are delighted he has joined our community. Our faculty and graduate students look forward to engaging with him as we study the challenges of intelligence, secrecy, and privacy in contemporary international affairs,” said Richard Samuels, Ford International Professor of Political Science and director of CIS. ■



*Joel Brenner, 2014–15 Wilhelm Fellow*

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**Center for International Studies**  
Massachusetts Institute of Technology  
1 Amherst Street, E40-400  
Cambridge, MA 02139-4307