

SSQ

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Twenty-First Chief of Staff of the US Air Force

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Realism, Rationality, or Uncertainty?**

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National and International Security*

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An Interview with Gen David L. Goldfein

Twenty-First Chief of Staff of the US Air Force

Conducted 5 January 2017

General David L. Goldfein serves as the senior uniformed Air Force officer responsible for organizing, training, and equipping 660,000 active duty, Guard, Reserve, and civilian forces serving in the United States and overseas. As a member of the Joint Chiefs of Staff, he advises the secretary of defense, the members of the National Security Council, and the president.

SSQ: As you move through your first year as chief of staff, what national security issues are most concerning to you that will impact the Air Force during your term?

General Goldfein: Over the past year the chairman has led an effort within the Joint Chiefs to refine and build a national military strategy that looks at the global challenges we face, which the secretary of defense laid out as a “four-plus-one” framework: China, Russia, Iran, North Korea, and the *plus one* is violent extremism as a condition. Each of the Joint Chiefs has contributed to looking at the global security challenges to ensure we have a national military strategy that gets after them. And so, from an Air Force perspective, the question I’ve focused on is: what’s the air component contribution to the joint force as a member of the joint team? The lens I look through is, first, what we do for the nation from a deployed-in-place perspective, and what we do for the nation when deployed forward. Thinking about the air component, you have to look at both. And very often we, the military, will tend to describe only what we do from a deployed-forward perspective. That misses so much of what the in-place force provides that is foundational to joint war fighting.

So, for example, consider the nuclear enterprise. Quite frankly, a safe, secure, reliable nuclear deterrent underwrites every military operation on the globe. Job one is ensuring we have and produce, with the Navy, three legs of a triad, including all of the nuclear command and control, which is primarily an Air Force responsibility. It’s job one because you can’t look at four plus one—China, Russia, Iran, North Korea, and violent extremism—without first looking at what’s been going on with

our strategic nuclear deterrent. I mean, in my personal opinion, there's a direct, solid line between what we're doing in the Middle East against violent extremism and the strategic nuclear deterrent of this nation. That's the first thing I think about driving to work. I have General Robin Rand, General Jack Weinstein, and a large team focused on the nuclear enterprise as well. I make sure we get this right.

The second thing I watch is what's going on in space, particularly space architecture and the space enterprise. What is our readiness to operate? Now remember, I organize, train, and equip. I produce ready forces for a combatant commander, and that combatant commander fights with that force. But it's sometimes challenging to articulate the readiness level of our space forces to the American people and to national leaders. Space forces, like the nuclear forces, may be unavailable to deploy forward because they're doing the job deployed in place. Likewise, for instance, cyber forces protect the nation every day, contributing to the four-plus-one strategic framework. Cyber is clearly a contested domain, and the Air Force is central to the way the nation operates relative to defending the networks and having those capabilities available to a president. So you've got to walk yourself through the missions we do from a deployed-in-place perspective: nuclear, space, and cyber.

Once you make sure the air component part of those capabilities is ready, then you can move to what we do deployed forward. Things such as global mobility to ensure we can move millions of ton-miles per day of logistics for the nation, the joint force, and our allies. We must get the tanker bridge we need to rapidly move and sustain forces that are fighting over landlocked countries, for instance. The conventional airpower provides the kind of striking force that we're using against ISIL. It ensures we can gain and maintain air superiority and deter aggression. The air component brings command and control and personnel recovery to the fight, and all those things we do from a deployed-forward perspective. Of course the foundation of that work is on our bases, because as an air component that's part of our fighting platform. So, the long answer to your good question is I'm thinking about those missions we contribute to defend the homeland, ensuring we've got the four-plus-one framework thought out as part of a national military strategy, and how our foundational capability is ready, capable, and resilient.

SSQ: In your congressional testimony last year, you stressed readiness. Is the Air Force "right sized" to adequately provide forces for combatant

commanders? If not, where are the shortfalls, and what must be done to fix them?

General Goldfein: No. We're not right sized. The reality is, since Desert Storm and certainly over the past 15 years, the story is the same. That is, the Air Force made some conscious decisions to trade capacity and readiness near term for capability in the future. We went down a path, and I was part of a dialogue on this, so it is not a 20/20 hindsight. The world looked different because we had been rather singularly focused on violent extremism in the Middle East. Since there hadn't been state-on-state kind of activity that we're seeing today with the four-plus-one framework, it made sense in the previous global security environment, perhaps, to trade capacity and readiness for future modernization and capability that the Air Force needed—desperately needed. With an average aircraft age of 27 years, you know we have to modernize. But in 2014 the world changed. Russia went into Crimea. Russia got active in Ukraine. China got active in the South China Sea. Iran got more active in the Middle East. A lot of things happened in 2014, and the global security environment changed.

For what the air component and the Air Force do for the nation, we are too small—too small to generate the readiness required and too small to do the missions at home, in garrison, deployed in place, and deployed forward. I've looked across the force at our biggest limitation in producing the kind of airpower the nation requires and the joint team has come to expect—we've got to get bigger. We need approximately 350,000 active duty with commensurate growth in the Guard/Reserve, and we need to stabilize civilian manpower across the Air Force. It's a troop-to-task issue. Here's the missions we've been given. Here's the global security environment. Here's the number of people required to do it.

SSQ: Last year at the Reagan National Defense Forum, you mentioned the importance of a modern and reliable nuclear deterrent. Since the Air Force maintains two legs of the nuclear triad, are you satisfied the current funding process remains valid? Or would a separate budget line, similar to Special Operations Command, be more appropriate?

General Goldfein: Well, it's a bigger, broader question when you take a look at the overall cost of recapitalizing the nuclear enterprise, and all three legs are due: the Air Force bomber and the missile legs, including

the munitions portions of this, and clearly in the Navy as well with their submarine force. Also we can't forget the nuclear command-and-control piece that actually is the foundation for all of it. Because if the president's not connected, it really doesn't matter how well we recapitalize and modernize individual legs because you can't execute the mission. So we've got to look at the entire enterprise approach going forward.

Even at the predictions of the high end, we're talking approximately 6 percent of the overall defense budget that would go into recapitalizing the nuclear enterprise. That's a significant amount of money. But I'll paraphrase a great quote from my US Army counterpart General Mark Milley at a hearing when he said, "The only thing more expensive than deterrence is fighting a war. And the only thing more expensive than fighting a war is losing a war." And so I'm one who absolutely believes—and the best military advice I will offer is—we need to recapitalize this part of our business. Because I go back to my earlier point: every military operation on the globe is underwritten by the nuclear deterrent.

SSQ: During the Air Force Association convention in September, you mentioned three focus areas for your tenure as chief. One of those was strengthening joint leaders and teams. Why do you see this need, and what long-term outcome do you hope to achieve?

General Goldfein: To achieve joint war-fighting excellence in the twenty-first century you must align four elements: the organizational element, the leader development element, the operations CONOPS [concept of operations] element, and the technological element. This is what I believe the air component and our Air Force must be prepared to contribute. Each of the three areas I want to focus on—revitalizing squadrons, strengthening joint leaders and teams, and multidomain command and control—directly supports those four elements. All of the three areas have connective tissue between them, and they all end with joint war-fighting excellence in the twenty-first century.

It begins with an organizational element, and I've chosen to focus on revitalizing the squadron level. Based on my experiences growing up in the Air Force, it's the squadron where the mission succeeds or fails. That's why I called the squadron the heartbeat of the Air Force. We have to get that part right because it's where Airmen get developed. It's where we inculcate the culture of being an Airman. It's where we generate readiness, and it's where we succeed or fail. So, that's the organizational element. Let's get that piece right.

Then there's a leader development piece, which is what you're asking about, and that is what constitutes the product we're looking for in the future as we refine, strengthen, and develop joint leaders. For me, what that means is when an Airman walks in, immediately that person is recognized as someone who understands the operational integration of air, space, and cyber. Now, we've got to take a fresh look at our development of leaders to say, when during a career are you exposed to the operational art of space?

And space can no longer be the responsibility of somebody that just wears space wings. It's got to be a responsibility of everybody who intends to lead in our Air Force to understand the operational art of the integration of space. That's a different development track. It means someone has to live it. When an Airman walks into a planning room and sits side by side with Sailors, Soldiers, Coast Guardsmen, and Marines, those joint team members must see an Airman who understands the operational integration of space and cyber into the campaign-design level of joint warfare. At the same time, the Airman must understand the application of airpower.

And so, when I talk about joint leaders of the future, the foundation of that is, first and foremost, building leaders who know the operational art of air, space, and cyber integration. And then you get to the next level on Maslow's hierarchy that says you comprehend how air, space, and cyber fit with the other domains—being the land and maritime domains and the expeditionary amphibious domain. Airmen must understand how it all comes together; so, we sit down and build campaigns that are truly joint in nature and ensure an Airman's voice is in the middle of the dialogue. Airmen must also be prepared to lead an operation once the plan is built. I believe we have an obligation as a service to produce leaders who are ready to step up and lead—just like those we have today in General Lori Robinson, in General John Hyten, in General Darren McDew, and in General Paul Selva. The word *strengthening* applied to joint leaders and teams is so important because I'm not trying to fix anything that's broken. I just want to strengthen what we're already doing well.

I want to also mention my third focus area, which is multidomain command and control. Multidomain command and control brings together the concept of operations and the technological aspect of twenty-first-century joint war fighting. Once you've got the organizational piece right and have developed leaders who understand how to operate at the

operational level, you've got to have the CONOPS that tells you how you're going to operate in air, space, and cyber and how they fit with everything else. Then you need that technological baseline which can be linked to all of those elements. But it's not just a CAOC [combined air operations center] of the future with big screens. This is about how we ensure we can get to decision speed and achieve operational agility at a speed that provides multiple dilemmas to an enemy from all domains at a speed that no adversary can match.

The United States is truly a global nation with global responsibilities and global capabilities. When we bring all our capabilities together, any adversary that's thinking of stepping over a line will think twice. In my mind, that provides just as much deterrent value as joint war-fighting capability. And so, it's all of those elements combined that you've got to assess to create joint war-fighting excellence for the twenty-first century, which is why you'll see me continue to focus on my three areas.

SSQ: There has been a lot of discussion on artificial intelligence (AI) and autonomous systems over the past year—particularly involving the use of lethal force. It seems as if people either embrace these concepts or fear them. What are your views on the future of artificial intelligence and autonomous systems?

General Goldfein: Well, I'll give an example of where I think we're already using it and where we've got to continue to improve. The Air Force has a significant portion of the ISR [intelligence, surveillance, and reconnaissance] enterprise—not all of it, but a lot of it. Now think about how we sense the globe today. We sense it in six domains: air, land, sea, space, cyber, and, I would argue, you should add *undersea* as a domain. You have to think about each of these domains together when you talk about sensing the globe and how we do that. Today, social media provides a huge input to what we can sense, and we get some of our best intelligence from social media.

So, the question becomes at what point is the volume of what you sense so large it actually starts slowing you down as opposed to speeding you up? The only answer, in my mind, is to get into the business of artificial intelligence and machine-to-machine learning. We need to neck down the terabytes of data we collect to the point of decision because the victor in future combat will be that person, that leader, who is able to command and control and move forces and deny the enemy the ability to do the same. This is going to require decision speed, and decision speed is

based on your ability to analyze volumes of data. We are only going to be able to get that if we do it through artificial intelligence. I see great promise in AI, and it is an essential quality for the future. We have to move forward toward that capability.

SSQ: Every new administration brings certain change to the Department of Defense. What changes do you anticipate for the Air Force as a result of this new administration?

General Goldfein: Well, I think there's going to be some early debates that I'm preparing for right now because I think they're really important debates. The debates will present far more opportunities than challenges. I think we're going to enter into an early, robust debate about the business of cyber: how we're organizing cyber, how we're executing missions in cyber, and how we're defending our networks. More importantly, how resilient we are in this contested domain to be able to continue to fight. Let me tell you, when General James Mattis was the CENTCOM [US Central Command] commander and I was his air component commander, I remember him looking at me, without blinking, and telling me, "Don't tell me you can't fight without all of your exquisite communications. Make sure that you can continue to fight if you lose all of this." So, I think we're going to have a robust debate because I'm pretty confident he hasn't changed his mind on ensuring we can still operate in a degraded and contested environment such as cyber.

I think we're going to have a very important debate about the organization of space. As a service chief, I organize, train, equip, and present ready space forces and capability to the STRATCOM [US Strategic Command] commander and the geographic combatant commanders in support of their operational plans. It is my intent, in terms of my best military advice, to talk about space as a contested domain and a war-fighting domain. The question then becomes how do you normalize space as a war-fighting domain like other war-fighting domains? So, we've got to have a healthy debate about the organization of space in the new administration.

Historically every new administration will generally conduct a nuclear posture review. And here, too, I'm expecting a healthy debate. Since I'm responsible for the majority of the nuclear enterprise, along with Admiral John Richardson, I'm expecting to have a strong voice in that debate. These are just three of many issues I think will be debated in a healthy dialogue I'm looking forward to.

SSQ: Civilian control of the military is a hallmark of our democracy. Are you concerned the new administration may have too much military influence in what has traditionally been purely civilian roles?

General Goldfein: I'm not concerned about that because of the quality of the individuals we're talking about. I've had a chance to serve with all of them, and they bring a depth of understanding of national strategy. They've been on the receiving end of national strategy. They've had to execute it. So, I think they're going to bring an important perspective. You have to look at the overall administration. If you do, you will see some from military backgrounds, some coming from a civilian industry background, and others that have a political background. So, you have pretty good breadth and depth of backgrounds coming into the new administration. I think it's positive to have some in the administration who have an understanding of the military.

SSQ: If you inherited the ability and the permission to change three things within the Department of Defense, what would you change?

General Goldfein: The first thing I do think we need is a healthy dialogue about the Goldwater-Nichols act. It was incredibly important legislation 30 years ago, and it more than accomplished its objective. I'm a product of Goldwater-Nichols as a joint officer, now a member of the Joint Chiefs, and former director of the Joint Staff. But the law was passed 30 years ago, and it's time to take a new look at the agenda that created it. The pendulum swings between relative spheres of influence. For example, what constitutes the responsibility and role of a service chief? What constitutes responsibilities of the service secretary? What are the responsibilities of the various branches? How do the checks and balances come together? Are there new ways of looking at the various positions and how we're organized? What is the role of the chairman and the Joint Staff relative to building the force? Some of this debate is happening right now and I expect the new administration will want to consider Goldwater-Nichols "next." These questions deserve a really important discussion.

SSQ: The heart of leadership is sound decision making. Do you have a certain way of deciding tough issues? Are there some decisions that challenge your abilities, and which decisions seem easier for you?

General Goldfein: Well, first, I'll tell you that I try pretty hard to ensure all the decisions I'm making are the tough ones. Because if I'm

spending much time making easy decisions, I'm doing somebody else's job, and they don't need my help—and, quite frankly, they don't want it. By the time a decision hits the chief's desk it ought to be really hard. The hardest. And then you understand that the reality of why it's hard is that there's not one clear solution. You don't have perfect information. You've got to balance the risk and understand the impacts and the branches and sequels and unintended consequences. So, for me, I've learned over the course of my career from mentors along the way. I've seen other leaders and the way they make decisions, and I've adopted many of those techniques with my own style. What I've found is that one of the first questions I ask is: when does this decision need to be made?

Early in my career I wanted to be decisive, but I learned over time that it was better to make good decisions. So, the first question is: when does that decision need to be made? Because the answer to that question gives you a sense of how much time you have to actually study and research and talk to others. Sometimes the answer is, "General, with all due respect, we need a decision now." Then you go with your gut and your background—your experience—and you make the best decision you can at the time. Once I've got an idea of how much time I have, I like to hear—depending on the kind of decision—differing opinions. It's the old adage, "If we're all thinking the same way, then somebody ain't thinking." So, I try to find people who completely disagree with each other and then listen to both sides, three sides, whatever, of the argument. That helps me conceptualize the framework within which I'm operating. I also try to think of what other voices should be in this dialogue that are missing. Because, as uniformed military, you know, we've all had a very similar upbringing; so, we tend to approach problems the same way. As director of the Joint Staff, I got to see the different cultures of the services at work. And I came to the conclusion that we each approach a problem from a slightly different perspective based on our service culture, which is a byproduct of the domains we're responsible for. An Airman takes a specific kind of culture to problem solving. A Soldier has a different kind of culture for problem solving. So, for me, I actually am looking for some voices of others that don't have the same upbringing, background, and culture I have that can give me a completely different sense of what it is we're talking about. I spent a year with the State Department, you know. They think about things in a different way. Theirs is a very valuable perspective to have in the dialogue.

Once you've studied the issue, you understand the details as best you can based on the information available, you've gotten the voices around the room from the different perspectives, then, quite frankly, it's time to sit back, take it all in, and make a decision. Of course, with tough decisions, you know full well there's no perfect answer. You have to be willing to reassess a decision and realize if it didn't work out, I made the best decision I could at the time. Sometimes, life gets in the way of a perfect plan, and then it's time to step back and admit that wasn't your best day; so, let's relook this one. Finally, you've got to be comfortable enough in your own skin to do this.

SSQ: Thinking over your career, was there some experience or education you had during your career that helped prepare you to be chief of staff?

General Goldfein: You know, they all do. I mean, all the experiences added up. I'll give you a few examples of some that were really important to me. But one really important point is, look at the bios of all the four stars in the Air Force today. There's not one that looks alike. Not one of them looks the same. I'd like to make sure our Airmen know that there's no one path that gets you to chief of staff. Look at General Ron Fogleman, who was a history instructor at the Air Force Academy. Take a look at General Mike Ryan, who was an exchange officer with Australia. All the experiences matter, and there's no one path to the top.

There have been a few experiences I probably rely on the most. The first was the opportunity to be the aide to General Mike Ryan when he was the CFACC [combined force air component commander]. He built and executed the first air campaign over Bosnia. Being on the inner circle to watch how he made decisions and how he actually ran an air campaign was very helpful for me when I grew up to be a CFACC and ran an air campaign.

Another experience was spending a year with the State Department on a fellowship and coming to admire the courage, the professionalism, the dedication, the commitment of our foreign service and what they do for us every day around the globe with very few resources. The air component helps them with coercive diplomacy, and learning how force and diplomacy come together has been very helpful to me as a member of the Joint Chiefs—to help think in a broader perspective than just the application of military force. And now, you know, I'll forever be one of their biggest fans and a big advocate for what our diplomatic corps does for us.

I will tell you, taking a squadron to war was formative and knowing the pressures on a commander goes back to why revitalizing squadrons is so important and that the command team and the development and support of that command team are so important for how we operate as an Air Force.

Let me also say that understanding the operational part as the air component commander for CENTCOM was formative, because it's there that you actually see all the elements come together. As the air component commander, you tend to naturally be the integrator of capabilities because you have that one headquarters that has the robust elements of each component represented on the team to be able to coordinate the activities.

The final experience I would offer is being the director of the Joint Staff. There you are seeing the strategic view of how actions operationally fit into a strategic framework of best military advice from the chairman and the Joint Chiefs to the commander in chief, the secretary of defense, and the national security team. You witness their decisions and how their perspective on what constitutes defense of the homeland, for instance, is so much broader than we focus on from just a military perspective. So, that's sort of the evolution of Dave Goldfein, if you will, in terms of experiences that broadened my horizon.

SSQ: Chief Goldfein, any journal is only as good as the profound ideas and insights published in it—ideas and insights like those you shared today. On behalf of the *Strategic Studies Quarterly* team and the entire *SSQ* audience, thank you, and we wish you great success as the twenty-first chief of staff.

Conventional Arms and Nuclear Peace

What many in the arms control community fail to appreciate, understand, or adequately analyze is how conventional force imbalances play into a state's security dilemma. Conventional arms imbalances generally—and US conventional military superiority specifically—are as much potential drivers of nuclear proliferation and geostrategic instability as nuclear weapons are. American preponderance in power-projection capabilities has in the past influenced some countries to acquire nuclear weapons as a deterrent against US intervention. There has been far less effort expended on exploring the relationship between conventional arms and nuclear proliferation than on nuclear arms and nuclear proliferation. In part, this may be because the spread of conventional weapons is viewed as a serious problem in its own right, possessing its own dynamics and its own bureaucratic and academic constituencies. However, conventional imbalances are just as important in understanding the threat perceptions that lead states to acquire nuclear weapons.

Why Conventional Military Balances Are Important

The relationship between the size of a state's arsenal and the resultant proliferation consequences is complex and, at best, only one part of the proliferation puzzle. For the past quarter-century, the US military's mastery of precision warfare has provided it with a significant advantage over its prospective rivals. Both China and Russia are working to offset this advantage, in part by developing their own competing capabilities. However, according to recent research by national security analyst Matthew Kroenig, there is no clear relationship between US nuclear force posture and proliferation decisions by other states.¹ Indeed, the connection may even be an odd proposition to make in the first place. That national leaders (aside from a Russian president) would stop to assess US nuclear policy or the size of the US nuclear arsenal before making decisions about nuclear proliferation is a tenuous assertion. Kroenig's research addresses an important question, but it does not analyze the role that the geographical deployment of US military forces has on a country's threat perceptions. In fact, states are more likely to confront, and therefore fear, America's conventional capabilities.

In the interim, the Russians in particular are seeking to offset the American advantage in precision-guided munitions by modernizing their nuclear arsenal and changing nuclear doctrine—even stressing nuclear escalation as a de-escalation mechanism. What appears clear is that both nuclear and nonnuclear nations see the prospects for conventional conflict with the United States as a losing proposition. For Russia and China, threatening to escalate their way out of a conventional loss is clearly an attractive option that Russian nuclear doctrine suggests is at the forefront of Pres. Vladimir Putin’s strategic planning.² For non-nuclear states, acquiring nuclear weapons may be perceived as the only viable deterrent against American aggression. In general, nuclear weapons are largely seen as an offset to superior conventional capabilities possessed by an adversary. With Iraq’s weapons of mass destruction (WMD) ambitions, for instance, evidence suggests that Saddam Hussein, from the mid- and late 1970s onward, was interested in nuclear weapons for two reasons: deterrence vis-à-vis enemies like Israel and Iran and considerations of national prestige.³ However, Hussein also wanted nuclear weapons as a means of enabling *conventional* attacks on Israel:

When the Arabs start the deployment, Israel is going to say, “We will hit you with the atomic bomb.” So should the Arabs stop or not? If they do not have the atom, they will stop. For that reason they should have the atom. If we were to have the atom, we would make the conventional armies fight without using the atom. If the international conditions were not prepared and they said, “We will hit you with the atom,” we would say, “We will hit you with the atom too. The Arab atom will finish you off, but the Israeli atom will not end the Arabs.”⁴

The acquisition of nuclear weapons by a weaker state significantly complicates the decision-making calculus of a militarily superior state. For these reasons, power-projecting states fear nuclear proliferation to both allied and enemy states.⁵ This is a point worth underscoring and one that is often overlooked when nonproliferation is discussed and its rationale and purposes debated. These factors demonstrate that the “more may be better” view of nuclear weapons proffered by political scientist Kenneth Waltz is entirely relevant and accurate.⁶ Waltz famously argued that more nuclear weapons in the world would tend to increase deterrence among states. That logic is turned on its head in a world with far fewer nuclear weapons and a greater reliance on conventional systems, which may actually be destabilizing. This was true even before the advent of the atomic bomb. The awesome destructive power of nuclear weapons

tended to overshadow the failure of conventional deterrence in the decades and centuries preceding the first use of nuclear weapons.⁷ Thomas Schelling, an economist and foreign policy scholar, also argued very specifically that more nuclear weapons might enhance strategic stability by increasing the survivability of a nation's nuclear forces.⁸

Because states might be more risk acceptant with conventional forces and concepts of first and second strikes are much less well defined in the conventional realm, stability was much more fragile in the pre-nuclear age and would likely prove fragile in a world with fewer, or zero, nuclear weapons. Advocates of a world free of nuclear weapons often overlook this point. A world with fewer nuclear, but more conventional, forces is likely to bring forth new dynamics for arms races, which increase the likelihood of disputes and wars.⁹ Reducing or eliminating nuclear weapons does not remove proliferation problems from the agenda. Might we fear arms races in the second conventional age less because of the subnuclear consequences of an advanced conventional missile system, or should we fear it more because of the lower threshold to the use of armed force that might be involved? A world not anxious about nuclear proliferation is more likely to be anxious about the proliferation of advanced conventional systems. In that world, the knowledge that war might escalate to the use of an immediate and devastating nuclear strike is gone. This also raises new issues influencing the extent to which a conventional war may be more controllable than a nuclear one. As Lawrence Freedman, the doyen of British strategic studies, writes, "In principle, denial is a more reliable strategy than punishment because, if the threats have to be implemented, it offers control rather than continuing coercion. With punishment, the [adversary] is left to decide how much more to take. With denial, the choice is removed."¹⁰

Nuclear Reductions, Nonproliferation, and Disarmament

Nuclear abolitionists have very different views on the nature of deterrence. Their efforts are based largely on a fundamental ideological dislike of nuclear weapons rather than a deep understanding or appreciation of them. Global nuclear disarmament, if considered in a vacuum, would make the world safer for US conventional power projection but would not necessarily promote strategic stability. This observation is made repeatedly by Russian and Chinese analysts, who clearly understand American conventional superiority. On this basis an argument can

indeed be made that global disarmament disproportionately benefits the United States, not regional or global competitors like Russia and China. The effects of conventional capabilities are certainly a neglected topic when compared to the focus on nuclear arms control over the past seven years. They are generally said to bear, or lack, significance in comparison to WMDs. But does this argument still hold in a world with no nuclear weapons?

A great deal of analysis is still needed to assess whether and how reductions could be managed to the point that no nuclear-armed state has more than a minimum deterrent. For even further reductions to occur, the process would necessarily have to be multilateral, including China, India, and Pakistan. While China and other states have indicated that they would potentially be willing to enter into negotiations once the United States and Russia reduce their arsenals, they have not specified at what level of forces this might conceivably take place. In any case, the process would involve complex calculations of deterrence equations involving changing sets of multiple actors as well as conventional imbalances that are, again, a major source of concern for many countries that may find themselves at odds with the United States.

For the “P5” nuclear weapons states (those with permanent seats on the United Nations’ Security Council) such as Russia and China who are members of the Nuclear Nonproliferation Treaty (NPT), the issue of conventional imbalance compounds the difficulty they face in shaping the perception of some states who suggest that the P5 failed to take significant steps toward nuclear disarmament. Pakistan, for instance, has recently accused the United States and other countries of nuclear hypocrisy, with the Pakistani ambassador to the United Nations saying that a handful of nuclear-weapon states advocate abstinence for others but are unwilling to give up their large inventories of nuclear weapons or cease modernization efforts. The ambassador also stressed that double standards were not only evident on nuclear issues but also in the area of conventional arms: “While professing strict adherence to responsible arms transfers, some powerful states continue to supply increasing numbers of conventional weapons in our region, thereby aggravating instability in South Asia.”¹¹ Indeed, from the Pakistani perspective, the international community does not give enough attention to the issue of vertical proliferation (arms buildup). Certainly, it should come as no surprise that Pakistan continues to stress the importance of nuclear weapons in acting as a deterrent to perceived Indian conventional military superiority.¹²

Pakistan has made efforts at addressing issues of conventional force imbalances with India in the past, but New Delhi has traditionally dismissed these efforts, instead focusing on its larger regional competitor, China.¹³ The problem in South Asia is therefore at least a trilateral one. However, the issue speaks to a much larger problem, and that is *multilateral* conventional arms control. If the India-Pakistan strategic situation offers any lesson, it is that weaker states (such as Pakistan) may desire to develop a “great equalizer” to achieve the security that they cannot find through traditional (conventional) means.

With the United States and Russia undertaking a 90 percent reduction in their nuclear arsenals since the end of the Cold War, it is fair to say that these efforts have promoted neither goodwill nor a peaceful posture in countries like China or North Korea. We are not suggesting that American nuclear force reductions have *pushed* Beijing to expand its antiship ballistic missile inventory, place multiple warheads on its DF-41 ballistic missiles, build artificial islands with deployed military capabilities, or build bases in northern Africa. Nevertheless, it does show that there is little evidence to suggest that nuclear cuts necessarily lead to a more peaceful security environment. If anything, regional and global security evolve *independently* of the size and shape of one country’s nuclear arsenal. North Korea, in particular, has pursued a nuclear weapons program as a means of countering American conventional superiority, paying little or no attention to the United States’ declining nuclear arsenal.

Conventional Arsenals, Crisis Stability, and Arms Race Stability

Nuclear reductions have important consequences for both crisis stability and arms race stability. Conventional forces differ tremendously from nuclear forces in the way they are organized and operate and in their destructiveness. These distinctions influence the way in which arms-control arrangements aimed at conventional arms-race stability and crisis stability must be conceptualized in a world free of nuclear weapons but safe for conventional conflict. To be highly destructive, conventional forces need to be used en masse. Their successful application requires well-organized cooperation between many military units, often between different types of military forces (land, air, naval, cyber, and space), and, due to the globalization of conflict, also the participation of several allied states granting military support and access. Conventional

forces most often seek military victory, which requires they first defeat adversarial forces before the political objectives of the conflict can be achieved. Also, to be militarily effective, conventional forces need up-to-date technology and well-trained troops that are capable of effectively employing weapons of war.

Crisis stability is a term that was perfected in its use during the nuclear age. Crisis stability aims at developing incentives for using the lowest level of military force possible—all while seeking to prevent escalation. It also seeks to control the emotions that are prevalent in conflict, providing procedures to cope with a crisis. Nuclear reductions and disarmament may make a paradoxical and undesired contribution; reducing expected levels of death and destruction if war comes might actually increase the probability of the onset of war. Even if two states went to war, one would expect the nuclear sword of Damocles to incentivize them to end the conflict as soon as possible. In addition, the historical record clearly shows there is not the same taboo or norm against using conventional missiles and bombers as there is against using an atomic version.¹⁴ Not a single nuclear warhead has been delivered by any delivery system since 1945. By contrast, over the past 45 years, ballistic missiles were employed in at least six different conflicts: the Egyptian and Syrian missile attacks on Israel in the 1973 Yom Kippur War, the 1980–88 war between Iraq and Iran, the Afghan civil war of 1988–91, the 1991 Persian Gulf War, the Yemen civil war of 1994, and the 2003 US-led invasion of Iraq. Indeed the duration and controllability of a war becomes important here. As antinuclear advocate Randall Forsberg admits,

The *main* role of nuclear weapons has always been to deter conventional war among the world's "big powers" (the USA, the USSR, the UK, France, West Germany, China, and Japan) by posing a clear risk that such a war would escalate to nuclear war. If ballistic missiles were abolished, raising again the prime strategic question of the 1950s—could a conventional war be fought without going nuclear, and if it went nuclear, could it be won?—it would diminish nuclear deterrence of conventional war.¹⁵ (emphasis in original)

The fog of war could become much thicker. Even if lower-yield nuclear weapons were used, they could still significantly disrupt command, control, communication, and intelligence. In the conventional world this would be less of an issue because of the smaller level of destruction, over a much more protracted amount of time, thus enabling more time to react. In the nuclear age, time becomes much more compressed.

Moreover, assuming that deterrence was still desirable, states would have to rethink how to reorient their forces toward achieving a *conventional* second-strike capability. This might lead to a different type of arms race. This concept was already present before the advent of the bomb, in discussions about the importance of airpower and having enough aircraft to deter aggression among European states.¹⁶ All these issues raise the importance of focusing on conventional arms control as much as nuclear reductions, especially in the Asia-Pacific.

Arms race stability aims at lowering incentives to further build up military forces. Thus we might conceivably ask: if the United States and Russia reduce their nuclear arsenals to a few hundred warheads each—and other nations to a few dozen—might we see a nonnuclear arms race to fill a nuclear void?¹⁷ As the 2010 *Nuclear Posture Review* states, “fundamental changes in the international security environment in recent years—including the growth of unrivaled US conventional military capabilities [and] major improvements in missile defenses . . . enable us to fulfill . . . objectives at significantly lower nuclear force levels and with reduced reliance on nuclear weapons . . . without jeopardizing our traditional deterrence and reassurance goals.”¹⁸

If one accepts this statement, and if opponents of nuclear modernization are truly concerned about reducing global instability, they should be urging the administration to cancel and eliminate a number of conventional capabilities that are far more concerning to our adversaries. Granted, such a position is irrational, but if *stability* is the key then this is the logical position to hold. Indeed, even with successful elimination of nuclear weapons, the tasks of strategic deterrence, extended deterrence, and arms control do not go away. Instead, they become more difficult to manage. This is especially true for conventional arms control, because nuclear weapons tend to make deterrence much easier, or so the historical record would seem to indicate. If one argues for further nuclear reductions and nuclear disarmament, then one needs to be responsible and also think seriously about *conventional* arms control. Conventional imbalances and any remaining system of deterrence would increasingly become the focus of deterrence and would serve as the source of instability.¹⁹ This is especially true because, in many instances, the imbalance and insecurity of a conventional-only world have remained obscured during the nuclear age.²⁰

With Article VI of the NPT obliging nuclear-weapon states to work toward general and complete disarmament of nuclear weapons, would such a treaty be required or feasible in a conventional world? This possibility raises an important question: to what extent should nuclear-weapon states focus on reducing their arsenals as a precondition for *conventional* disarmament? We have tended to think that it would first be a good idea to reduce nuclear weapons before reducing conventional forces. However, nuclear weapons are but one component of the overall military balance among states. In an age without nuclear weapons, it is also conceivable that deterrence relationships will simply not work without boosting some aspects of conventional arsenals. The more-may-be-better logic that Schelling (and others) applied to nuclear weapons may also carry into an entirely conventional era. That is, fewer nuclear weapons in the world would likely entail more conventional forces to compensate, which would not necessarily be a stabilizing development.

For advocates of “global zero,” the implications of a world free of nuclear weapons are assumed to be inherently positive. However, the reality of such a world may be far less positive because the psychological effect achieved by the understood destructive power of nuclear weapons will no longer push risk-acceptant national leaders to allow caution to prevail. Given that no current leader of a nuclear-weapon state was even alive prior to the development of the atomic bomb, the security and stability of a nuclear-free world should not be taken for granted. Instead, much more work is required to understand the implications of such a fundamental change to a proven and stable approach to constraining great-power conflict.

Conclusion

If the past offers any lessons for the future, it is not unreasonable to believe that a world free of nuclear weapons is a world in which standing armies grow larger, defense expenditures (as a percentage of gross domestic product) increase, and conflict becomes more frequent as the perceived risks to a nation and its leaders decline. National leaders are not always rational, because they do not effectively weigh costs and benefits or risks and rewards, which would lead them to overvalue the prospect of a loss and undervalue the prospect of a gain. The certain loss caused by any prospective use of nuclear weapons has caused decision makers to exercise great restraint when contemplating the prospective use of

force.²¹ History appears to suggest that, to some degree, nuclear weapons do cause decision makers to see the use of nuclear weapons as ensuring losses, with few gains—causing restraint. Thus, eliminating nuclear weapons may well reduce perceived risks and increase perceived gains from fighting—making the world safe for conventional conflict. Such a state of affairs would not have the same absolute risk associated with it that nuclear warfare poses (that of total annihilation), but it would increase the risks of proliferating conflict, which may lead to a dramatic increase in conflict-related casualties.

Efforts to bring nuclear abolition to fruition may have an unintended consequence that has been given too little consideration by those who have made it their goal to rid the world of nuclear weapons. Too often, opponents of the nuclear arsenal fail to go beyond their desired end state to understand the consequences of such a world. Would America and the rest of the world really be better off without nuclear weapons holding great-power conflict in check? Such a discussion is strikingly absent from the debate. Perhaps it is time for advocates of nuclear abolition to provide a compelling description of the world that is to come should they succeed in further reducing or eliminating the nuclear arsenals of the great powers. **SSQ**

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Notes

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Defense Decisions for the Trump Administration

Robert P. Haffa

Abstract

The new administration that took office in January 2017 faces cross-currents of continuity and change as it formulates national defense policy. Defense decision making within the Donald J. Trump administration can be organized and streamlined by achieving internal consensus on a grand strategy to secure American interests abroad, by deciding the size and composition of the armed forces needed to meet plausible military contingencies, and by creating a defense budget adequate to underwrite those challenges. This article provides a framework for analysis in each of these three categories of defense decision making and suggests a course of action the Trump administration is likely to follow.

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The word *strategy* requires a modifier, and *grand* sits near the top of a pyramid of choices linking foreign policy objectives and resources. One of the foremost students of grand strategy, Robert Art, posits that grand strategy “tells a nation’s leaders what goals they should aim for and how best they can use their country’s military power to attain those goals.”¹ Importantly, Art differentiates between a nation’s foreign policy and grand strategy. Foreign policy delineates a set of objectives that differ in the level of national interest (vital, important, tangential), a time frame to achieve those objectives (long-range, mid-range, or near-term), and the instruments of national power (diplomatic, information, military, economic) that might be used, alone or in combination, to pursue those objectives. Grand strategy focuses on how the military instrument of foreign policy should be used in achieving those goals, across the range

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of interests and time frames stipulated.² Thus, grand strategy is very much dependent on the formulation of America's interests in the world and a perception of the threats to those interests. As political science and security studies specialist Barry Posen points out, these are core security interests, traditionally encompassing "the preservation of sovereignty, safety, territorial integrity and power position"—not wider foreign policy goals posed by challenges such as climate change, global pandemics, human rights, or free trade.³ Posen states that grand strategy's most important purpose is addressing the structure of an international political system in which armed conflict is likely. Therefore, grand strategy subjects military power to the discipline of political analysis. And because states and nonstate actors rise and fall, and measures applied to defeat or deter threats succeed or fail, it is important to periodically revisit and revise the concepts and principles incorporated in US strategy. A change of administrations is an appropriate time for such a reevaluation to take place. Defense decision making within the Trump administration can be organized and streamlined by achieving internal consensus on a grand strategy to secure American interests abroad, by deciding the size and composition of the armed forces needed to meet plausible military contingencies, and by creating a defense budget adequate to underwrite those challenges. This article provides a framework for analysis in each of these three categories of defense decision making and suggests a course of action the Trump administration is likely to follow.

Choosing a Grand Strategy

The Trump administration's national security team can choose from three grand strategies: primacy, selective engagement, and restraint. A good deal of academic study, political analysis, and practical application has described and explained these approaches over the years, and it is well beyond the scope of this article to engage in a rigorous, focused comparison of these contrasting grand strategies. But to get a sense of what might prove attractive to defense planners now taking their seats in the Pentagon and the executive branch, one must take a quick tour of the strategic horizon, noting the characteristics, proponents, and critics of each approach.

The debate over grand strategy is a post-Cold War discussion. The overarching objective of American foreign policy during the Cold War was the containment of the Soviet Union, and successive administra-

tions of both the Republican and Democratic parties adopted that goal. Despite the broad agreement on that objective, however, grand strategies adopted by those governments differed considerably, principally owing to the perception of resources available to dedicate to the military instrument of foreign policy. As John Lewis Gaddis has explained, these administrations adopted either symmetric means (matching the adversary at every level) or asymmetric approaches (applying American strengths against the opponent's weaknesses).⁴ Of note to our investigation of a grand strategy choice within the Trump administration, Gaddis—a Cold War scholar and grand strategy expert—concluded that, barring unforeseen events (for example, the terrorist attacks of 9/11), policy perspectives formed before the administration's accession to office tended not to change over the years.

After the Cold War, the consensus on containment vanished in victory, and scholars and politicians deliberated on the meaning of a *unipolar moment*, the end of history, and a new world order. With respect to grand strategy, the debate was introduced in an influential article written by Posen and fellow national security professor Andrew Ross in the Winter 1996 issue of *International Security*.⁵ There, the authors suggested four rival grand strategies that might guide American post-Cold War defense policy: a retreat from global leadership, a campaign of liberal internationalism, an effort to maintain American primacy, or a less adventuresome policy of selective engagement. Since that time, given the foreign policy agendas and use of military force supporting those objectives through the Clinton, Bush, and Obama administrations, the four grand strategy alternatives appear to have morphed into three. Liberal internationalism, coupled with cooperative security, is defined as *primacy*. Neo-isolationism, combined with “offshore balancing” is now best characterized as *restraint*. *Selective engagement* occupies the middle ground of grand strategy, perhaps allowing its practitioners the most flexibility regarding American military action abroad. A brief explanation will help identify which of these might be most attractive to a Trump administration.

Primacy

As Posen and Ross stated, primacy “holds that only a preponderance of US power ensures peace.”⁶ This strategy is essentially a carryover from Cold War policies, those in which the United States sought a decided

military advantage over the USSR across the spectrum of potential conflict. Under this concept, although allied contributions were welcome, it was up to the United States as a superpower to ensure it could develop and sustain this capability unilaterally. Because this grand strategy proved so successful in winning the Cold War, proponents argue it should not be abandoned. Once the Soviet Union had succumbed, it was the purpose of US defense policy to ensure that any rising competitor would face an unrivaled military power capable of deterring and defeating any challenge to a stable and peaceful international order. Was primacy the adopted grand strategy of the US government during the post-Cold War period? To some degree it was, although not to the extent that its critics claim. Primacy was the guiding strategic concept in the George H. W. Bush administration, as a draft of the 1992 *Defense Planning Guidance* explicitly called for “precluding the emergence of any potential future global competitor.”⁷ However, primacy was not the grand strategy adopted by the Clinton administration, which chose instead a strategy of *selective engagement*—eschewing the use of military force during some crises and pursuing collective security in place of unilateral military power and action. In rejecting neo-isolationism and deemphasizing primacy, the *National Security Strategy* issued in February 1996 promoted cooperative security measures and acknowledged limits restraining the role of the American military as the world’s police force. The George W. Bush administration included in its decision-making circle some of the authors of the 1992 planning guidance. After the terrorist attacks on the World Trade Center and the Pentagon, its *National Security Strategy* called for a military so powerful that it would “dissuade potential adversaries from pursuing a military buildup in hopes of surpassing or equaling the power of the United States.”⁸ Since that time, owing to the rise in external threats and diminishing resources resulting from the “great recession” of 2008, American grand strategy has alternated between primacy and selective engagement. Reversing course, Barack Obama, elected on a promise to bring US forces home from Mid-East wars and to seek diplomatic solutions to challenges overseas, characterized his strategy as one of selective engagement, “doubling down where success is plausible, and limiting American exposure to the rest.”⁹

What are the arguments for and against a return to a grand strategy of primacy? Writing in the September/October 2016 issue of *Foreign*

Affairs, Rep. Mac Thornberry (R-TX) and defense policy analyst Andrew Krepinevich call for the new administration to preserve primacy to “allow the United States to preclude the rise of a hegemonic power along the Eurasian periphery and preserve access to the global commons.”¹⁰ Thornberry and Krepinevich are concerned specifically with three threats to US security and vital interests abroad: (1) the rising conventional power of China as it seeks regional dominance in the Western Pacific, (2) the use of Russian proxy forces to push back the political freedoms and open markets in former Soviet states in Eastern Europe, and (3) the nuclear potential and ideological expansion of Iranian power in the Middle East. These revisionist states also challenge US and allied access to the global commons of trade and communication. To meet these threats, primacy proponents call for a military strategy focused on reducing these risks to international security. In agreeing with former Secretary of State Henry Kissinger that America has not faced a more complex and dangerous set of crises and adversaries since the end of World War II, the authors call for the United States to develop new military competitive advantages—and to do so more quickly than our adversaries.¹¹

Arguments against primacy as a grand strategy characterize it as a military-centric approach leading the United States into costly and unnecessary wars. Posen terms it a “costly, wasteful and self-defeating grand strategy” in which a “huge global military presence and the frequent resort to force produce several unfortunate outcomes.”¹² Those outcomes include countervailing behavior by competitors, free riding by allies and friends, and widespread anti-Americanism owing to its insensitivity to identity politics. Primacy’s “expansionist dynamic,” warn its critics, leads the United States to drift into military action at the expense of more affordable and effective instruments of foreign policy. Rather than a status quo policy to maintain American leadership in the international system, primacy leads us toward political expansion and high defense spending. Continuing primacy, these opponents argue, is unnecessary and likely to be increasingly costly in blood and treasure.

An article in the Winter 2016 issue of *Strategic Studies Quarterly* declared that grand strategy was rarely debated in Washington, where the foreign policy establishment defaulted to a posture advocating American primacy in foreign and defense affairs.¹³ The above short historical review suggests that is not the case. Pres. Bill Clinton’s grand strategy and what has been termed the Obama doctrine both deemphasized the

military instrument of national power by choosing where, when, and how to intervene militarily and demonstrated explicit themes of selective engagement as US grand strategy.

Selective Engagement

A grand strategy of selective engagement narrows the American worldview to a focus on great power competition and conflict. It calls for American military engagement abroad—but only where that military power can be used to deter great power conflict. Unlike primacy, which sees resources ample enough to support a symmetrical strategy against any adversary, proponents of selective engagement acknowledge that American resources are limited and therefore must be husbanded to be available for the most serious crises in defense of vital interests. Regional conflicts do matter, but only if they might spiral out of control and bring the great powers into military confrontation. The regional focus for selective engagement is maintaining order and avoiding conflict in Europe and East Asia. The Middle East remains an area of concern owing to its petroleum resources but is not vital enough to warrant a forward military presence or continued military intervention. To fight terrorism there, the United States should leverage its regional alliances, lending intelligence and logistic support, rather than leading counterinsurgent and counterterrorism forces.¹⁴

Proponents of selective engagement believe it is the right grand strategy for the times. It maintains many of the trappings of primacy with a robust military and a forward defense to commit the United States, by demonstrating its credibility and capability, to preserve the liberal international order. But it seeks a middle course between an isolated, retrenching America and one with the power and the motivation to repress any challenger and act as the world's policeman. To pursue either of these extremes risks great power conflict. Selectively engaging preserves the status quo at an affordable political and economic cost.

Critics of selective engagement come at the strategy from both sides. Champions of primacy fear it lacks the commitment to principle and idealism that has characterized American foreign policy and fails to differentiate between good and evil. In focusing on great power relations, selective engagement tends to ignore armed conflicts elsewhere, therefore encouraging mischief-making by lesser actors and tolerating regional wars—but it lacks clear guidance on when and where the United States

should intervene militarily on the periphery. From the *restraint* perspective, neo-isolationists argue that too much reliance on the military instrument overseas is a natural catalyst to involving the United States in future wars. Attempting to deter far-flung conflict often results in fighting them.

Restraint

Since the United States assumed its role of international leadership after the end of World War II, there have been calls for it to retreat to the isolationism that characterized its international posture prior to that global conflict. “No more Koreas” was a chant encouraging retrenchment from American involvement in Asia, and US military intervention in Vietnam led to cries for America to come home. Neo-isolationists in any age see American military presence abroad as both unnecessary and counterproductive. The perception of limited resources and where to spend them occupies a central role in prescriptions of restraint. According to this view, the United States can no longer afford to maintain world order and, instead, should devote its attention and funds to nation building at home, counting on the private sector to pursue globalization and economic well-being. George Washington’s farewell advice to “avoid entangling alliances” sits just fine with advocates of restraint as a grand strategy. Bringing that warning up to date, neo-isolationists would agree with the majority in recent public opinion polls ranking “defending our allies’ security” near the bottom of foreign policy priorities.¹⁵

Proponents of a grand strategy of restraint complain that America’s foreign policy has become too militarized and that the United States can achieve the majority of its goals abroad by emphasizing other instruments of national power. American security, they agree, is of the highest importance, but they see few discernible threats to the continental United States. They rail against profligate defense spending, frequently noting how US defense budgets dwarf those of other nations and arguing that America’s prosperity could be enhanced by allocating these resources elsewhere. While positing that a grand strategy of restraint would increase US security and prosperity, advocates of such a strategy admit that “shifting to a restrained military policy will require major changes to America’s alliance commitments, regional crisis planning, and force structure.”¹⁶

Those who oppose a grand strategy of restraint see it as a recipe for the loss of US influence abroad and, with it, diminished American se-

curity and prosperity. A world of myriad dangers requires American engagement, not retreat, to shape and maintain the international order. Even post–Cold War administrations electing to lessen a reliance on the military instrument have sought to shore up US activism in the international political system by relying on other instruments to convey American commitment. An isolated America will embolden its competitors, spawn new anti-American alliances, weaken our economic leadership, and encourage destabilizing nuclear weapons proliferation. Any savings in reduced defense budgets will be offset by a loss of American economic, diplomatic, and informational power.

Because President Trump ran a successful political campaign against the establishment, he is well positioned to adopt approaches challenging previous assumptions and practices regarding how the United States should prepare and respond militarily to international actors that threaten American interests. While it is likely the Trump administration will adopt an *ad hoc* approach, adapting its grand strategy to events and crises as they materialize, developing a clear consensus on the role the US military should play in supporting American foreign policy could help shape events, ward off crises, and enhance preparations for the challenges that lie ahead. Only after doing this can the new administration successfully plan future military forces.

Adopting a Force-Planning Construct

Military force planning has been described as an art more practiced than studied, and America's inchoate efforts to downsize its armed forces over the last decade in what has been termed an age of austerity lend credence to that aphorism. Current force planning—how the Department of Defense goes about sizing its ground, maritime, and air and space forces to meet present and future contingencies—has been clouded by competing views on how to confront major state and nonstate adversaries and shackled by arbitrary cost caps and cuts. At the heart of force planning is the *strategic concept*—the number and types of wars the United States anticipates and plans its forces to deter and fight. In the early stages of the Cold War that was *two-and-a-half* wars, two simultaneous conflicts of major proportions in Europe and Asia, plus a lesser conflict—implicitly, Cuba. In the 1970s, in the wake of the American withdrawal from Vietnam and a recognition of the Sino-Soviet split, the Nixon Doctrine reduced those force-planning requirements to encompass a

major war in Europe against the Warsaw pact and a lesser contingency elsewhere, perhaps in Northeast or Southwest Asia—the *one-and-a-half* war strategic concept. Following the success of the 1990 Gulf War, the 1993 “Bottom-Up Review” called for “sufficient military power to be able to win two major regional conflicts [MRC] that occur nearly simultaneously.”¹⁷ The *two-war* planning construct (that rather improbably planned the exact same numbers of armored divisions, air wings, and naval battle groups to fight two very different military confrontations) was sustained in a series of defense planning reviews through the 1990s.

With the two-war planning scenario overtaken by the US invasion of Iraq in 2003, defense planners have struggled to come up with the strategic concept to guide future force planning. A series of quadrennial defense reviews (QDR) attempted to adjust the strategic concept to the reality of American forces engaged overseas in less-than-major contingencies while hedging against a larger-than-expected threat. Thus the 2006 QDR’s planning construct called for the United States to maintain an irregular warfare capacity at “the current level of effort associated with operations in Iraq and Afghanistan.”¹⁸ But it also required the capacity to conduct two simultaneous conventional campaigns (or only one if the irregular campaign turned out to be of a long duration) with the capability to topple a regime and restore order after that military victory. The 2010 QDR, also conducted during ongoing combat operations in Iraq and Afghanistan, maintained the same strategic guidance while acknowledging the complexity of the force-planning scenarios and the numerous assumptions and calculations used in attempting to match a future force structure to plausible hypothetical contingencies.¹⁹ The 2014 QDR was even less specific regarding a strategic concept and force sizing but followed the 2012 Strategic Guidance declaring that US armed forces would no longer be sized to conduct large-scale, prolonged stability operations.²⁰ The 2014 QDR stated that the US military would be capable of “conducting sustained, distributed counterterrorist operations; and in multiple regions, deterring aggression and assuring allies through forward presence and engagement.” In addition, US forces “will be capable of defeating a regional adversary in a large-scale multi-phased campaign, and denying the objective of—or imposing unacceptable costs on—a second aggressor in another region.”²¹

Strategic concepts, of course, have to be translated into force size and structure. The MRC building block used in the Bottom-Up Review,

based on a force needed to turn back a cross-border armed incursion by a major armed competitor, included four to five Army divisions, 10 Air Force fighter wings, and four to five aircraft carrier groups. Added to that base force were flexible long-range bombers, expeditionary units from the Marine Corps, and special operations forces (SOF). Additional naval surface combatants were required for global presence. That force size, through a series of QDRs, was simply doubled to reach a two-MRC requirement, a rather simplistic formula given the varied adversarial capabilities and terrain that might be encountered. An update of that force-planning process—continuing to rely on a requirement to meet two major contingencies nearly simultaneously and making conservative assumptions—might require 50 Army brigade combat teams (BCT), 346 naval surface combatants with attendant strike aircraft, 1,200 Air Force fighter aircraft, and 36 Marine Corps battalions. This joint force would also be supplemented by long-range bombers, SOF, and support and enabling functions.²²

On entering office, the Trump administration will find US forces well below these levels. The Army is on track by 2020 to field 30 BCTs (plus 26 more in the National Guard). The Navy plans to build modestly from a current fleet of 287 surface combatants (including 11 large-deck aircraft carriers) to 308 ships by 2021. The Air Force plans to field 55 fighter squadrons and roughly 100 long-range bombers, while the Marine Corps holds steady at three divisions with their associated air wings.²³ These forces have been planned to continue counterterrorism and counterinsurgency operations in Afghanistan, Iraq, and wherever Islamic State in Iraq and Syria (ISIS) might be found, but at a moderate “light footprint” presence and pace. The joint force also has been sized to be able to defeat a regional aggressor and pursue regime change, perhaps within Iran, while deterring and defending against another would-be aggressor in a different region, presumably North Korea. However, the Army and Marine Corps are no longer to be shaped to conduct large-scale stability operations, as reflected in the continued downsizing of ground units in Iraq and Afghanistan over the last eight years. The Navy and Air Force, in addition to supporting roles in both major and lesser contingencies, are tasked with maintaining and securing the global commons of communication and trade.

Force Planning for Primacy

Given that force planning history, what strategic concept and force-planning approach might guide a new administration? There are several from which to choose. In their *Foreign Affairs* article advocating a grand strategy of primacy, Thornberry and Krepinevich call for a strategic concept of one-and-a-half wars. That posture would give the United States an ability to deter or wage a major war with China while being able to send expeditionary forces “to either Europe or the Middle East.”²⁴ In the Western Pacific, the authors are most concerned with Chinese expansionism and advocate a forward defense with additional land, naval, and air forces able to impose a blockade or take back territory. Thornberry and Krepinevich also advocate increased US air and ground forces deployed to frontline Eastern European states to deter further Russian adventurism and proxy wars. In the Middle East, the authors think that the aim of destroying ISIS is unrealistic but advocate greater US support for regional friends and allies countering this virulent strain of Islam.

Force Planning for Selective Engagement

While foreign policy expert Michael O’Hanlon does not term it as such, his *one-plus-two* framework for sizing ground forces including “enough combat capability to wage one substantial and extended regional war while also carrying out two to three smaller operations at a time”—perhaps in continuing counterterrorism and counterinsurgency operations—might serve as a blueprint for force planning under a grand strategy of selective engagement.²⁵ O’Hanlon’s strategic concept calls for sufficient ground forces to deter and defend against North Korean aggression, plus an air- and naval-centric force to hedge against hostile action in the Persian Gulf or South China Sea. His two “half wars” envision multilateral deterrence or response missions, to include peacekeeping or disaster response, “more on the scale of the typical post–Cold War US missions in Somalia, Bosnia, Kosovo or Afghanistan through 2008 (and after 2014).”²⁶ O’Hanlon’s specific force plans call for a modest increase in the size of the Army, stabilizing the naval fleet at 300 ships, and keeping a two-war planning standard for the Air Force and its fighter aircraft.

Force Planning for Restraint

Force planning under a grand strategy of restraint eschews a framework of hypothetical scenarios to plan military forces against and instead emphasizes a maritime strategy, focusing on the “command of the commons.” Posen writes, “Command of the commons permits the United States to strengthen itself at leisure for operations abroad, concert and reinforce the actions of allies if they are available, weaken enemies through embargo and blockade, and erode the adversaries’ capabilities through direct attack. It also allows the United States to interdict the movements of terrorists and technology smugglers, and to mount offensive raids ashore when needed.”²⁷

With respect to ground forces, a strategy of restraint permits sizable cuts. Large forward forces dedicated to presence or stability/counterinsurgency operations are seen as counterproductive, and a major land war against a sophisticated armed state is not a likely contingency to plan against. But a sizing principle for land forces is required, and Posen suggests an active ground force able to “alter the local military balance firmly in favor of its friends in a range of contingencies that could matter.”²⁸ Although that force is admittedly difficult to calculate, taking the Bottom-Up Review’s approach by modeling the force used for Operations Desert Storm in 1990 and Iraqi Freedom in 2003 suggests an active Army of six divisions, each with three or four brigades, all based in the United States. Such reductions might result in a standing force of 400,000—a reduction of nearly 100,000 from current plans. Acknowledging that the size of the Marine Corps is established by law at three divisions, a strategy of restraint advocates reducing the personnel in each division/wing combination, with enough shipping prepositioned on either American coast to support a division-sized amphibious assault. Such an approach might cut Marine Corps total end strength by about one-third.

Sizing Air Force tactical fighter wings has always been a tricky proposition, as traditionally they were seen as airborne artillery and dedicated to support of Army divisions at a ratio of about two to one. Therefore, despite the importance of combat air to protecting the commons, Air Force tactical fighter squadrons, using the Marine Corps as a model, might be reduced by perhaps three squadrons or roughly 216 aircraft. Posen notes that it is not the challenge of air superiority but rather ground defenses that pose the most serious obstacle to command of the air in nonpermissive environments. Here a premium is placed on

stealth, long-range, and, perhaps, unmanned platforms to accomplish the important mission of suppressing enemy air defenses.

With restraint defined as a maritime strategy for force-planning purposes, the Navy emerges as the key service charged with defending and exploiting the command of the commons. Central to this effort is a robust nuclear attack submarine (SSN) force, which, based on contingency analysis, Posen sizes at 48. In addition to being able to “thwart open-ocean submarine offensives,” the SSN fleet must also “maintain an ability to protect the remainder of its surface-based naval power, as well as its trade. This means antisubmarine (and anti-air) warfare capabilities—multipurpose destroyers, long-range antisubmarine warfare aircraft, sensors and command and control.”²⁹ As Army divisions were used to size Air Force fighter wings, the number of aircraft carriers and their attendant battle groups have in the past driven the number of naval surface combatants. Even with maritime forces dominating a grand strategy of restraint, Posen argues that a fleet of nine carriers, rather than the current force of 11, should suffice to underwrite the strategic concept. Based on a naval fleet of 300 ships supporting 11 carriers, a fleet of nine carrier strike groups might reduce the total number of combat ships to 290 or less.

Deciding How Much Is Enough

With grand strategy as a guide and force planning based on plausible military contingencies in support of that vision, formulating a defense budget should be a relatively straightforward process. Of course we know that is not so, as often the topline defense budget is determined, or at least constrained, by outside factors and frequently becomes the entering argument rather than the resulting calculation. Despite these exigencies, defense budget formulation has a history of rational formulation, dating back to the time when analysts Alain Enthoven and K. Wayne Smith, in the employment of Secretary of Defense Robert McNamara, first asked the question “how much is enough?” and sought to bound the answers systematically.³⁰ Those methods can and should be renewed. However, there is a great deal of financial carryover from past administrations and, in a budget dominated by well-ensconced and -supported programs of record, flexibility is hard to find. One thing is for sure: the defense budget has fallen dramatically since 2011, and legislated cuts under the Budget Control Act and the process of sequestration call for further declines. Although many agree that the defense budget needed to go

down from the Cold War peaks of 2008–11, an equivalent majority would conclude that the cumulative total of approximately \$1 trillion in cuts, executed and planned for the period 2011–20, go too far. That conclusion, of course, is based on grand strategy preferences and force-planning models designed to support those strategies. Defense budgets in the Trump administration, therefore, should reflect on and deliberate alternative foreign and defense policy choices and match their budgets to those priorities.

As an indicator of what might be done in a Trump administration, a group of think tanks in Washington recently asked again, “how much is enough?,” and offered a range of budget amounts and priorities.³¹ The study was based on the current 10-year forecast of US defense spending—some \$6.3 trillion—and asked the five teams to supplement or decrement that amount based on their preferred strategy and supporting forces. Although these organizations, for the most part, did not explicitly tie their force planning and budgets to specific grand strategies—or prescribe a defense budget for the Trump administration—by inference we can suggest what a defense budget might look like across a range of the three grand strategies and in support of the forces required to underwrite that strategy.

Budgeting for Primacy

The positions taken by individuals from the American Enterprise Institute (AEI) and the Center for Strategic and Budgetary Assessments (CSBA) come closest to estimating a defense budget that might underwrite a grand strategy of primacy. The AEI section of the collective study explicitly renounces a strategy of selective engagement in positing three major theaters of potential conflict—Europe, East Asia, and the Middle East—and advocates forces and budgets capable of restoring American military primacy in each. Force planning in support of the hypothetical contingencies that might be encountered in those theaters focuses on three initiatives. First, AEI suggests fielding stealthy aircraft en masse to counter the anti-access/area-denial (A2/AD) networks now being developed by China and Iran with the purpose of denying US air and naval forces presence and freedom of action as they respond to territorial aggression in East Asia and the Persian Gulf. Second, AEI champions reclaiming sea control through renewed and increased investment in surface combatants, nuclear attack submarines, and the jump jet F-35B. Third, AEI prioritizes modernizing the Army with more organic firepower

to conduct both irregular and conventional ground combat missions successfully. To reach these desired capabilities, AEI estimated that the planned defense budget would have to be increased a total of approximately \$1.3 trillion over the next 10 years.

In making “strategic choices for future competitions” CSBA nevertheless argues for a US military that is second to none. This think tank also adopts a three-theater planning framework but recommends a defense budget increase of only about half the AEI proposal—\$572 billion over the next decade. As a longtime advocate of a “revolution in military affairs” composed of not only technology improvements but also organizational change and new concepts of operation, CSBA notes that greater funding alone will not be enough to reestablish American military primacy. Nevertheless, it advocates increased US ground presence in Europe and Asia, resulting in a 55,000-Soldier add above currently planned personnel levels. A high-low mix for the Air Force includes accelerated production of the new stealth bomber (the B-21) a restart of the stealthy F-22 air superiority fighter, sustained funding for the F-35, and a new low-cost fighter to replace the A-10, although the size of the force—owing to retirements of aging aircraft—should remain about the same. For the Navy, CSBA calls for an increase in the size of the battle fleet from 272 ships to 384 over the planning period. Sea control and power projection drive these increases, with emphasis on long-range unmanned penetrating intelligence, surveillance, and reconnaissance and carrier-based strike aircraft.

Budgeting for Selective Engagement

In addressing the question “how much is enough” in this study, two think tanks offered forces and budgets that might be presumed to underwrite a grand strategy of selective engagement. Analysts from the Center for New American Security (CNAS, which did not take an institutional position) focused on maintaining force readiness and hedging against future threats through select modernization. The result of their prescription was a relatively modest 2 percent increase above the FY17 projected defense budget, resulting in an annual defense budget of approximately \$550 billion over the decade. Nevertheless, the CNAS scholars’ recommendations mirrored some of those advanced by their primacy-seeking colleagues: increase the Navy’s battle fleet from 272 ships to 345 and grow the attack submarine force from 58 to 74. The Air Force also profited

from force increases, including adding 180 fighter aircraft and 44 stealth bombers. The Army was preserved at an end strength of approximately 450,000, with armored BCTs increased from nine to 12. In supporting a selective engagement policy of overseas presence, the CNAS team heavily invested in forces abroad by positioning additional carriers and attack submarines in the Pacific and shifting brigade combat teams to Europe. Budgetary savings for these improvements were achieved by decommissioning legacy forces determined to have declining utility in new, contested environments.

The second budgetary and force proposal that can be considered as supporting a strategy of selective engagement was advanced by the Center for Strategic and International Studies (CSIS). The rebalancing approach offered by CSIS stressed that military needs must be assessed “against the resources available and the tradeoffs that must be made elsewhere in the federal budget.” Their roles and missions statement for the US military in the future has a definite selective-engagement ring: providing a stabilizing military balance in key regions when needed and conducting humanitarian and disaster relief operations. Specifically, the CSIS work differentiated between planning for major military competitions with great powers and a selective-engagement policy to counter lesser regional threats. However, in seeking investment commonalities across these two planning contingencies, CSIS was able to restrict its requested budget increase to a relatively modest \$461 billion over the next 10 years. Central to that increase was moving back into the baseline budget enduring operational costs that had previously been absorbed into the war-fighting supplemental—overseas contingency operations. Additional new investments went to air, space, cyber, and sea—the anticipated domains for future combat in highly contested environments.

Budgeting for Restraint

The only organization to advocate cuts to the US defense budget over the next 10 years was the Cato Institute, and its team did so under the specific declaration that it was following a grand strategy of restraint. The Cato proposal to cut about \$1.1 trillion from the defense budget over a decade results primarily from that strategy’s assumption regarding the decreased role the US military should play in underwriting American foreign policy and the force reductions that naturally result. In keeping with the “come home, America” theme of restraint, the Cato analysts

eliminated almost all US overseas bases over the decade and cut US ground forces—Army, Marine Corps, and SOF—by about one-third. Such a move gets the United States out of the nation-building and even train-and-equip missions, reducing commitments to allies and friends in the process. The Air Force also came in for its share of budgetary reductions, cancelling the short-range F-35 and instead investing in so-called fourth-generation legacy fighters, but preserving the new long-range bomber. The Navy fares better under a grand strategy of restraint, still cut by 25 percent but left with the lion's share of the defense budget. Carrier reductions amounting to the four oldest flattops in the inventory allowed further cuts in supporting surface and undersea combatants, along with the cancellations of the littoral combat ship. Rather than forward presence—on which the Navy has rested its planning foundation for decades—Cato proposes a surge force that responds to challenges to the sea lanes as necessary. The strategy of restraint, both in force planning and budgeting, promises a defensive strategy to achieve greater security at lower cost.

Defense Decision Making in the Trump Administration

Political scientists describe, explain, and predict. They are generally good at the first two but lamentably poor at the third. As a current reminder of this, recall the projections on the result of the 2016 presidential election by experts who make their living polling potential voters and outcomes. The bane of social scientists is attempting to quantify rational choices from irrational actors.³² As Yogi Berra and others have warned us, “Prediction is difficult . . . especially about the future.” On the other hand, prescription is a much easier task. History's arc gives a great deal to build on, and one's preferences immediately come to the fore. Moreover, prescriptions cannot be proven wrong, only misapplied. But to wade through the above analysis only to arrive at a previously determined recommended course of action would seem to be a waste of time. Therefore the prescriptions here are based what was known in December 2016, prior to inaugural speeches and confirmation testimony, to offer an informed opinion on what the Trump administration might decide to do about America's defense.

Students of decision making know that individuals matter, whether it is the power of a single leader's charisma or the collective conclusions of groupthink. The new set of leaders brought into the Trump administration

to deliberate and act upon challenges to American defense and security will therefore have much to say in deciding on grand strategy, force planning, and budgets. As stated in the beginning, reaching consensus on key issues of strategy, forces, and budgets could ease and streamline future decisions. Given what we know about those occupying key defense and security positions in the Trump administration, such a consensus appears unlikely. With apologies to historian Doris Kearns Goodwin and, perhaps, to Abraham Lincoln, Donald Trump may have, wittingly or not, created a “team of rivals.” Foreign policy expert Thomas Wright has suggested that a new cabinet of defense decision-makers may be divided into three opposing camps: “the America Firsters, the religious warriors, and the traditionalists.”³³

An *America First* policy preference harks back to the days of US isolationism and protectionism. In asking “what’s in it for America economically,” President Trump’s frustration is that “the United States gets little for protecting other countries or securing the global order, which he sees as a tradable asset.”³⁴ Trump seems willing not only to withdraw from international trade agreements he sees as unfavorable to US economic interests but also to conduct an “agonizing reappraisal” of American security commitments. Wright’s *religious warriors* make up the second group, one that waves a flag of “radical Islamic terror” to rally against and believes the war against radical Islam is every bit as important as the Cold War struggles against Communism. President Trump’s pre-election pledge to defeat ISIS by bombing (more recently, to “eradicate them from the face of the earth”) is a course of action this part of the team would advocate. They believe radical Islam is an existential threat, that Iran’s role in supporting such radical groups must be countered, and that this danger ranks in priority well above meeting the security challenges presented by Russia and China. Finally, some players on this team of rivals can be characterized as *traditionalists*, acting as a bulwark against those advocating major changes in American defense policy. The traditionalists seek “to maintain America’s alliance system and military presence around the world.”³⁵ They are likely to have a strong voice, but not an unrivaled or uncontested one, in the making of defense policy in the Trump administration.

Trump's Grand Strategy: Restrained Engagement

This strategy might also have been termed *selective restraint*, but a grand strategy in the Trump administration is likely to be more engaged than restrained. As the term implies, this strategic choice is influenced by an America First perspective, abandoning an objective of primacy in favor of a more restrained US role in the world. Indeed, advocates of restraint may find much to like in Donald Trump's grand strategy. Posen has suggested three objectives within a strategy of restraint: preventing a powerful rival from upsetting the balance of power, combatting terrorism, and limiting nuclear proliferation.³⁶ The Trump administration will also like some of the recommendations supporting those goals, including recasting US alliances so other countries increase contributions to their own defense. Combatting terrorism is also high on the defense agenda of the new administration. However, limiting nuclear weapons proliferation was not a goal enunciated by Mr. Trump; in fact, the contrary has been suggested—that other nations may need to develop their own nuclear capability if the United States rejects extended deterrence. But advocates of selective engagement will note—and traditionalists within the administration will agree—that “military force will remain an important component of U.S. power . . . that [m]arkets depend on a framework of security . . . and that maintaining alliances is an important source of influence for the United States.”³⁷ A grand strategy of restrained engagement would adopt an *offshore balancing* view, calling on the United States to preserve a favorable balance of power in the event a potential hegemon emerges in vital regions, but it would maintain American presence and overseas engagement to assure the free flow of international commerce and global economic growth assured by an activist and engaged policy.³⁸

The Nixon (Trump) Doctrine for Force Planning

Donald Trump is an admirer of Richard Nixon. According to news reports, he “borrowed phrases from him, used his speech at the 1968 Republican convention as a template for his own convention address, and spoke glowingly of Nixon in interviews.”³⁹ In that case, Trump might like his doctrine, too. With the 1969 declaration of the Nixon Doctrine, the United States abandoned the two-and-a-half war standard that had been used since the Kennedy administration to size conventional forces

in favor of that of one-and-a-half wars. The assumption that America no longer faced the threat of dual, simultaneous major conflicts allowed the phasing down of US global military commitments. While pledging to keep those treaty agreements, the formal declaration of the doctrine noted that “we shall look to the nation directly threatened to assume the primary responsibility of providing the manpower for its defense.”⁴⁰ The premise of the doctrine was that the United States would give first priority to its own interests.

What might a one-and-a-half-war doctrine yield for force planning under a Trump doctrine? Presumably the one major conflict would be either against China in the South China Sea or Iran in the Persian Gulf. Although major military force-on-force confrontations cannot be ruled out—particularly if such a conflict over Taiwan independence or Iranian nuclear weapons were to spin out of control—the most plausible hypothetical contingency to plan against in both cases is likely to be maintaining freedom of navigation in territorial waters, penetrating or establishing a naval blockade, and overcoming A2/AD defenses. In 2010 the CSBA developed the operational concept of “Air-Sea Battle.”⁴¹ Although the title has since been rejected by the Pentagon owing to its focus on only two of the armed services, the principle on which the concept was based has only become more relevant. Politically incorrect, the initial study and further elaborations of it pointed to the A2/AD capabilities being developed by China that, if not responded to, could negate the ability of American armed forces to approach and operate within the Western Pacific. A follow-on CSBA study found a similar challenge and advocated a common approach to deal with Iran’s emerging anti-access capabilities.⁴² In each hypothetical conflict, the need was for new long-range air and naval systems such as penetrating bombers and carrier-based unmanned aircraft, increased numbers of nuclear attack submarines with larger magazines of standoff munitions, improved air and missile defenses, and forward posture initiatives to shore up deterrence and “complicate the operational planning of an enemy force.”⁴³ Underwriting this concept of operation requires a buildup of air and naval forces similar to that advocated by CNAS and CSIS in their force and budget proposals.

Despite Trump’s calls for increasing the size of American land forces during the presidential campaign, such an approach seems at odds with this doctrine. Candidate Trump promised a policy that would “stop

looking to topple regimes and overthrow governments” in the Middle East and elsewhere, so large land armies required to do that appear superfluous. Thus, although the military may be given more leeway in going after Mid-East militants, the numbers of US forces increased slightly, and the bombing sortie rate increased, the end strength of the Army and Marine Corps seems unlikely to grow significantly.⁴⁴ Sizing for the Army, then, might best follow O’Hanlon’s one-war capacity that “might or might not lead to regime change and occupation of enemy territory.”⁴⁵ O’Hanlon suggests a modest increase in the size of the 450,000 active Army and 525,000 Reserve and National Guard forces to total about one million men and women.

Force planning focuses on the strategic concept, the numbers of wars the nation might fight, and the plausible contingencies that drive the quantity of general purpose forces needed. But there are three other initiatives in force planning carried over from the previous administration that the Trump administration will find worthwhile. The first of these is the so-called third offset. A name change might be useful here—something like *game changers* perhaps, or *creative disruption* to add a business school ring to it—but the investment in next-generation weapons systems and technologies, such as directed energy, unmanned platforms, cyber and hypersonic weapons, and space-based assets and their concepts of operation, is meant to assure future US military superiority and strengthen conventional deterrence.⁴⁶ A second program to continue is strategic nuclear modernization, recalling that the Nixon Doctrine promised that the United States would “provide a shield if a nuclear power threatens the freedom of a nation allied with us or a nation whose survival we consider vital to our security.”⁴⁷ Like those underwriting Eisenhower’s “New Look,” nuclear weapons systems are relatively affordable and bring a good deal of “bang for the buck.”⁴⁸ Finally, the so-called Asian pivot should be continued, with perhaps another name change.⁴⁹ Europe no longer is the central focus for defense. And although ISIS and Iran will remain important in force planning and operations, Asia, particularly China, deserves a new prominence in American defense policy.

Conclusion: Deciding How Much Is Enough

Four of the five think tanks participating in the study referenced above recommended significant increases in the defense budget. There-

fore, the first declaration a Trump administration may choose to make regarding defense spending is that the era of austerity is over. The 2011 Budget Control Act, the central legislative player in equating defense budgets with other discretionary spending in the process of sequestration, should no longer be allowed to dictate defense budgets. With that obstacle set aside, the question of how much is enough remains. To support a grand strategy of restrained engagement and a one-and-a-half war force-planning construct, the relatively modest defense budget increases proposed by CNAS and CSIS appear to be adequate to support overseas operations, keep modernization and readiness initiatives on track, increase Army end strength marginally, and make major improvements in the quantity and quality of air and naval capabilities. In O'Hanlon's words, a 2020 defense budget of \$650 billion in constant 2016 dollars will be the "best bargain going."⁵⁰ President Trump's defense decision-making team, in the spirit of "the art of the deal," should start negotiating that bargain right now. ■■■

Notes

1. Robert J. Art, *A Grand Strategy for America* (Ithaca, NY: Cornell University Press, 2003), 1.
2. Another dedicated student of grand strategy, Hal Brands, uses a more expansive definition: "an integrated set of concepts that offers broad direction to statecraft." Because this article focuses on defense decision making, we will adopt Art's more narrow definition. See Hal Brands, "Barack Obama and the Dilemmas of American Grand Strategy," *The Washington Quarterly* (Winter 2017): 101–25, <http://doi.org/bwrm>.
3. Barry Posen, *Restraint: A New Foundation for U.S. Grand Strategy* (Ithaca, NY: Cornell University Press, 2014), 1.
4. John Lewis Gaddis, *Strategies of Containment* (New York: Oxford University Press, 2005).
5. Barry Posen and Andrew Ross, "Competing Visions for U.S. Grand Strategy," *International Security* 21, no. 3 (Winter 1996/97): 5–53, <http://muse.jhu.edu/article/447445>.
6. *Ibid.*, 32.
7. "Excerpts from Pentagon's Plan: 'Prevent the Emergence of a New Rival,'" *New York Times*, 8 March 1992, <http://www.nytimes.com/1992/03/08/world/excerpts-from-pentagon-s-plan-prevent-the-re-emergence-of-a-new-rival.html>.
8. George W. Bush, *The National Security Strategy of the United States of America*, The White House, September 2002, 5.
9. Jeffrey Goldberg, "The Obama Doctrine," *The Atlantic*, April 2016, <http://www.theatlantic.com/magazine/archive/2016/04/the-obama-doctrine/471525/>.
10. Mac Thornberry and Andrew F. Krepinevich Jr., "Preserving Primacy," *Foreign Affairs* 95, no. 5 (September/October 2016): 27, <https://www.foreignaffairs.com/articles/north-america/2016-08-03/preserving-primacy>.
11. Robert Art distinguishes between *dominion* and *primacy*, which he does not believe deserves the title of a grand strategy. But he admits that dominion is a dictatorial position and probably unachievable, while primacy is both feasible and—for some—desirable.
12. Posen, *Restraint*, 65.

13. Benjamin H. Friedman and Justin Logan, "Why Washington Doesn't Debate Grand Strategy," *Strategic Studies Quarterly* 10, no. 4 (Winter 2016): 14–43, <http://www.au.af.mil/au/ssq/comments.asp?id=143>.
14. Art, *Grand Strategy*, 198–203.
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The Convergence of Information Warfare

Martin C. Libicki

Abstract

If information technology trends continue and, more importantly, if other countries begin to exploit these trends, the US focus on defeating a cyberwar threat will have to evolve into a focus on defeating a broader information warfare threat. It is far less plausible to imagine a cyber attack campaign unaccompanied by other elements of information warfare—in large part because almost all situations where cyber attacks are useful are those which offer no good reason not to use other elements of information warfare. Thus the various elements of information warfare should increasingly be considered elements of a larger whole rather than separate specialties that individually support kinetic military operations.



In the 1990s, information warfare (IW) burst on the scene and subsequently left with a whimper. It came to prominence when a community of military strategists, citing the works of John Boyd, the Tofflers, and Sun Tzu, argued that competition over information would be the high ground of warfare.¹ In this struggle, some would collect ever-more pieces of information ISR (intelligence, surveillance, and reconnaissance) systems. Others would use the tools of electronic warfare (EW), psychological operations (PSYOP), and cyber operations to degrade what the other side knew or could control. Many felt there had to be a unified theory of information warfare out there to integrate these various elements.

Information warfare receded when people realized there was no such unified theory and hence no good reason to organize militaries as if there were.² The ISR community kept building and operating systems of greater acuity and range. Electronic warriors went back to mastering their magic in support of air operations, counter-improvised explosive

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devices, and other combat specialties. Psychological operators continued to refine the arts of persuasion and apply them to an increasing roster of disparate groups. Cyber warriors bounced through the space community before getting their own subunified command within which they could practice their craft. This refusal to coalesce happened for good reason. Although the *ends* of each of these separate activities—to gain the information advantage—were similar, the *means* by which these separate activities were carried out were very different. Expertise in sensors, emitters, content, and code (for ISR, EW, PSYOPs, and cyber operations, respectively) hardly resembled one another. Each called for different equipment and training; there was scant reason for them to be organized together.

However, given today's circumstances, in contrast to those that existed when information warfare was first mooted, the various elements of IW should now increasingly be considered elements of a larger whole rather than separate specialties that individually support kinetic military operations. This claim is supported by three emerging circumstances. First, the various elements can use many of the same techniques, starting with the subversion of computers, systems, and networks, to allow them to work. Second, as a partial result of the first circumstance, the strategic aspects of these elements are converging. This makes it more likely that in circumstances where one element of IW can be used, other elements can also be used. Hence, they can be used together. Third, as a partial result of the second circumstance, countries—notably Russia, but, to a lesser extent, North Korea, Iran, and China—are starting to combine IW elements, with each element used as part of a broader whole.

Taken together, these emerging circumstances create challenging implications for the future of US information warfare. Simply put: if information technology trends continue and, more importantly, if other countries begin to exploit these trends, then as a general rule, the US focus on defeating a cyberwar threat will have to evolve into a focus on defeating a broader IW threat. Perceptions of cyberwar will likely need rethinking. One could debate plausibility of a determined cyber attack campaign unaccompanied by physical violence and destruction. It is becoming far less plausible to imagine a cyber attack campaign unaccompanied by other elements of information warfare. Preparations to retain resilience and accelerate recovery after a cyber attack campaign

would also do well to address the complications that could arise if other IW elements were used in conjunction with such cyber attacks.

Computer Subversion as Information Warfare

Subversion can be the starting point for multiple IW elements. The point of subversion is to usurp the normal state in which systems do only what their owners want. Instead, they do things hackers want. In some cases hackers can get systems to react to inputs in unexpected ways, and in other cases such systems can execute an arbitrary set of commands provided by hackers.

Once hackers compromise a system they have many options. These days the most common is to collect information. When national intelligence agencies do this, it is called cyber espionage, a subset of intelligence collection. Whereas human intelligence takes place one person at a time, cyber espionage can take place millions of records at a time. A prime example is the Office of Personnel Management (OPM) hack—22 million personnel records were stolen. It showed how one side's voluminous data keeping can be another side's intelligence mother lode. It can be a lot easier to find those who collect information and steal from them than it is to collect the information afresh. The advantage of piggybacking can be applied to the many ways that individual data are generated, with the theft of information already ordered in databases (as with OPM) as the clearest case of leveraging the other side's work. Indeed, imagine what could be done with the Chinese database of political "creditworthiness."³ But there are other targets, notably the large compilations created via web transactions and surveillance systems.⁴ For overhead images, consider the burgeoning market for gyrocopters or other types of unmanned aerial vehicles; for ground imagery, there are cell phone snaps—which could wind up in an intelligence database by being donated, posted, offered, aggregated, and handed over—or simply stolen. If the Internet of Things evolves as it appears to be doing, homes could leak information from sources almost too many to keep track of.⁵ Again, why collect what can be stolen?

In many cases, the purpose of stealing all the haystacks is to find the few needles of particular interest. But one can also make hay with such information. Once collected, data-mining techniques permit analyses and exquisite tailoring of such information.⁶ The ability to build increasingly realistic simulations of individuals, indeed perhaps of most

of a population, could arise from integrating data streams with enormous cloud-based storage, powerful processing, and a dash of artificial intelligence. Such simulations may be used to test every individual's reaction to events (both virtual and real), advertising, political campaigns, and psychological operations and even to guess what might go viral through person-to-person interactions.

One way to use information on individuals gathered through a combination of ISR (albeit often third-party ISR) and cyber operations is through exquisite psychological operations, messages tailored to one person at a time. The trend to "micro-appeals" is already obvious in US domestic political campaigns and advertising.⁷ As long as psychological operators grasp the essentials of the cultures of those they wish to influence, there is every reason to believe that a data-mining campaign to characterize individuals precisely can help in crafting the message most likely to resonate with them. The messages do not have to convince (e.g., buy this, believe that); in a conflict context, their point may be to induce fear or at least anxiety and thus paralyze resistance one person at a time; tailoring messages to each person erodes the solidarity enjoyed by groups all facing the same threat. Doxing individuals—which is posting the results of hacking to embarrass or blacken their reputation through randomly found (as in the Ashley-Madison hack) or deliberately selected (as in the Democratic National Committee hack) information—is increasingly common.

Cyber operations can enhance PSYOPs in other ways. Devices and websites both can be infected to introduce users to propaganda that shows up in unexpected places or carries unexpected credentials.⁸ Compromising systems can also aid psychological operations by directing people to sites they had not intended to go or to sites that falsely purport to be where they had intended to go. Similar techniques can and are being used to enhance the credibility and page rankings of favored sites. Spam-bots can be engineered to dominate online debates.⁹ Troves of material stolen from political opponents can be seasoned with concocted documents with appropriate levels of verisimilitude.¹⁰ Overall, the shift from more-curated mass media to less-curated Internet websites and uncurated social media permits outright falsehoods to spread much faster and farther.

Other harvests from compromised systems—notably the other side's—are the classic ones of disruption, corruption, and, possibly, destruction.

Websites can be knocked offline when computers (and, one day, kitchen appliances?) of web users are converted into bots and herded into bot-nets. To date, the damage from all cyber attacks combined (as distinct from cyber espionage) has been modest, but it is an open question whether the threat will stay contained. Can increasingly sophisticated defenders withstand assaults from increasingly sophisticated attackers? How much will growing digitization and networking increase a country's attack surface?

The Internet of Things is another new playground for hackers, which could harm not only such things but also whatever they could come into contact with. To date, it has been difficult for hackers to hurt people and break things, in large part because the major industrial facilities, having seen others attacked through cyberspace, are taking information security more seriously. But most of the Internet of Things will be owned by people unable or unwilling to pay requisite attention to security; many of those who build these networked things seem to have ignored the security lessons that information system makers have painfully learned. Many of the things that are becoming networked (notably, cars and drones) are capable of causing serious harm to their owners and worse, third parties, if their controls are usurped. Even if wholesale chaos is unlikely, there will be new ways of heightening anxiety or targeting individuals from afar.¹¹

To a partial extent, electronic warfare can also be carried out by controlling devices that emit radio-frequency (RF) energy. New forms of RF signals pervade homes and cities: Bluetooth, Wi-Fi, 5G, keyless entry systems, and Global Positioning System (GPS), to name a few. The coming Internet of Things is essentially an Internet of RF-connected items. If software-defined radios (those capable of broadcasting or receiving signals over an arbitrarily selected frequency) become ubiquitous, they could be hijacked to jam or spoof targets hitherto inaccessible using traditional EW boxes.¹²

In sum, systems compromise is becoming a core technique across all IW elements. It remains the key element of cyber attack. Cyber espionage itself is a growing element in ISR. Subverting sensors or the data repository allows harvesting of surveillance collected by others. Similar subversion can allow data collection at such high resolution as to permit individuals to be simulated; this knowledge permits PSYOPs to be optimized; compromising media creates new conduits for persuasion

or the manipulation of fear. Hijacking the Internet of Things can create new ways to create physical harm. Finally, some forms of EW can be carried out by subverting RF-transmitting devices. Opportunities abound.

IW in the Niche of Cyberwar

The second basis for arguing that the various elements of information warfare should be considered parts of a greater whole results from four propositions. First, cyberspace operations differ in key respects from kinetic operations. Second, other elements of IW differ from kinetic operations in similar ways. Consequently, third, these various elements can all be used for operations where these characteristics are important or even essential (or where opposing characteristics make using kinetic operations impractical or unwise). And, fourth, for such operations, the use of IW elements should therefore be considered together rather than separately. Consider that the first two positive propositions now ground the last two propositions (what is versus what could or should be).

Several broad characteristics differentiate cyber from kinetic operations: the variance of their effects, their nonlethality, their ambiguity, and the persistence of the war-fighting community. Take each in turn.

Higher degrees of variance are more likely to characterize cyber attacks than kinetic attacks. Most cyber attacks cause temporary or at least reversible effects whose extent depends on the technical details of the target systems (many of which change in ways attackers cannot expect), the services such systems provide (often opaque to attackers), how such services are used (also opaque), and how quickly the attacked system can be restored (often unclear even to defenders, much less attackers). Outcomes can easily vary from expectations in such an environment. Even estimating battle damage assessment, not to mention collateral damage, can be unreliable particularly if defenders isolate an attacked system from the rest of the world to restore it. Because systems have to be penetrated before they are attacked, the timing of success in going after hard targets is often unpredictable (with Stuxnet, for instance, effects had to await some unknown person inserting a USB device into a computer inside the closed network).

Insofar as other IW operations start with compromising systems, they consequently would wait until those systems are sufficiently compromised; thus these IW operations can also start with large degrees of unpredictability. But even after this unpredictability is taken into

account, the IW effects are, to a further extent, unpredictable. PSYOPs, for instance, entail persuasion in that one hears echoes of retail tycoon John Wanamaker: “Half the money I spend on advertising is wasted; the trouble is I don’t know which half.” Unpredictability is higher if leveraging social media rather than mass media, because the former depends on the willingness of those receiving the message to pass it on and thus have it go viral. Although EW and ISR have features that allow predictability, their ultimate effectiveness often depends on the tricks the other side has or lacks: do war fighters know what frequency-protection measures are being used; will spoofing be successful or will the other side see through some tricks; how well does the other side camouflage itself, hide itself, or use denial and deception techniques? Even if one side sees what it sees (or thinks it sees) it can only guess at what it cannot see.

One obviously different effect is the general nonlethality of information operations vis-à-vis kinetic operations. Rarely do cyber attacks in particular or other IW techniques in general create casualties. After nearly a quarter-century of alarm over the lethality of cyber attacks, no one has yet been hurt in a cyber attack, and there are only two known occasions of serious physical destruction (Stuxnet and a blast furnace in Germany).¹³ EW is even more benign (electronics can be fried, but this generally requires either close range or nuclear effects). This has several implications. IW can rarely disarm (even if it can temporarily disable equipment or at least discourage its use) or make others realistically fear for their lives. It can be used in circumstances where causing casualties may yield condemnation or beget an overreaction.

Ambiguity entails doubt over who is doing what and for what purpose. Cyberspace operations unfold in a dense fog of ambiguity (even as certain fogs that have bedeviled kinetic operations are lifting). In the wake of a cyber attack, although context may provide a strong clue of who did what, attribution can be a problem if and when attackers take pains to mask their involvement. Adding ambiguity to IW means that the global reach of the Internet widens the number of potential attackers because small states and nonstate actors can threaten large ones. It does not take a large state apparatus to hack computers or devices, exploit borrowed ISR, or generate propaganda—although it does take clever people to do this well. Countries can use IW elements to harass countries they cannot hope to touch in traditional kinetic ways—as long as they aim for societal effects rather than those requiring kinetic follow-up

(e.g., that would exploit the other side's confusion when its information turns to mush).

In some cases even the effects may be less than obvious (e.g., a subtle intermittent corruption of data), particularly if the attack is halted mid-way. Discovering a penetration into a system does not indicate whether its purpose was to spy on or to interfere with a system and, if the latter, when the system would go awry—if the penetration is discovered, which often takes months or years if it takes place at all. Thus intentions cannot always be inferred from actions, and indications and warnings have yet to be terribly useful¹⁴; there are, for example, few if any steps that must precede a cyber attack by *x* hours and whose discovery can be used to predict when a cyber attack is coming. Inasmuch as cyber attack techniques are unlikely to work if their particulars are exposed, these particulars are deep secrets. No one really knows what others can do in cyberspace. Few show what they themselves can do; past attacks may be demonstrative but not necessarily repeatable—hence they are better indicators of what was rather than what will be.

Other IW elements would be colored by such ambiguity if they worked by first subverting systems. To the extent that the source of such subversion was not obvious, then neither would be the identification of what element of information warfare (e.g., surveillance, messaging, manipulating RF emissions) was the purpose. Similarly, to the extent that the purpose of such subversion was not obvious, it complicates drawing inferences once such subversion is discovered.

But again, many information warfare elements would have ambiguous features even if carried out through non-cyber means. It can be hard to locate the source of a transmitter that moves and broadcasts infrequently. People often do not know they are under surveillance or even if they do, from where and using what means. And even if these are known, the use to which such information is put can be little better than a guess. The origins of a meme or a rumor circulating within social media can be easily obscured. The ultimate target of surveillance, emission, or disinformation may not be the proximate one.

Finally, information warriors—notably cyber warriors—may persist longer than their kinetic counterparts because they work as small units or even individuals without expensive, bulky, or otherwise telltale equipment. Information warriors rarely need be in harm's way nor need their operations have any obvious signature that distinguishes them from

civilians. Their ability to generate instant worldwide effects from anywhere gives them plenty of places to hide in relative safety. Thus it is hard to put them out of commission by attacks (and certainly not by cyber attacks). Because hacking looks like typing it can escape casual oversight. Because their efforts need little specialized equipment, hackers may even survive their country's demise. This latter characteristic does not extend to forms of IW that use expensive organic assets like aircraft-mounted jamming pods, surveillance satellites, or mass media outlets. But a force that can no longer count on such assets may be able to leverage subverted systems to make up some of what these assets supplied. Such a force can persist in fighting even if dispersed.

Implications of Variance, Nonlethality, Ambiguity, and Persistence

These characteristics of information war shape how countries might want to use (and not use) information warfare. Take each characteristic in turn.

Variance complicates the use of IW elements to support modern kinetic combat or various forms of irregular warfare, all of which represent a highly complex and synchronized affair dependent on the careful integration of effects. On such battlefields, IW is used almost entirely in support of kinetic operations. Although militaries favor efforts with high degrees of effectiveness, many, perhaps most, military operations are predicated on the finite and bounded success of discrete, well-defined support efforts (e.g., radars are jammed to permit aircraft to reach a target and return home safely). While exceeding objectives is nice, it is usually not worth the risk of *not* meeting objectives. So although IW elements may be included in operational plans, they are more likely to be nice-to-have but not need-to-have tools—apart from traditional and more predictable (i.e., measurable and discrete) aspects of EW or ISR. Conversely, unpredictability matters less if IW is the main event where the point is to achieve an agglomeration of effects so that overachievement in one endeavor can compensate for underachievement in another, particularly if done to support strategic narratives that shape decisions or actions. There is a big difference between (1) needing A to work in order that B would work and (2) knowing that if A and B both work they reinforce the message that each other is sending. Arguably, cumulative rather than

coordinated effects are what better characterize the use of IW against societies in comparison to its use against militaries.

In any event, civilian targets are softer targets for IW than are their military counterparts. Civilian systems are less well protected and are more often exposed to outside networks. Civilians rarely practice operational security. Security is still an afterthought for the Internet of Things. Civilian RF signals rarely use antijamming or antispoofing techniques. Civilians themselves are often softer targets than war fighters, who are trained to be inured to most IW. So IW is likely to have a different target than kinetic warfare.

Nonlethality and ambiguity, for their part, may be exploited to modulate the risk of reprisals—notably, violent reprisals—for having carried out information operations. Information warriors may well doubt that target countries will mount a kinetic response, which can break things and kill people, to an IW campaign that does neither. Indeed, it is unclear whether countries would mount a kinetic response to an information warfare campaign that happens to wreak some damage and hurts a few people. Similarly, there is little precedent for responding to propaganda with force.

If the target cannot be sure who is causing its suffering it may have to forego both disarming and deterring the attacker. Even if the target later concludes that it knows who is doing what or at least cannot afford to remain passive (doubts notwithstanding), it may not be able to do so easily. Having accepted continued harassment as the new normal puts the onus on the defender to risk escalation to end harassment; it has to shift from deterrence to the much harder art of compulsion.

Nevertheless, an IW campaign that wants to avoid triggering a violent reaction from the target requires knowing where the latter's thresholds lie¹⁵—and it may have little better than a guess to work with. The true threshold will depend on personalities, politics, and foreign pressure. Injury may be, alternatively, likened to a boiling frog (leading to underreaction) or the straw that broke the camel's back (leading to an unexpected reaction). An attack that passes notice may be only subtly different from one that excites retaliation. The target state may deem something put at risk to be more sensitive than outsiders realize even as it assumes that its own sensitivities are known and understood by others. The threshold may also vary by information war element. Cyberwar can levy large costs (it may take \$1 billion to replace South Korea's national identification

system¹⁶) without anything actually breaking. Broad foreign surveillance can be scary without much cost in life and property, but it can also be shrugged off. EW, however, can interfere with transportation operations by making them unsafe, but if there is damage, fingers may point to those who choose to operate in the face of risks.¹⁷

These days, countries appear to be mindful that there are limits. Although Russia took territory, tried to interfere with Ukrainian elections, and disrupted Ukraine's parliamentary sites with a distributed denial-of-service (DDOS) attack, it has refrained from all-out cyber attack or EW against civilian targets and is not trying to foment disorder in core Ukrainian areas, which may now be out of reach for Russia. It probably does not want Ukraine to feel under existential threat unless and until Ukraine reacts forcefully to Russian incursions.

Persistence means that IW can be hard to disable even as kinetic forces are being targeted for destruction. Much as ambiguity makes it hard to figure out if information warfare has started, persistence means that the end itself may not be declared unless someone concedes and perhaps not even then—persistence can be a two-edged sword for a country that turns such tools on but cannot credibly promise to turn them off. President Kennedy's phrase "a long twilight struggle" may become apropos when discussing information warfare.¹⁸ Indeed, were the Cold War to have taken place in the modern era, its day-to-day activities may well have included many such elements.

In many ways, we have already seen this kind of war before: terrorism combines high levels of variance (many would-be terrorist attempts fail or are thwarted), modest levels of lethality compared to historic kinetic warfare, ambiguity (particularly as regards state sponsorship), and persistence. If terrorism remains the "propaganda of the deed" (as anarchists argued in the nineteenth century), then its link to IW is clearer. Because full-fledged IW requires, as a target, a well-digitized society, one might view it as terrorism against the rich.

Commingling IW Elements

The third reason to take the convergence of IW seriously is because the Russians and others are doing so in theory and in practice (i.e., Ukraine). Russia's "hybrid warfare" campaign features an admixture of specialized units (*speznats* and artillery), logistical support of local insurgents—and copious amounts of IW. The latter has included DDOS attacks on Ukrainian

sites, an attack on Ukraine's power grid, near-successful attempts to corrupt Ukrainian election reporting, heavy electronic warfare in combat areas, the severing of electronic links between Ukraine and Crimea, the physical destruction of communications links, and heavy amounts of propaganda directed at Russian-speaking Ukrainians among others.¹⁹ Russian cyber espionage against Western targets appears to have grown; they are certainly being detected more often. Examples include NATO and the unclassified e-mail systems of the White House, the US State Department, the Joint Chiefs of Staff, the Democratic National Committee, and the German Parliament.

Russian theory underlies its practice. As security specialist Keir Giles has observed, "the Russian definition [is] all-encompassing, and not limited to wartime . . . [and] much broader than simply sowing lies and denial, for instance maintaining that Russian troops and equipment are not where they plainly are. Instead, Russian state and non-state actors have exploited history, culture, language, nationalism and more to carry out cyber-enhanced disinformation campaigns with much wider objectives."²⁰ Others note that, "Cyberspace is a primary theater of Russia's asymmetrical activity . . . because . . . [it] offers a way to easily combine fighting arenas, including espionage, information operations, and conventional combat, and to do so behind a curtain of plausible deniability."²¹ Russian military doctrine argues, "military dangers and threats have gradually shifted into the information space and internal sphere of the Russian Federation . . . [requiring military forces to] create conditions, that will reduce the risks that information and communication technologies will be used [by others] to achieve military-political goals . . ."²² Russia expert Dmitry Adamsky argues, "It is difficult to overemphasize the role that Russian official doctrine attributes to . . . informational struggle in modern conflicts . . . [which] comprises both technological and psychological components designed to manipulate the adversary's picture of reality, misinform it, and . . . forces the adversary to act according to a false picture of reality in a predictable way. . . . Moral-psychological suppression and manipulation of social consciousness aim to make the population cease resistance, even supporting the attacker, due to . . . disillusionment and discontent."²³

Similar beliefs may motivate North Korea, which has carried out cyber attacks against South Korea, notably its banks, media companies, and national identification system. It also engages in intermittent electronic

warfare (GPS jamming directed at passing aircraft²⁴) and directs propaganda south (which the South Korean government takes seriously enough to censor). China for its part has pressed on with a more tactical approach to IW; in late 2015 it merged its integrated network electronic warfare activities with its space and ISR activities.

Russians and to a lesser extent others believe that IW should be approached holistically for two reasons. First, IW should not be dismissed out of hand—and Russia seems satisfied that it worked in Ukraine. Second, to the extent that the United States has to contend with Russian operations, it helps to grasp how IW elements fit together.

The Future of US Information Warfare

Given the trends and convergence of information warfare, how might the United States exploit these trends? On the face of it, no country is better positioned to carry out information war. US skills at cyberwar have no equal. US institutions lead the world in the commercialized arts of persuasion, and the collection and analysis of personal information for commercial and political purposes have proceeded farther in the United States than anywhere else. No country is more advanced in digitizing and networking things. US expertise in systems integration is unchallenged. But figuring out how to effectively harass another country's citizens one at a time does not seem like an urgent or important, much less permissible, US national security problem to solve.

Nevertheless, because other countries are interested in figuring out how to combine these elements of information warfare into a unified whole, the United States ought to understand how to do so itself. First, there may be useful techniques learned even if the larger idea is unacceptable. Second, even though the prospect of operating a harassment campaign based on IW is unpalatable, one cannot rule out occasions in which the only way to stop others from doing so (short of armed conflict) may be a credible offensive capability. Third, just as the Defense Advanced Research Projects Agency was established shortly after *Sputnik* launched for the purposes of preventing surprise—and then went ahead to develop technology that surprised others—dabbling in the arts of IW could help prevent external developments from surprising the United States.

If the United States were to embed cyber operations within a broader context of IW, then the mission and organization of US Cyber Command would have to change. Today it boggles the mind to ask an organization

(deservedly) wrapped in great secrecy to take the lead for influence operations, which are ineluctably public. But in time, the choice to overlook the psychological effects of cyber operations or the potential synergy between psychological operations and cyber operations would make just as little sense.²⁵ Serious thought may be needed on how to build an information warfare authority, whether housed under one organization or achieved through intense coordination among the various communities: cyber warriors, cyber intelligence collectors, electronic warriors, psychological operators, and, in some cases, special operators.

Perceptions of cyberwar might also need rethinking. One could debate the plausibility of a determined cyber attack campaign unaccompanied by violence. However, it is harder to imagine a cyber attack campaign unaccompanied by other elements of information warfare, in large part because almost all situations where cyber attacks are useful are also those which offer no good reason not to use other elements of IW. For instance, if another country is trying to exhaust US will by conducting cyber attacks on information systems that underlie US commerce, they would not necessarily try to blow up trucks. Rather, cyber attacks that compromise trucks, to reduce confidence in their safe operation, are more plausible, if achievable. It is also quite likely that in a systematic campaign, attackers would try to jam GPS or override satellite uplinks, using cyber espionage to create the impression that they are watching Americans and are prepared to dox particular individuals, or letting a thousand trolls bloom to create a news environment that would pit Americans against each other. The latter activities have attributes of nonlethality, unpredictability, ambiguity, and persistence that allow them to fit the strategic niche occupied by cyber attacks. Preparations to retain resilience and accelerate recovery after a cyber attack campaign would also do well to address the complications that could arise if other elements of IW were used in conjunction with cyber attacks.

Against such a campaign how should countries respond? The terms war and warfare suggest a military response, and one cannot completely rule out circumstances in which the only way to reduce suffering from an IW campaign to within reasonable levels is to threaten force. But many characteristics of IW—nonlethality, ambiguity, and persistence—suggest using the same mind-set, tools, and rules used against crime. Much crime fighting involves changing the environment. The moral environment affects an individual's propensity to join a fight; it includes

ethical norms and the social influences that arise when communities alternatively applaud, excuse, or shun criminals. The physical environment can also be changed. Cyber attacks can be countered by cybersecurity standards, air-gapping (e.g., isolating controls from the grid), and information sharing (making it as mandatory as accident investigations). EW threats may be mitigated through spectrum and transmission-device controls (which make it easier to identify attacking devices). ISR exploitation may be frustrated by policies such as restricting unmanned aerial vehicles, surveillance cameras, data collection, and data retention (so that there is less data to steal). Ultimately it has been the evolution of the information economy that has provided the means by which hostile others can run a pervasive harassment campaign. There is little evidence that others have been willing to invest enough time and trouble to make a comprehensive campaign work and no evidence yet that such a campaign could work, in the sense of shifting the balance of power among various actors. But it would not hurt to ask to what extent the collection and connection of personal information in modern economies provide more raw material than they should for someone else's hostile IW campaign.

Even if defeating information warfare through conventional war is unrealistic, the prospect of managing it down to tolerable levels need not be. Treating IW like crime rather than state acts shows a refusal to accept it as "acceptable" behavior but does not signal a commitment to violence as an appropriate response. Such a strategy requires a narrative that calls on the public for both less and more: less in that conscious mobilization is deliberately eschewed and more in that managing such a conflict may require fundamental and lasting changes in how people go about their daily lives. ❧

Notes

1. John Boyd's briefing "Winning and Losing" exists only in summary form. For more on his work, see, for instance, Frans Osinga, *Science, Strategy and War: The Strategic Theory of John Boyd* (London: Routledge, 2006); Alvin and Heidi Toffler, *War and Anti-War, Survival at the Dawn of the 21st Century* (New York: Little Brown and Co., 1993); and Sun Tzu, *The Art of War*, trans. Thomas Cleary (Boston: Shambhala Publications, 2005).

2. The author's contribution to this process is *What Is Information Warfare?* (Washington, DC: National Defense University Press), 1995.

3. Celia Hatton, "China 'Social Credit': Beijing Sets Up Huge System," *BBC*, 26 October 2015, <http://www.bbc.com/news/world-asia-china-34592186>. FireEye's William Glass observed that "a centralized system would be both vulnerable and immensely attractive to hackers. 'There is a big market for this stuff, and as soon as this system sets up, there is great incentive for cybercriminals and even state-backed actors to go in, whether to steal information or even to alter it.'" Simon Denyer, "China's Plan to Organize Its Society Relies on 'Big Data' to Rate Everyone," *Washington Post*, 22 October 2016, https://www.washingtonpost.com/world/asia_pacific/chinas-plan-to-organize-its-whole-society-around-big-data-a-rating-for-everyone/2016/10/20/1cd0dd9c-9516-11e6-ae9d-0030ac1899cd_story.html.

4. Ludwig Siegele, "The Signal and the Noise," *Economist*, 26 March 2016, 10, <http://www.economist.com/news/special-report/21695198-ever-easier-communications-and-ever-growing-data-mountains-are-transforming-politics>. "Facebook and Google . . . know much more about people than any official agency does and hold all this information in one virtual place. It may not be in their commercial interest to use that knowledge to influence political outcomes, as some people fear, but they certainly have the wherewithal."

5. Law Enforcement Cyber Center, "Internet of Things Infographic," accessed 8 December 2016, <http://www.iacpccybercenter.org/officers/iot/>.

6. Adm Michael Rogers, National Security Agency director, has opined that the Office of Personnel Management attack is a signal of what may become an emerging trend in network attacks by other nation states: because of the proliferation of tools that can readily perform detailed analytics on large data sets, adversaries will increasingly seek to purloin entire haystacks of data all at once and search for the needles later. See Jared Serbu, "Cyber Command Chief Frustrated by Lack of Industry Participation," Federal News Radio, 8 July 2015, <http://federalnewsradio.com/cybersecurity/2015/07/cyber-command-chief-frustrated-lack-industry-participation-u-s-tries-build-early-warning-system-cyber-attacks>.

7. "Ted Cruz Took a Position on Iowa Firework Sales to Try and Sway 60 Voters," *The Week*, 2 February 2016, <http://theweek.com/speedreads/603059/ted-cruz-took-position-iowa-firework-sales-try-sway-60-voters>.

8. Apparently, so can airport public address systems. See "The Alleged Chinese Hacking at Vietnam's Airports Shows That the South China Sea Battle Isn't Just in the Water," *Huffington Post*, 6 August 2016, http://www.huffingtonpost.com/helen_clark/china-hack-vietnam-south-china-sea_b_11357330.html.

9. Siegele, "The Signal and the Noise," 9. "During the Maidan protests in Ukraine in 2013–2014, Russian 'spam bots' had a much larger presence in Ukraine's Twittersphere than tweets by the Russian political opposition."

10. Cory Bennett, "Democrats' New Warning: Leaks Could Include Russian Lies," 17 August 2016, <http://www.politico.com/story/2016/08/democrats-cyberhack-russia-lies-227080>.

11. What may be highly implausible *in toto* is not necessary implausible considered one incident at a time; see, for instance, Reeves Wiedeman, "The Big Hack," *New York Magazine*, 19 June 2016, <http://nymag.com/daily/intelligencer/2016/06/the-hack-that-could-take-down-nyc.html>.

12. Inasmuch as traffic lights are normally accessible only through wired connections and Bluetooth devices, they might seem immune to mass remote hacking—until the population of infected Bluetooth devices crosses some threshold to where nearly every control box is within range of some such device.

13. Several major cyber attacks, most notably at Saudi Aramco and Sony, have rendered computers inoperable, but that was as a result of hard-to-reverse changes in software, not damaged hardware.

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14. The FBI supposedly warned the Democratic National Committee (DNC) that their systems could be hacked but not with enough specificity to do anything much about it; see Even Perez, "Sources: US Officials Warned DNC of Hack Months before the Party Acted," CNN, 26 July 2016, <http://www.cnn.com/2016/07/25/politics/democratic-convention-dnc-emails-russia/>.

15. The concept of "gray zone" is one specifically below the threshold of conventional conflict; see, for instance, Michael J. Mazarr, *Mastering the Gray Zone: Understanding a Changing Era of Conflict* (Carlisle, PA: US Army War College Strategic Studies Institute, 2 December 2015), <http://strategicstudiesinstitute.army.mil/pubs/display.cfm?pubID=1303>.

16. Iain Thomson, "South Korea Faces \$1bn Bill after Hackers Raid National ID Database," *The Register*, 14 October 2014, http://www.theregister.co.uk/2014/10/14/south_korea_national_identity_system_hacked/.

17. Mary-Ann Russon, "Russia Blamed for Crashing Swedish Air Traffic Control to Test Electronic Warfare Capabilities," *International Business Times*, 14 April 2016, <http://www.ibtimes.co.uk/russia-blamed-bringing-down-swedish-air-traffic-control-test-electronic-warfare-capabilities-1554895>.

18. Pres. John F. Kennedy, "Inaugural Address," 20 January 1961, <http://www.presidency.ucsb.edu/ws/?pid=8032>.

19. "Russia jammed and intercepted Kiev signals and communications, hampering the other side's operations, and effectively detaching the peninsula from Ukraine's information space," quoted from Pasi Eronen, "Russian Hybrid Warfare: How to Confront a New Challenge to the West" (Washington, DC: Foundation for Defense of Democracies, June 6, 2016), 6, 8, http://www.defenddemocracy.org/content/uploads/documents/Russian_Hybrid_Warfare.pdf.

20. Kier Giles, *The Next Phase of Russian Information Warfare*, NATO Strategic Communications Centre of Excellence, 20 May 2016, 2, <http://www.stratcomcoe.org/next-phase-russian-information-warfare-keir-giles>.

21. Margaret Coker and Paul Sonne, "Ukraine: Cyberwar's Hottest Front," *Wall Street Journal*, 10 November 2015, <http://www.wsj.com/articles/ukraine-cyber-wars-hottestfront-1447121671>.

22. *Voyennaya Doctrina Rossiiskoy Federatsii* (2014), rg.ru/2014/12/30/doktrina-dok.html (citation courtesy of Olesya Tkacheva).

23. Dmitry Adamsky, "Cross-Domain Coercion: the Current Russian Art of Strategy," *Proliferation Papers*, no. 54 (November 2015), 26–27, <https://www.ifri.org/sites/default/files/atoms/files/pp54adamsky.pdf>.

24. Choe Sanghun, "North Korea Tried Jamming GPS Signals across Border, South Korea Says," *New York Times*, 1 April 2016, <http://www.nytimes.com/2016/04/02/world/asia/north-korea-jams-gps-signals.html>. Although that particular attempt disrupted little, earlier attempts in 2012 had forced incoming aircraft to use alternative navigation methods.

25. The broad psychological ramifications of cyber operations, which this paragraph talks about, should be distinguished from the use of psychology to assist cyber operations by, for instance, enhancing social engineering or understanding how mucking with an adversary's command-and-control systems will change how its forces are commanded.

Russia, NATO, and the INF Treaty

Ulrich Kühn and Anna Péczeli

Abstract

Since 2014, the United States has publicly accused Russia of violating the Intermediate-Range Nuclear Forces (INF) Treaty, a landmark Cold War nuclear arms control agreement. The new US president, Donald J. Trump, will face the tough decision about whether or not to remain committed to the treaty. This article recounts the history of the INF treaty and assesses Russian and US interests related to the treaty. It develops three possible future scenarios for Russian actions and their impact on, as well as possible responses by, the United States and its NATO allies. The conclusion is that NATO allies will most likely face an ambiguous Russian stance with respect to INF weapons, which will make it difficult to find a balanced response strategy, bringing together diplomatic and economic pressure as well as military means to respond to Russia's INF violation.



By multiple standards, the 1987 Treaty between the United States of America and the Union of Soviet Socialist Republics on the Elimination of their Intermediate-Range and Shorter-Range Missiles—referred to as the Intermediate-Range Nuclear Forces Treaty¹—can be considered a landmark arms-control and disarmament treaty.² Not only was it the first treaty to effectively eliminate a whole class of missiles between the Soviet Union and the United States, but it also lifted the most imminent nuclear threat to Western Europe, served as a turning point in US-Soviet relations, and introduced the most intrusive verification measures up to that point. Its previous history was one of the end of détente, of NATO's dual-track decision to counter the Soviet SS-20 threat, and of a negotiation record which finally achieved what almost no one would have expected.

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Almost 30 years after the treaty entered into force in 1988, the INF treaty is again in the headlines. In 2014, the United States publicly accused Moscow of violating it by testing a ground-launched cruise missile (GLCM) in the ranges banned by the treaty (500–5,500 kilometers).³ In late 2016, US officials expressed concerns that Russia is producing more missiles than are needed to sustain a flight-test program.⁴ Russia has continued to reject the accusations and tabled a number of counter-charges against the United States.⁵ The diplomatic back and forth has neither resolved the issue nor shed light on whether Moscow plans to produce and deploy an intermediate-range system. These uncertainties have triggered a great deal of speculation and come at a critical time. Since the illegal Russian annexation of Crimea, Russian relations with the West have plummeted to a post–Cold War low. Against the background of mutual accusations of violating the European security order, covert Russian involvement in the war in Eastern Ukraine, Russian nuclear saber-rattling and continued intimidation of European NATO allies, the European Union’s economic sanctions against Russia, and the Russian military intervention in Syria, the West and Russia find themselves trapped in a dangerous downward spiral, which some have already labeled a “New Cold War.”⁶

The renewed confrontation has also left its mark on the instruments of arms control and risk reduction. Russia violated the Budapest Memorandum of 1994 in which it, along with the United States and Britain, agreed to respect the sovereignty, independence, and territorial integrity of Ukraine (a key element in securing Kiev’s agreement to transfer all Soviet-era nuclear warheads to Russia for elimination) and damaged further integrity of the so-called negative security guarantees in general. In March 2015, Russia completed its suspension of the most important conventional arms-control treaty—the Treaty on Conventional Armed Forces in Europe (CFE)—and walked out of that treaty’s decision-making body. On nuclear safety and security, Russia ended almost all cooperation with the United States on bilateral efforts to secure nuclear materials and facilities under the auspices of the Cooperative Threat Reduction program and cancelled the US-Russian Plutonium Management and Disposition Agreement. Taken together, these developments have led some to caution that the world might experience “the end of the history of nuclear arms control.”⁷ Others have argued that Russia has effectively broken with the rules and constraints of the European and global

security order and that the West (that is, NATO) is, therefore, no longer bound by agreements such as the INF treaty.⁸ Against this background, the debate about whether to preserve or abandon the INF treaty is in full swing in the United States. The new administration faces a choice of what to do with the treaty, a decision which will have a significant impact on European security. Furthermore, any decision to abandon INF could ultimately disrupt the US-Russian strategic arms-control dialogue for years to come.

This article recounts the history of the INF treaty from the latter days of détente to the current US allegations. Departing from an assessment of the Russian and US interests related to the treaty, it develops three possible future scenarios for Russian actions and their impact on, as well as possible responses by, the United States and its NATO allies. It comes to the conclusion that NATO allies will most likely face an ambiguous Russian stance with respect to INF weapons, which will make it difficult to find a balanced response strategy, bringing together diplomatic and economic pressure and military means. Even though the current INF crisis might create additional ripple effects with a view to the Asia-Pacific and Middle Eastern regions, this article focuses primarily on its impact on the European theater.

The Origins of the INF Treaty

It is important to note that, from the very beginning, the history of INF was a history of European concerns. The precarious conventional NATO–Warsaw Pact balance came under increased pressure when Moscow decided to replace its aging SS-4 and SS-5 ballistic missiles (all single-warhead missiles) with the triple-warhead SS-20 ballistic missile. With a maximum range of 5,000 km, the SS-20 could potentially strike any target in Western Europe, targets in Southeast Asia, and also those in Alaska, from deep inside the Soviet territory. European NATO allies, first and foremost Chancellor of the Federal Republic of Germany Helmut Schmidt, identified the weapon as destabilizing, creating a gap in NATO's nuclear deterrence posture as the allies had no similar capabilities to match the threat.

When NATO allies decided in 1979 to effectively mount a response to the growing SS-20 threat, they opted for a dyadic concept.⁹ The dual-track decision had two components: On the deployment track, NATO threatened to introduce 108 newly built Pershing II ballistic missiles and

464 GLCMs to Europe. On the arms-control track, NATO reached out to the Soviets and offered negotiations aimed at achieving limits that could affect the scale of NATO's deployment.

The first round of negotiations (1981–83) was completely fruitless due to both sides sticking to their maximum positions. Washington wanted to include all INF systems—those in the 1,000- to 5,500-km range—wherever they were deployed and proposed the so-called zero-zero option (a proposal by Pres. Ronald Reagan), meaning that all SS-4, SS-5, and SS-20 missiles should be dismantled and the Pershing II and GLCMs not be deployed. In turn, the Soviets insisted on including British and French systems, limiting the geographical scope to cover only the European part of the Soviet Union (thereby allowing for Soviet INF-range deployments in the Asian part of the USSR), and including all American nuclear-capable missiles and aircraft in Europe. The impasse led the US to introduce the first intermediate-range nuclear weapons in West Germany in November 1983. As a direct reaction, the Soviet delegation to the INF talks in Geneva walked out.

While NATO strategists hailed the deployment as a symbol of alliance unity and solidarity, one should not forget how risky the decision was perceived to be in many European capitals and among NATO populations. In hindsight, Washington-based experts had paid little attention to the hefty political and societal arguments in Western European capitals that surrounded the contentious dual-track decision.

A Truly Historic Deal

When Mikhail Gorbachev took office as general secretary of the central committee of the Communist Party of the Soviet Union in March 1985, resumption of INF talks had already been agreed upon two months earlier. However, it was only in 1986 that the Soviet position changed markedly. By the time of the Reagan-Gorbachev summit in Reykjavik (October 1986), the Soviets had already come close to the original US zero-zero proposal for intermediate-range forces, even though Gorbachev wanted to retain a small number of INF missiles in Asia. To the surprise of Western analysts, Moscow subsequently went even further by suggesting the inclusion of missiles of shorter ranges (between 500 and 1,000 km)—in concrete terms, the West German Pershing IA and the Soviet SS-23 and SS-12. On 8 December 1987, Reagan and Gorbachev signed the INF treaty in the East Room of the White House.

Being of unlimited duration, the treaty eliminated all Soviet SS-20, SS-4, SS-5, SS-12, and SS-23 ballistic missiles; SSC-X-4 cruise missiles and launchers; all US Pershing II and Pershing IB ballistic missiles; and US GLCMs and launchers. In fact, the treaty banned all US and Soviet ground-launched nuclear and conventional missiles and launchers with a range between 500 and 5,500 km worldwide. By 1 June 1991, a total of 2,692 intermediate-range missiles had been eliminated entirely. In addition, the treaty prohibited producing or flight-testing any new INF systems or separate stages of INF missiles or launchers. It did not, however, ban sea-launched cruise missiles (SLCM) and air-launched cruise missiles (ALCM). A further novelty was the asymmetric character of the reductions. While the Soviet Union destroyed 1,846 missiles, the United States destroyed 846. To address possible compliance concerns and to oversee implementation, the treaty established the Special Verification Commission (SVC). For Europe, INF meant the beginning of a process which resulted in a densely institutionalized network of various multi-lateral arms-control and confidence- and security-building measures, including, among others, the Treaty on Conventional Armed Forces in Europe (CFE), the various formal stipulations on military transparency and predictability of the Conference on Security and Co-operation in Europe (later the Organization for Security and Co-operation in Europe [OSCE]) as well as the bilateral Strategic Arms Reductions treaties (START I and II) and the Presidential Nuclear Initiatives (PNI).

Growing Russian Unease

The subsequent years saw little reason to worry about the bargain. On-site inspections continued until mid-2001 when, according to the treaty's provisions, the extensive inspection regime was finally terminated and replaced by national technical means of verification—10 years after the last INF systems had been destroyed. But below the level of public attention, Russian dissatisfaction with the treaty surfaced now and then. Russian officials and Pres. Vladimir Putin himself have questioned the continued viability of the INF treaty, and they have formulated arguments in favor of abandoning the agreement several times.¹⁰

In 2007 then-Russian Defense Minister Sergey Ivanov publicly questioned the treaty. “The gravest mistake was the decision to scrap a whole class of missile weapons—medium-range ballistic missiles. Only Russia and the United States do not have the right to have such weapons,

although they would be quite useful for us.”¹¹ What Ivanov hinted at was the Russian military’s concern with China’s intermediate- and shorter-range missiles, a capability Russia could not match.¹²

In 2010, the Russian Ministry of Foreign Affairs repeated its 2000 claim that the continued US use of “a whole family of target missiles” (the Hera, Long Range Air Launch Target, and Medium Range Target ballistic missiles) represented “direct violations” of the treaty.¹³ As we know today, at that time, Russia was already engaged in testing a new GLCM of intermediate range. Finally, the INF crisis reached the level of full public attention in 2014 when the US State Department declared, “the Russian Federation is in violation of its obligations under the INF treaty not to possess, produce, or flight-test a GLCM with a range capability of 500 km to 5,500 km, or to possess or produce launchers of such missiles.”¹⁴ What followed was a fruitless diplomatic back and forth which culminated in November 2016 in the US request to reconvene the SVC—which had been dormant for over 13 years—in Geneva after information surfaced that Russia was allegedly producing more missiles than needed for a flight test program.¹⁵

The Russian Interest in INF Missiles

Currently, Russia publicly supports maintaining the INF treaty.¹⁶ But according to Russian nonproliferation expert Alexei Arbatov, the position of the opponents is growing stronger and not much would be needed to tip the balance.¹⁷ Putin asserts that Russia’s military policy is “not global, offensive, or aggressive [and it has] virtually no bases abroad.”¹⁸ Meanwhile, NATO is a global military power which spends ten times more than Russia does on defense and builds up its missile defense capabilities, which, according to the Russian logic, undermine strategic stability. In Putin’s words, “everything we do is just a response to the threats emerging against us. Besides, what we do is limited in scope and scale, but is, however, sufficient to ensure Russia’s security.”¹⁹ The 2015 National Security Strategy of the Russian Federation cites “the increased force potential of NATO and its acquisition of global functions, performed in violation of international law, the stepping up of military activities by countries of the bloc, further enlargement of the Alliance, its military infrastructure approaching Russian borders [as] a threat to national security.”²⁰ The assumption that Russia would need intermediate-range missiles primarily to counterbalance NATO’s conventional superiority is not unfounded. In

terms of the ability to project military power, Russia found itself in a comparative disadvantage at the end of the Cold War. While NATO extended its regional coverage, Russia lost many of its basing grounds and no longer had the capability to forward-deploy missiles in Europe. The only remaining territory is the Russian Kaliningrad Oblast, wedged between Poland and Lithuania, but short-range missiles below 500 km (such as the sub-strategic Iskander-M system) can only cover the Baltic states and certain parts of Poland. If INF weapons were to be added to the equation, 1,000-km range weapons in the Russian Luga Missile Brigade Base, for instance, could cover the entire territory of Poland without the necessity of deploying these systems in Kaliningrad, while 2,000-km range weapons could reach Germany and a 3,000-km range missile could threaten all other European NATO allies.²¹ With land-based intermediate-range missiles, Moscow could reach all European NATO members without the necessity of forward-deploying its assets. However, the important question is whether that perceived military disadvantage justifies reintroducing INF missiles.

With respect to the perceived conventional threat from NATO, the overwhelming conventional superiority of NATO is only relative. In terms of overall manpower and military capabilities, NATO is unquestionably stronger. However, in the immediate vicinity of the NATO-Russia neighborhood, Russia enjoys conventional superiority everywhere in terms of quantity, quality, and geographical depth.²² This means that Russia could easily withstand the highly unlikely scenario of a conventional NATO surprise attack.²³ Russia has the necessary capabilities to secure its western territories without the need to redeploy land-based intermediate-range weapons.

Even if Russia plans to hold certain sites in European NATO member states at risk with nuclear-tipped land-based cruise missiles of intermediate ranges, it already has the relevant nuclear capabilities. Russian strategic bombers or intercontinental ballistic missiles (ICBM) can deliver nuclear warheads at much shorter ranges if modified.²⁴ With the potential redeployment of INF-range weapons, Russia could not hold at risk anything in Europe that it is not already capable of attacking with its existing nuclear forces. In addition, Russia plans to deploy a new long-range SLCM, a version of the 2,000-km range Kalibr land-attack cruise missile, which may be nuclear-capable,²⁵ on ships and submarines in all of its five fleets during the next few years.²⁶ The deployment of this missile on Russian

ships at port would already hold at risk all European NATO countries except for Spain and Portugal.

Another Russian justification often mentioned for (potentially) abandoning the INF treaty is the European Phased Adaptive Approach (EPAA) missile-defense system with its planned sites in Poland (under construction) and Romania (operational). Russia claims that the EPAA is part of a global US missile-defense architecture designed to undermine Russia's strategic deterrent. However, the EPAA is designed against intermediate-range ballistic missiles and currently has no capability to defend against cruise missiles. Most importantly, in its currently planned form, the SM-3 Block IIA interceptors at the Polish and Romanian Aegis Ashore sites (24 each) are not fast enough to intercept Russian ICBMs that are simply flying too high. Furthermore, Russia is in the process of modernizing its strategic nuclear forces, in the framework of which it plans five new types of land- or sea-based missiles with advanced penetration techniques, leaving the EPAA, even if further advanced than currently planned, little chance to intercept these weapons.²⁷ Nevertheless, Putin claims that, "the missile defense deployment sites can be used effectively for stationing cruise missile attack systems."²⁸ What Putin is referring to is the potential of the EPAA's Mk-41 vertical launchers to effectively launch Tomahawk cruise missiles if deployed on ships. According to the US Navy's "Fact File," the Mk-41 is "a multi-missile, multi-mission launcher, capable of launching SM-2, SM-3, SM-6, ESSM, *Tomahawk*, and Vertical Launch ASROC missiles."²⁹ The only distinction is that the Aegis Ashore systems are using different electronics and software.³⁰ Russian leadership seems to have a point—if the United States is actually exploiting a legal gray area in the INF treaty.³¹ But given these allegations, the Kremlin seems less concerned with the EPAA's potential future strategic implications and more with the scenario of a decapitating strike against Russian command-and-control installations.

Although NATO is a significantly more vocal threat in the Russian rhetoric, behind closed doors China is also mentioned as a potential military threat, and it might become a more important rationale for Russia's INF efforts in the future.³² Internal factors such as the Russian military-industrial complex also play a significant role in that regard.³³ In addition, the general proliferation of missile technologies, especially in Russia's southern neighborhood, has been mentioned several times.³⁴ Regarding the proliferation of missile technologies, at the mo-

ment seven countries (China, India, Pakistan, Israel, Iran, North Korea, and Saudi Arabia) have land-based intermediate-range missiles; some of those countries could hypothetically equip these missiles with nuclear warheads and reach the Russian homeland within minutes.³⁵ However, most of these weapons do not pose a real threat to Russia, at least not in the foreseeable strategic environment. China is officially a strategic partner, and its missiles are designed to hold at risk India, the South China Sea, and the Pacific region. However, one should not underestimate how quickly international relations can change—the latest ups and downs in the Russian-Turkish relationship are just one example. Toward that end, Russian strategists might view Beijing's growing economic and military capabilities at least with some ambiguity, a concern Russia cannot stress for political and diplomatic reasons. India is a key importer of Russian military technologies. Delhi's missile arsenal is meant to deter China and Pakistan, while the Pakistani missiles are directed exclusively against India. In the case of the Middle Eastern powers, the Israeli arsenal was developed against the Arab states and Iran, the Iranian missiles were designed against Israel and Iran's Arab rivals, and Saudi Arabia's missiles are meant to deter Israel and Iran. Finally, the North Korean missiles are also not directed against Russia as they were developed to hold at risk South Korea, Japan, and the United States and its military assets in the region. Therefore, missile proliferation in itself does not justify abandoning the INF treaty or building up Russian missile capabilities. Moreover, even if strategic directions change and relations between Russia and one of these states were to deteriorate significantly, the military capabilities, which are enough to deter the United States, should be enough to deter any of the above-mentioned states or even a coalition of them—at least for the time being. As a matter of fact, Russia's current strategic missiles, bombers, and short-range weapons can hold at risk any target. Therefore, land-based intermediate-range weapons would not have an added value for the execution of a strike plan. According to Arbatov, if the enormous Russian military potential does not provide enough deterrent, an INF violation and the deployment of intermediate-range missiles would not deter either.³⁶

As it stands, the Russian military interest in INF weapons would mostly make sense in relation to a possible conversion of Mk-41 launchers deployed in Eastern Europe and in relation to a quickly rising power

such as China and the strategic uncertainties Beijing's continued rise might bring for Russia.

Besides the military realm, INF weapons could be used as political tools as they would have an important psychological effect on NATO allies. This is especially true for the Baltic states and the Eastern European allies who are geographically more exposed to any potential Russian aggression. INF weapons would clearly demonstrate Russia's intention to have added military capabilities against Europe, broadening the "blackmail potential" on Russia's side. Without any doubt, such decision would trigger an intense disagreement within NATO on how to respond. It would reignite some of the most inconvenient debates during the Cold War about alliance cohesion, the resilience of reassurance measures, whether the United States would really be willing to defend its European allies, and whether Western European allies would come to the defense of the new NATO members as well, thus taking the risk of "losing Berlin for Riga." To be clear, for Russia, the INF crisis is still the perfect political tool to test NATO's cohesion.

US Interest in the INF Treaty

The compliance concerns of the United States with the INF treaty go back to 2008. The test detected then was not recognized as a problem for another few years until more tests and data were added to it.³⁷ Washington officially accused Russia of being in violation of the treaty in mid-2014.³⁸ There are many guesses about why it took Washington so long. Possible explanations for the delay include the following:

1. The difficulty of gathering information on the Russian modernization efforts and the actual military capabilities of the new system
2. The desire to build a strong case before going public
3. The Obama administration's fear that bringing up the INF compliance problem at the beginning of the first term would have undermined New START negotiations and the ratification process in Congress
4. The importance of Russian cooperation in other fields (such as Iran negotiations)
5. The hope that the whole issue could be addressed through regular diplomatic channels without the necessity of going public

In general, concerns about treaty violations occur rather often, and the US-Russian arms-control process has witnessed similar cases. The majority of these cases have been rather technical and were addressed by experts behind the scenes without making the compliance concerns public, or, if the violation was not so significant, the two sides simply waited until the issue lost relevance. In this case, however, the US administration had concluded that there was a violation and was obliged to include it in the State Department's annual compliance report, thus publicly accusing Russia of being in violation of its treaty obligations. This implies a number of things: first, the United States managed to gather enough information to confront Moscow; second, the administration decided that it was not possible to treat the issue silently and that public pressure was necessary to handle the situation; and third, the violation was too significant to just let it lose relevance. In addition to these factors, the worries of the allies (especially the Baltic states) and domestic politics (the opportunity for Congress to push back on Obama's disarmament agenda) might have contributed as well.³⁹

The first official accusation appeared in the July 2014 compliance report, and US concerns were repeated in the 2015 version of the report.⁴⁰ But despite the US decision to openly confront Russia, many unanswered questions remain. The unclassified version of the compliance report, for example, does not specify the Russian system to which the administration is referring. The compliance reports are silent on the issue of whether Russia intends to deploy the system or if it was "just" a technicality, involving the testing of a system otherwise allowed under the INF treaty.⁴¹ We do not know anything about the Pentagon's threat assessment of the Russian violation, and it is also not clear whether the violation was related to a nuclear or a conventional missile system, although in this respect, US Secretary of Defense Ashton Carter testified in his confirmation hearing that "Russia's INF treaty violation is consistent with its strategy of relying on nuclear weapons to offset US and NATO conventional superiority," which seems to imply that it is a nuclear-capable missile.⁴²

Over the last two years, administration officials have repeatedly stressed that the United States remains committed to saving the INF treaty and will try to bring Russia back into compliance.⁴³ There are several reasons why the White House is holding on to the treaty. From a purely military point of view, the United States simply does not need

land-based INF-range missiles to protect itself. With Canada and Mexico as benign neighbors it is, for the foreseeable future, unnecessary for the United States to deploy ground-launched intermediate-range missiles on US territory. American INF weapons would mostly make sense within with the European theater to reassure NATO allies.⁴⁴ Probably the most important political reason is that a US withdrawal from INF would be convenient for Moscow. It would place the blame for INF failure on Washington.⁴⁵ While the United States would not benefit significantly from abandoning INF, Russia would be free to deploy its new missile, which would certainly create a more threatening security environment and would upset both the US European and Asian allies. In other words, Russia could not only blame the United States for the collapse of the treaty but could also take advantage of the absence of the treaty in a way that it cannot do now.

Another important reason is the political-military value of arms-control measures with Russia. As Rose Gottemoeller, former US undersecretary of state for arms control and international security, had put it: "The United States and its allies are made safer and more secure by such agreements . . . providing transparency and predictability."⁴⁶ Particularly in times of heightened tensions and military muscle-flexing, the argument goes, communication is essential to avoid misunderstandings and misperceptions about the intentions of the other side.⁴⁷ Obama stated that after the ratification of the New START agreement his administration would seek reductions in the US-Russian nonstrategic nuclear arsenals⁴⁸ and, in his 2013 Berlin speech, he also held out the prospect of cutting the deployed strategic nuclear forces of the United States by one-third.⁴⁹ As a result of the strategic review process, US military planners came to the conclusion that the current levels under New START are too high and that cutting them by a third would be commensurate with US interests and security. However, Obama also clearly stated that these reductions should be based on reciprocity with Russia. Even though there is a precedent for unilateral reductions without a treaty framework (most importantly the PNIs), the current security environment does not warrant such measures. Whatever security situation the new US administration faces and whatever foreign and security policy it might pursue, codifying future US-Russian arms reductions in a bilateral treaty framework seems to be the more realistic policy choice. But none of these efforts will succeed if the already existing treaties are falling apart, one

after the other. After the Russian violation of the Budapest Memorandum and Moscow's "suspension" of the CFE treaty in 2007, the INF treaty is "one of the last few active bases of the European security system."⁵⁰ Thus the demise of INF could also have additional negative effects on the last remaining arms-control regimes, such as the New START agreement (in this case, losing the ability to monitor strategic nuclear modernizations would be even more critical).

However, there is also considerable skepticism about and outright rejection of the continued value of the treaty in the United States. Among the first to voice this was former US Secretary of Defense Donald Rumsfeld, who commented in 2005 that he would not mind if Russia withdrew from the INF treaty (although this view did not seem to resonate with the rest of the George W. Bush administration).⁵¹ Recent proponents of a US withdrawal have argued that Russia is no longer a reliable partner as it continuously violates different arms-control agreements.⁵² Others have tried to point out that NATO is inferior to Russia's tactical nuclear forces in the European theater and must reconsider its adherence to INF. Accordingly, "to increase the credibility of NATO nuclear threats, the Alliance must deprive Russia of its overwhelming battlefield nuclear advantage [and] must plan for the development and deployment of a new generation of sub-strategic nuclear weapons to Europe."⁵³

Partisan politics plays a huge role when it comes to the INF crisis. Commentators from the Republican camp criticized the Obama administration's policy of bringing Russia back into compliance as "failed" and therefore conclude "that the treaty has outlived its utility and is no longer in the US interest."⁵⁴ Another argument in the domestic debate involves the potential capabilities of third states, such as China, Iran, and North Korea. John Bolton, US ambassador to the United Nations during the George W. Bush presidency, has argued that these states "face no limits on developing intermediate-range weapons" and that "with Russia's violations of the treaty, America remains the only country bound by and honoring a prohibition on deploying intermediate-range forces."⁵⁵ He inferred that "maintaining international security requires that the US have access to the full spectrum of conventional and nuclear options" and advocated eliminating the INF. China's growing military capabilities and particularly its large missile arsenal play an increasingly important role in such considerations, which somewhat mirror Russia's concerns over China. New US GLCMs with INF ranges could have additional

value for the military by bolstering its presence in the East and South China Seas. However, as long as the treaty is still in place, this option is not available. Therefore, Evan Braden Montgomery, senior fellow at the Center for Strategic and Budgetary Assessments, came up with the idea to consider modifying the INF treaty. “Washington and Moscow could agree to sanction the development of intermediate-range missiles, preserve the ban on missile deployments in Europe, and lift the ban on missile deployments in Asia.”⁵⁶ However, such a proposal starts from the assumption that Russia and the United States could find common ground and that both identify China as the greater military threat—though, perhaps, for different reasons.

Taken together, there is no domestic consensus in the United States on how to handle the INF treaty and the Russian violations. Contending views run mainly along partisan lines. This fact might have more to do with general controversies surrounding Obama’s arms-control legacy than the actual Russian threats that emanate from the violation and the potential response options Washington has at hand.⁵⁷ It also suggests possible changes to US foreign and security policy in the new administration with respect to INF.

Three Russian Options

Russia has basically three options for dealing with the self-induced INF crisis. It could return to full compliance with the treaty. It could openly produce and deploy new INF weapons, thus admitting its violation. Or it could produce and stockpile weapons in a clandestine manner without admitting its violation, thereby causing ambiguity about its intentions. The following assesses the advantages and disadvantages of each option.

The Compliance Option

A thorough Russian assessment of the consequences of reintroducing INF weapons might come to the conclusion that such a decision would be dangerous, costly, and destabilizing. If Moscow really feels threatened by its adversaries, it could still continue to improve its sea- and air-based intermediate-range systems, which would be compliant with the INF treaty. To be fair, this option would be extremely costly for Russia, which has a historical record of overreliance on land-based surface-to-surface missiles, and would thus almost certainly strain its monetary and

technological capacities. Toward that end, Moscow could promise not to produce, deploy, or stockpile the new missile systems, and it could agree to inspections and demonstrate that the missiles were destroyed. Building on such a transparency approach, Moscow could then seek to modernize the INF treaty with Washington, which has been a long-term Russian demand for technical reasons and which might even entail the political option of including other countries of Russian concern.

When the treaty was signed, the parties decided to overlook some technical problems for the greater good.⁵⁸ This is why there are still some gray areas and conceptual problems with the interpretation of treaty obligations, some of which became evident during the current crisis. Furthermore, the treaty does not cover some technologies, such as UAVs, which did not exist in the 1980s but could be included today. One of these conceptual problems is the range of cruise missiles. Cruise missiles, in general, are quite problematic to categorize. Their flight trajectory is nonlinear, and they navigate by terrain contour matching. Therefore, depending on the terrain, they might spend a significant amount of their range zigzagging.⁵⁹ According to the INF treaty, the range of a cruise missile is the “maximum distance which can be covered by the missile in its standard design mode flying until fuel exhaustion, determined by projecting its flight path onto the earth’s sphere from the point of launch to the point of impact.”⁶⁰ Although the United States has tried to clarify this definition, Moscow has refused to respond so far.⁶¹

When rumors arose about a potential Russian violation, there were three competing theories about which system might have caused a violation: the R-500 Iskander-K cruise missile, the RS-26 ballistic missile, and a new submarine-launched cruise missile.⁶² Even though the State Department has, meanwhile, clarified that none of these theories is accurate and that, instead, the violation comes from a state-of-the-art GLCM with INF range, the older theories provide some critical links to modernizing the treaty.⁶³ The category of nuclear-tipped submarine-launched cruise missiles is an important missing element from the coverage of INF. The treaty, in general, allows sea-based intermediate-range cruise missiles, and according to Article VII, these missiles can be tested from a land-based launcher, but only if it is used solely for testing purposes and if it is distinguishable from operational land-based launchers. Although the INF does not cover these systems, the United States and Russia agreed, as part of the 1991–92 PNIs, to remove nuclear-armed cruise missiles from

surface ships and nonnuclear ballistic missile-capable submarines.⁶⁴ Implementing these commitments, however, has never been subject to verification, and Russian general-purpose submarines are still assumed to carry nuclear-armed cruise missiles.⁶⁵ If Russia decides for the cooperative option, it could use the opportunity to clarify the definition of cruise missile ranges and have an honest discussion about the PNIs and the future of nuclear-armed submarine- and sea-launched cruise missiles as well.

The second area in which Moscow could benefit from reinvigorating the INF treaty is the question of combat drones. Although they meet some of the criteria of cruise missiles (drones are also remote controlled), they do not self-destruct after reaching their targets and are, therefore, not covered by the treaty. Russia, however, has accused the United States of being in violation of the treaty for these weapon systems.⁶⁶ With the newest technical developments, the range and payload of these UAVs have significantly expanded. Hence, if Russia is really worried about these capabilities, it could pressure Washington to start a dialogue about military UAVs. Even though Russia has started to develop its own long-range armed UAVs, the sides might still usefully work out language clarifying the difference between a prohibited GLCM and permitted UAVs. Such dialogue could take place in the Special Verification Commission.

Another topic for the SVC could be clarifying language in the treaty that distinguished banned intermediate-range ballistic missiles from permitted target missiles for missile defense. In conjunction with this, Russia has raised concerns about the SM-3 vertical launch box deployed in Romania being capable of containing and launching a GLCM.⁶⁷ Here, a transparency quid pro quo could help to break new ground: the United States might, for example, allow some transparency, perhaps even inspections, regarding the launch box in return for Russian transparency measures that assure testing of its GLCM has ended and that production has been reversed.⁶⁸ If Russia insists on more permanent measures regarding the EPAA, Washington could seek ways to make it technically impossible for the SM-3 to launch GLCMs. Of course, for any such quid pro quo to work, Russia would first have to admit that it had done something that raised compliance concerns.

An additional area where the parties could expand and improve the INF treaty is the issue of verification and compliance. In the 1980s, INF was groundbreaking for its verification measures as it included

unprecedented on-site inspections of selected missiles and facilities. The weapons under the scope of the treaty were disposed of by 1991, and, in accordance with the treaty provisions, the inspections ended in 2001.⁶⁹ In the framework of the SVC, the two sides could discuss the relevant new developments since 2001 and identify new missiles and facilities of concern. Reinstating some of the inspection measures in these updated locations could strengthen compliance, clarify technical misunderstandings, and create trust between the parties again.

Last but not least, reengaging on INF might offer Russia the possibility to press for multilateralizing the treaty. As it stands, the INF treaty still reflects the Cold War bipolarity. Obviously, that world is gone; today, China, India, and other states at Russia's southern periphery invest considerably in missiles of intermediate ranges. Since China is already a concern for the Russian (and the US) military, tentative consultation efforts could start in a trilateral setting, which might turn out to be more promising than simply continuing the bilateral INF legacy.

Altogether, there are several areas where Russia could benefit from returning to compliance and strengthening the INF treaty. Therefore, if Moscow were to decide for the compliance option it could actually use the momentum to open talks with Washington and maybe even Beijing and refurbish the treaty in a way that would better serve the national security interests of Russia and the United States. But the pure fact of the Russian GLCM test suggests that Moscow is operating on a different logic.

The Deployment Option

Given the destructive potential of the INF crisis with respect to attempts at political blackmail and testing NATO's political cohesion, Russia could decide for openly producing and deploying new INF missiles, thus confronting NATO with a military *fait accompli*. Such a step would likely enjoy strong internal support in Russia.⁷⁰ The Kremlin could use the George W. Bush administration's decision to abandon the Anti-Ballistic Missile (ABM) Treaty in 2002 as a precedent and blame Washington for disrupting the arms-control process, calling the INF treaty a Cold War relic which no longer serves the national security interests of Russia. While being free to deploy INF systems against Europe, Moscow could hope that political considerations at home and among allies could block the United States from developing and deploying INF systems in Europe that could target Russia in response. As mentioned before,

the Russian tactic could, therefore, be seen as a way of testing the unity and resolve of NATO. By reintroducing a direct threat to the security of Western capitals, Moscow could hope to limit their political options to allow Russia greater maneuvering capability in eastern Europe. A deployment of weapons could also be used as a bargaining chip to achieve limitations on certain military capabilities that Russia considers a threat to its security. The threat of redeploying INF weapons in Europe could, for example, lead some European NATO members to press Washington to agree on legally binding limits on the European Phased Adaptive Approach, however futile such endeavor would be, given the obstinate stance of Congress about any restrictions to US missile-defense programs.

The downsides to this option are manifold. Most importantly, Moscow and Washington could slip back into a costly arms race, which could result in NATO answering the Russian *fait accompli* by also reintroducing INF missiles to Europe. Bringing INF-range weapons back to the European equation could lead to massive instability in Europe, which would benefit neither the United States and its nervous allies nor Russia. It could also trigger escalation dynamics that Moscow and Washington might not be able to control. A look into the history books is helpful in that regard. During the 1980s, in response to the deployment of the Soviet SS-20s, NATO deployed in Europe the fast-flying Pershing II ballistic missiles and the modified Tomahawk sea-launched cruise missiles, which were transformed into highly accurate mobile GLCMs. This actually created results opposite to those Moscow had originally hoped for. The Soviet leadership and command-and-control targets were suddenly endangered from Europe with missiles of a much shorter flight time of 8–10 minutes instead of the previous 30 minutes.⁷¹ As Soviet leader Mikhail Gorbachev remembered, “It was like holding a gun to our head It increased the risk of nuclear war, even one that was the result of an accident or technical glitch.”⁷² In essence, it was not the deployment of the SS-20s, but the later Soviet decision to sacrifice the missiles, which made Russia more secure in the end. Today an escalatory cycle *vis-à-vis* NATO could reemerge, ultimately fueling the existing tensions in the nuclear realm. Moreover, based on hypothetical military threat perceptions, Russia could end up making a nonexistent threat become real. If, in response to a Russian deployment, NATO decided to boost its missile defense capabilities, further strengthen its military ties with Eastern European allies, pre-position assets on their territories, and

ultimately reintroduce INF weapons to Europe, that would undermine Russia's security and significantly weaken its position. INF weapons in Europe could cover the most populated portion of Russia's territory, requiring a very costly and technically demanding overhaul of the entire Russian nuclear weapons complex and its command-and-control structure, as well as its air- and missile-defense capabilities.⁷³

However, it might not be these arguments that could block Russia from pursuing the deployment track but rather tactical and status considerations. When Russia abandoned the CFE Treaty after years of dissatisfaction, Moscow chose not to officially withdraw but to suspend it, an option not foreseen in the treaty text. By so doing, Moscow kept open the chance of returning to the agreement at a later stage and avoided taking the full international blame for acting as a spoiler of European security. Given this precedent, Russia might decide against the open-deployment option—which would be a *de facto* withdrawal—and could pursue a more ambiguous course.

The Ambiguity Option

Instead of openly deploying INF weapons and thus taking the blame for effectively abrogating the treaty, Russia could decide to secretly produce and stockpile INF missiles while officially denouncing any such claims by NATO. The advantage of this option is that it would confront NATO and Washington with a threat much harder to deal with that would be ambiguous in terms of Russian capabilities and intentions, particularly leaving some ambiguity about the missiles' range and deployment mode. NATO allies would most likely struggle much more to find a common position in such a scenario than with the option of open deployment.

However, this option is also not without risk for Russia. Stockpiling the new missile systems could well result in further sanctions against Russia as allies could initially try to avoid military reciprocal actions. Additional sanctions could seriously harm the already faltering Russian economy. They might even affect internal support for leadership. Apart from that risk, should Russia acquire a significant breakout capability, the further strategic nuclear dialogue between Russia and the United States would be doomed to fail. The New START agreement, which foresees nuclear parity between the two sides in terms of deployed strategic warheads and launchers, expires in 2021. Even now, some US law-

makers aim to suspend funding the agreement if Russia does not return to full compliance with INF.⁷⁴ If Russia were to opt for the ambiguity option, the move would most likely kill all chances for ratification of a New START follow-on agreement in Congress. In that regard, the ambiguity option might backfire, creating additional ambiguities in the strategic nuclear realm. Furthermore, with the loss of military predictability through the breakdown of CFE, the inability of states to comprehensively update the OSCE's Vienna Document on Confidence- and Security-Building Measures, and the lack of transparency in nonstrategic nuclear weapons (below 500 km), the New START agreement is the only remaining nuclear agreement to monitor the military developments of the other side and address any concerns through bilateral dialogue. In times when the Cold War weapons systems are being gradually phased out and both Washington and Moscow are engaged in robust modernization programs, neither side might be willing to accept losing the capability to monitor the other. Since the peak of the Cold War, the nuclear capabilities of the United States and Russia have been significantly reduced. As the two sides are moving toward lower levels, cheating acquires a greater military significance—and so do advanced verification and transparency measures to monitor each other.

A possible breakdown of the strategic arms-control framework would create additional negative ripple effects at the international level and could undermine Russia's international status and further isolate it from the rest of the global community. Instead of being the victims of the growing Western influence and military build-up—rhetoric often used by the Kremlin—it could also support the unpleasant image of an irresponsible power that is fundamentally a major threat to the security of its neighbors in Europe and also Asia. The result could be a deterioration of relations with some of Moscow's closest partners and, in the end, a less secure environment for Russia. However, as explained above, the political leverage INF weapons could bring for Russia vis-à-vis NATO might feel too tempting for the Kremlin to completely let go of the ambiguity option and return to full compliance. Given anonymous US allegations that Russia is in the process of producing INF weapons,⁷⁵ the ambiguity option might, thus, be the most likely option for Russia to pursue over the next few years.

Three US Options

Whatever the different views on the issue, the US Department of Defense established that the Russian violation of the INF treaty could be a threat to the United States and its allies.⁷⁶ Therefore, silence on the issue is not a good solution for three reasons: first, it would send the wrong message to the allies who could see it as a sign of US disengagement from Europe; second, it would allow Russia military gains while the United States still showed restraint; and finally, hesitation to respond could also encourage noncompliance with other arms-control agreements involving third states (such as Iran). In the following pages, we analyze three possible ways for Washington and its allies to deal with the Russian options as outlined above, in each case considering the likely advantages and disadvantages.

Dealing with a Compliant Russia

The easiest option for Washington to deal with would be if Russia were to return to full compliance. However, given Russian behavior in recent years and Russian interest in INF missiles, it is also the least likely. Nevertheless, in such a case, Washington could concentrate on modernizing (and even expanding) the treaty, both because Russia has repeatedly expressed an interest in doing so and because of the need to prevent a future INF crisis. Efforts at modernizing the treaty could take place within the framework of the Special Verification Commission, which has the potential to maintain a secure line of communication between technical experts and the militaries, and could concentrate on transparency and verification measures. Although INF inspections and data exchanges have ended, the compliance concerns on both sides might justify the resumption of some of these measures. In light of the various missile tests that both sides have conducted over the past years, both sides might come to the conclusion that the INF treaty is the right legal framework to inspect these systems and related production facilities and make sure they are either treaty compliant or verifiably dismantled. In a second step, Washington could then take into account Russia's and its own concerns regarding China's growing capabilities, possibly opening an entirely new bargaining framework (including China) taking into account the new structural realities that have developed since the end of the Cold War.

Dealing with a Russian Deployment

If Russia were to openly produce and deploy INF weapons, a strong push in Washington and within certain NATO states to answer in kind could occur. So far, an open debate among allies about possible consequences of such a move has not surfaced, and assessing the different views is difficult. A recent study by the James Martin Center for Nonproliferation Studies concluded that, “the U.S. debate over nuclear weapon policy is far removed from the concerns of most respondents in Europe.”⁷⁷ According to the authors, frontline states in NATO have little appetite for the deployment of new nuclear weapons in Europe or for hosting such systems. And further: while these frontline states welcomed the reassurance measures of NATO’s 2014 Wales Summit, they don’t seem to be thinking much about nuclear weapons policy.⁷⁸ Hosting nuclear weapons, in the allies’ views, could heighten the risks of being involved in a nuclear confrontation. Additional arguments for such a stance would be that the introduction of new types of nuclear weapons could be counterproductive, creating an interalliance division along East-West lines—not to mention that it could increase already existing divisions in the nuclear realm among allies and would allow Russia to play out its well-known divide-and-rule tactics.

However, somewhat contrary to these arguments, the repeated calls for strengthened defense measures by NATO’s Central and Eastern European members, in light of Russia’s aggressive military posturing, seem to suggest that states such as Poland and the Baltics could drop their vocal restraint and call for nuclear countermeasures were Russia to deploy INF missiles. The call by Poland’s deputy defense minister to discuss the option of Poland joining NATO’s nuclear sharing program to strengthen the country’s ability to defend itself, even though immediately revoked by the Polish Defense Ministry, can be interpreted as an initial hint in that direction.⁷⁹

While responding in kind to the deployment option might sound logical at first glance, it has a number of obvious downsides, even from a military point of view. First, even if Russia were to deploy a limited number of INF systems—say on the order of 50 to 100 missiles—such a deployment would not immediately alter the overall military balance between NATO and Russia, given the general conventional superiority of NATO. It would also not constitute a completely new type of threat because of the existing Russian ability to modify its strategic nuclear forces. In addition, the United States already deploys conventionally

armed intermediate-range cruise missiles from the sea and on aircraft, which are perfectly capable of reassuring allies and protecting US military bases overseas.⁸⁰ Even during Cold War times, US leaders saw only limited military value in the deployment of ground-launched intermediate-range ballistic missiles, and they developed several other military capabilities to protect their allies. Therefore, reintroducing such weapons would have very little added military value.⁸¹ The United States not only has plenty of other means to reassure its allies, but it also has the necessary military capabilities (for example missile defense and aerial detection systems) to offset a potential Russian GLCM deployment.⁸²

If, however, the new US administration decides to withdraw from the INF treaty, it might choose to close the so-called capability gap and focus on weapons systems that were prohibited under INF. The Joint Chiefs of Staff have already identified two such weapons, which are “ground-launched cruise missiles deployed in Europe or Asia, and ground-launched intermediate-range ballistic missiles equipped with technology that adjusts the trajectory of a warhead after it re-enters Earth’s atmosphere and heads for its target.”⁸³ Looking at the potential missions of INF-type weapons reveals a number of associated risks. Counterforce capabilities to prevent a strike would imply high readiness of forces and concrete measures to execute a strike plan as soon as possible, which could easily be misread in Moscow and lead to an escalatory cycle. At the same time, countervailing strike capabilities would require an improved ability to hit targets in Russia, which is problematic for the very same reasons.⁸⁴ A US commitment to new INF systems would also face financial difficulties. For Washington, redesigning Pershing III intermediate-range ballistic missiles does not seem feasible in the current tight budget environment. It would require time, and maintaining and modernizing the US nuclear arsenal would divert money away from other, more important modernization efforts, such as conventional systems and capabilities that the military might need more urgently and could actually use for war-fighting purposes.

While we assess the Russian deployment option as unlikely, Washington’s and NATO’s responses could, at some point, revolve around answering in kind—meaning to counter offense with offense. The disadvantages of such choice would be quite significant. Most definitely, there would be no immediate military need for countering a limited Russian deployment with new nuclear missiles. Aside from offensive systems, the United

States could also decide to boost defenses against cruise missiles. Such a move, as will be shown below, could also occur were NATO to face the ambiguity option.

Dealing with the Ambiguity Option

As argued above, the ambiguity option is the most likely option NATO would face if Russia does not return to full compliance. It is also the most delicate and complex one to deal with because it would happen in a gray area of obscure threats and vague countermeasures, easily misread and potentially disproportional. Since the ambiguity option is a more serious extension of the current situation, it might be helpful to start by looking at the current response strategies by the United States and NATO allies and see what measures are also suited to address the ambiguity option and which measures could be added.

In a 2014 congressional hearing, Gottemoeller laid out a strategy mix to bring Russia back into compliance. That mix consists of diplomatic steps and economic pressure as well as developing new defenses against cruise missiles to offset any potential gains Russia could achieve from violating the INF treaty.⁸⁵ Continuing such a preventive strategy might still have its benefits even though it has to be clear that diplomacy cannot last forever. Washington could explain to Moscow why Russia would not achieve any significant gains from deploying or stockpiling INF weapons and that it would face serious consequences if it were to do so. As mentioned before, the Russian violation is already a major political issue in Washington and, if unresolved, would most likely block ratification of any new US-Russian arms-control treaty in the future. Making it abundantly clear to Moscow that noncompliance with the INF treaty would kill any efforts at a New START follow-on agreement, thereby creating an atmosphere of strategic instability that neither side might find favorable, might be a good argument to help shift the Russian logic.

In addition to the diplomatic dialogue, Washington needs to take some sort of action to preserve the unity of NATO, to reassure worried allies, and to prevent further irresponsible steps by Moscow. However, these actions should be proportionate to the problem. They should aim at regular consultations and strong coordination between Washington and its allies and at increased conventional reassurance measures, as well as explore defensive military responses that would minimize Russia's potential gains from its violations. It will be important to convey the message

to allies that even if Russia decides to deploy or stockpile land-based intermediate-range missiles in a limited fashion, NATO's extended deterrence will not break down in the face of these systems.

Greater presence of conventional allied forces in such a scenario could certainly ease some of the fears of the Baltic states and the Eastern European allies. Increased NATO preparedness, joint exercises for Article V scenarios, and the development and modernization of air and missile defense systems against cruise missiles are also possible options. Therefore, in addition to the diplomatic efforts and the threat of economic sanctions, the United States might find it valuable to explore a wide range of possible military responses. The Department of Defense already started this process, and the 2015 National Defense Authorization Act contains a provision for the development of countermeasures to potential Russian deployments in violation of the INF treaty.⁸⁶ According to US Principal Deputy Undersecretary of Defense for Policy Brian McKeon, "the Joint Staff has conducted a military assessment [that] tells us that development and deployment of such a system by the Russian Federation would pose a threat to the United States and its allies and partners. The Joint Staff assessment has led us to review a broad range of military response options and consider the effect [of] each option."⁸⁷ In his confirmation hearing, Ashton Carter also noted that "the range of options we should look at from the Defense Department could include active defenses to counter intermediate-range ground-launched cruise missiles, counterforce capabilities to prevent intermediate-range ground-launched cruise missile attacks, and countervailing strike capabilities to enhance US or allied forces. US responses must make clear to Russia that if it does not return to compliance, our responses will make them less secure than they are today."⁸⁸ Without withdrawing from the INF treaty, concrete military measures of a conventional nature could include deploying additional sea- and air-launched cruise missiles, deploying intermediate-range ballistic missiles at sea with a range below 600 km (in order not to violate New START), expanding missile-defense deployments against cruise missiles, extending the range of guided artillery, deploying aerial detection systems in Europe, or selling advanced drones to allies.⁸⁹ Particularly in the realm of defensive systems, allies would face some serious technical and political difficulties. The EPAA is designed against ballistic missiles of intermediate ranges and not against cruise missiles. Since NATO allies continue to argue that the EPAA is meant to counter bal-

listic missile threats emanating from the south (predominantly meaning Iran), and because Russia is particularly worried about the system's alleged offensive strike capabilities, further expanding the EPAA to defend against cruise missiles might not be the best option from a political point of view. From a technical viewpoint, defenses against cruise missiles, as a matter of fact, can only engage incoming GLCMs extremely late due to their low-flying trajectory and only within a very limited area. They can thus only provide point defense (in an area of roughly 35 km) to selected military or civilian assets. A full-fledged area-defense system which could continuously monitor the airspace and help to defend large populated areas is currently not proposed, and aerial detection systems to increase warning time, such as the Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System—basically a high-flying spying blimp—have not proven to be very reliable.⁹⁰

Notwithstanding these difficulties, if allies decided on a combination of increased point-defense measures against GLCMs and additional conventional military reassurance measures, these actions might convince Moscow to give up its efforts in the field of INF weapons. If Russia's nonstrategic nuclear arms are meant to counterbalance NATO's conventional superiority, further strengthening NATO's conventional advantage could actually prove that Moscow's efforts are pointless. Such a move could discourage Russia from wasting its increasingly scarce economic resources on INF weapons. In addition, the Department of Defense could even start studying possible options that would go against the INF treaty. Studying the options as such would not constitute a violation of the treaty. In fact, it could send a strong diplomatic message to Russia, calm down defense hawks in Congress, and also reassure allies about the commitment of the United States. Allocating some funds in the Pentagon's budget for a possible Pershing III feasibility study might get the Russian leadership to recall how much they feared the Pershing II.

It is important to note, again, that all these steps should be withheld until significant and unambiguous evidence of Russia producing and stockpiling INF missiles is available to all allies. Rhetorical muscle-flexing can be useful in parallel to diplomatic dialogue, but concrete action should be based on the principle of proportionality. While strengthening conventional reassurances to European allies would create the vision of a confident and united alliance, engaging in a robust US missiles

program could easily backfire and trigger Russian countermeasures that could further weaken the security of the allies.

Apart from these measures, European allies need to be more vocal. Ultimately, this is a treaty matter between the United States and Russia. But new INF missiles, if deployed or stockpiled, would first and foremost affect European security. Allies should ask themselves: how would Europe deal with an ambiguous Russian breakout capacity? So far, European leaders have not publicly expressed great concern about Russia's INF violation. Their silence might lead the Kremlin to assume that Europe does not care and that only the US-Russian dimension matters or, even worse, that the allies are following a strategy of duck and cover. Such false assessment should be rectified head-on by NATO's European allies and they should start thinking about possible responses. Should credible evidence be found that Russia really is stockpiling new INF weapons, allies should push hard to address the issue with Russia. In parallel, allies should think about an economic punishment strategy. The threat of specifically tailored economic and financial sanctions against Moscow, Russia's military-industrial complex, and related personnel might convince the Kremlin to give up its efforts, particularly if the message resonates with Putin that Russia's violations are becoming a problem not only for Russia's relations with Germany, Italy, France, Hungary, the Netherlands, and other allies but also in Asia, where Japan, South Korea, and China might be most concerned. Such a closely coordinated strategy could affect the Kremlin's calculus.

A more active role for NATO allies could also be beneficial for Washington. In testimony at a 1 December 2015 hearing, held jointly by House Armed Services and the Foreign Affairs subcommittees, McKeon said that "Russia is not violating the INF treaty in isolation from its overall aggressive behavior; therefore we concluded that our responses cannot focus solely on the INF treaty. . . . Accordingly, we are developing a comprehensive response to Russian military actions and are committing to investments that we will make irrespective of Russia's decision to return to compliance with the INF treaty due to the broader strategic environment we face."⁹¹ These remarks highlight a possible change to US policy on INF. The measures taken to bolster NATO in response to more general concerns about Russia's military intentions are also seen as sufficient to respond to the INF problem. In other words, there will not be a direct INF response by Washington for the time being. The problem

with this approach is that if Russia stays within the treaty, Washington might not see a need to withdraw, maybe even in light of Russia stockpiling INF weapons. And if there is no security benefit for Russia, because US responses would not change, why would Russia see any reason to return to the treaty? To prevent such a murky state of limbo, European allies must raise their voices and exert pressure on both Moscow and Washington. The delicate issue for the Europeans will be to avoid pressuring the new US president into hastily responding to Russian INF missiles with American INF missiles. In the end, allies could end up with a trap of their own making.

All in all, the new US administration might face the difficult task of abiding by the treaty while, at the same time, hedging against the possible consequences of an ambiguous Russian threat. As has been argued, a US withdrawal from INF should only be considered as a measure of last resort. Rather, Washington should continue to rely on a number of diplomatic and economic means to resolve the crisis, and it should push its European and Asian allies to be more active in voicing their concerns in relation to Russia. If Russia verifiably continues down the ambiguity path, military options should not be ruled out. But they should only be used in accordance with the significance of the Russian violation, and they should be proportional. Reminding Russia about the importance of the treaty and the potential consequences of abandoning it provides valuable leverage. Building up the US conventional presence in Europe and boosting missile-defense capabilities against cruise missiles, for example, could hurt Russian interests and would start to affect the Russian deterrent. For the Trump administration, waiting until this message resonates with the Russian leadership, using the diplomatic channels to address the technical concerns of both sides, and providing information to allies would be the right strategy to pursue.

Conclusions

The INF treaty, long a cornerstone of European security, is in acute danger of collapse since the United States and Russia are operating on the basis of different, indeed contrasting, logic. While the Obama administration had a genuine interest in maintaining the treaty and bringing Russia into full compliance, the Kremlin finds value in violating INF. Our assessment of the Russian interest in acquiring INF weapons in the NATO-Russia relationship has shown that the Kremlin's motivations

stem more from political than from purely military considerations, even though it is hard to find incontrovertible evidence to support this conclusion. Nevertheless, secretly produced and stockpiled INF missiles present a formidable opportunity for Russia to exert additional political pressure on NATO's European allies. Assessing the US interest in maintaining the treaty reveals that Washington and its allies remain much better off without a renewed *Euromissiles* debate. So far, the US strategy of combined diplomatic pressure and the announcement of possible military countermeasures has not yielded the desired results. Particularly if Russia were to choose the ambiguity option of stockpiling INF missiles in a clandestine manner, Trump might choose to step up the pressure. As this article has argued, any future responses in the military realm should be proportional to the Russian threat capabilities, and decisions should be based on an inclusive dialogue among NATO allies. Given the wide-ranging political and military consequences, a US withdrawal from INF should only be considered as a measure of last resort. Indeed, European allies need to be more vocal and should begin to publicly voice their concerns vis-à-vis Moscow. They should also consider developing a genuine European strategy of punishing Russia for its INF transgressions. Most importantly, allies should internalize the fact that it will take time and convincing arguments to alter the Russian logic. Beyond the more narrow European perspective, Russia seems to find convincing military arguments for INF weapons in Asia. This circumstance offers Washington a genuine chance to engage with Moscow, as both players share mutual concerns there. A possible new negotiation framework, including China and other actors, could represent a breakthrough. But as it stands now, the INF crisis has the potential to become a major security issue for the whole of Europe and Asia over the next several years if it is not resolved in a cooperative manner. Here, a possibly more cooperative and conciliatory stance toward Russia under President Trump—as controversial as such policy would be seen in Washington and among allies—might actually help with the INF dispute. Even if relations between Washington and Moscow warm again, the Russian leadership must understand that continued noncompliance will yield no political or military gains and will thwart any efforts at concluding a New START follow-on agreement. For Washington and its allies, this core message must be communicated to the Kremlin. ■■■

Notes

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Military Planning for East Asia: A Clausewitzian Approach

Michael R. Kraig

Abstract

Carl von Clausewitz's tome *On War* provides a rich, conceptual, logic-based, practical framework for addressing the challenges of military planning in East Asia. It remains relevant into the twenty-first century particularly for a protracted crisis defined by strategic maneuver or in a limited attritional war. US military planners must take great care to provide graduated, partial, and controllable options at the concrete level of campaigns and ultimately engagements and combat, thereby providing decision space to policymakers.

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In the Asia-Pacific, from the Straits of Malacca to the Taiwan Straits to the Sea of Japan, there are real and seemingly intensifying disputes over symbolic sovereign territory, resource rights on such territory, and questions of national cultural identity.¹ Meanwhile, the long-held status quo of allied socioeconomic hegemony and US forward military power is being challenged, in part due to organic economic and demographic trends in the region that have created the first ever "intra-Asian market."² Specifically, as Chinese wealth and military budgets increase, new military capabilities are supporting a legitimate wish to secure China's own interests as well as a more expansive vision for regional leadership.³ At the same time, the US armed services are facing a combination of unforgiving domestic budgetary trends, the exponential expense of new generations of weapons platforms in all domains, rising personnel and maintenance costs, and incremental mastery of technological trends by potential adversaries.⁴ These trends could harbor a destabilizing geopolitical agenda and challenge current US military planning.⁵ In the past, force

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planning faced fewer budgetary, foreign policy, or physical dilemmas, relying upon unquestioned preponderance of offensive forces and allies. More generically, the classic US focus has been on achieving absolute military victory delivered by “command of the sea and air” or preponderant offensive US forces using “precision strike” and “dominant maneuver” to secure early, comprehensive advantages on the battlefield.⁶

However, the highest level military leaders in today’s Department of Defense are explicitly, and repeatedly, making a very blunt point about this historical approach: the United States continues relying upon it at its own peril. The ability to use the threat of overwhelming force to compel de-escalation and political capitulation is steadily waning in both geopolitical value and physical and budgetary feasibility as the world and East Asia in particular become globalized and multipolar.

As luck would have it, a rich conceptual, logic-based, and practical framework exists for tackling these difficulties: Carl von Clausewitz’s classic *On War*. Clausewitz remains relevant into the twenty-first century because he purposefully employed a methodology that strongly avoided coming to rigid, universalistic, and “for all time” conclusions on applying the military art. Clausewitz focused on prosecuting battles or engagements only to the extent needed to achieve bounded policy goals. Today, the epitome of US operational art in the East Asian maritime environment would be to end a future militarized conflict via strategic frustration of the adversary’s will rather than strategic annihilation of its deployed forces or socioeconomic powerbase.⁷ This “frustration,” according to Clausewitz, would be based on designing operational campaigns that affect probabilities of ultimate victory or defeat in one’s favor while enacting as little battle damage as possible, so that the magnitude and duration of the conflict do not outstrip the limited (but still serious) conflicts of interest in play in the globalized, interconnected East Asian political economy. This article first draws out Clausewitz’s basic logical and conceptual framework for using discriminating judgment in campaign planning by military professionals. Clausewitz recommended and exemplified a cognitive approach based equally on the use of deductive reason alongside intuition, factual knowledge, and experiential knowledge, in the process creating an open interpretive framework for understanding and analyzing a given strategic situation that could involve open warfare.⁸ Second, given that Clausewitz focused above all on the central importance of interstate politics in a given historical era

and geographic area, the article explores the broad geopolitical characteristics of East Asia today and exemplifies those core “theater strategic” characteristics that will infuse and constrain US planning goals and methods in any given crisis. In brief, the primary finding here is that East Asia offers a challenging geopolitical context of mixed interests and limited disputes over both congruent and competing policy positions, defined principally by a complex array of purely bilateral interests that do not involve complete ideological enmity as in the earlier Cold War period. Finally, the argument shows that throughout his text Clausewitz differentiated between wars undertaken for purposes of comprehensive political occupation or destruction of standing military capabilities on the one hand and negotiated settlements based on reaching a balance of interests between the two contending sides on the other. Clausewitz sometimes dubbed the latter as either offensive or defensive war defined by a “limited aim” both politically and militarily.⁹ To deal with the growing complexity and fragmented geopolitics of a multipolar East Asian regional system, the constant input of regional, subregional, and country experts, or area experts, is absolutely required if the theoretical and practical mandates of Clausewitz’s *On War* are to be observed and met in the construction and implementation of military campaign plans.

Clausewitzian Logic and Military Planning

The more polished, refined, and edited first section of *On War* defined roughly two categories of military strategy at a theater level for those armed interstate disputes that might fall well short of regime change, homeland occupation, or comprehensive destruction of the enemy’s fielded military. At the low end of both political and military aims, Clausewitz described campaigns based mainly on skillful maneuvering to signal superior abilities for battlefield victory. At the higher end, he described a more decisive form of frontline “disarming” of the opponent’s currently fielded forces, but still well short of annihilation-based warfare. Notably, even in the case of serious frontline destruction of forces in one or more battles, the focus would not be either total political capitulation or complete military annihilation but instead the imposition of greater and greater costs through attritional destruction. The military objective would *not* be comprehensive defeat, in short, but rather a steady increase in the opponent’s estimation that this attritional cost imposition would likely continue well past the opponent’s own

break-even point for hostilities, leading to a newly accepted balance of interests between contending parties.

Political-Military and Strategic-Tactical Military Theory

Throughout *On War*, Clausewitz argued firmly for a dialectical view (pose, counterpose) of both the combined political-military and strategic-tactical tensions facing high-level political and military leaders—an approach useful for today's East Asian dilemmas. In particular, he argued that neither high-level policy, or what we might today call national security strategy, nor military procurements, training, positioning, and employment tactics on the field could be cleanly separated from each other in either conceptual or practical terms; the very “logic” of war served to always bind them together.¹⁰ Furthermore, what one might today call theater strategy for an entire, holistic regional geopolitical environment could not, in Clausewitz's mind, be separated from what today is called the operational level of war, or as US joint doctrine defines it, “how, when, where, and for what purpose major forces will be employed . . . to achieve operational and strategic objectives.”¹¹

His final logical and practical framework can be reasonably portrayed in figure 1.¹² While he never used the term “operational” as defined in US documents per se, he essentially accorded great importance to this middle level of combined political-military planning via his overwhelming focus on military “genius” at weaving together sets of campaigns, battles, and engagements to reach war goals. In his view, combat-intensive large battles and small tactical engagements alike would service larger theater campaigns and the ultimate, strategic-level “political object” or “political aims.”¹³ As shown in figure 1, for Clausewitz, adept strategic planning would not just concern itself with what he dubbed “the war as a whole” or what we would call today “grand strategy.” Instead, Clausewitz intentionally conceived of strategizing as a thought process in which real-time data on the socioeconomic and political contexts of both adversaries and allies alike would constantly infuse the production and execution of theater military campaigns against specific adversaries (their motives, goals, interests, socioeconomic limitations and vulnerabilities, and so on).¹⁴ And in partial contradiction with the extremely technocratic way that US operational campaign plans are bureaucratically produced in terms of specific bottom-up military mission sets such as close air support, air interdiction, air superiority, logistics, and so forth, he refused to isolate

what we today call tactical tasks and missions from the imperatives and constraints of strategic-level political intentions.

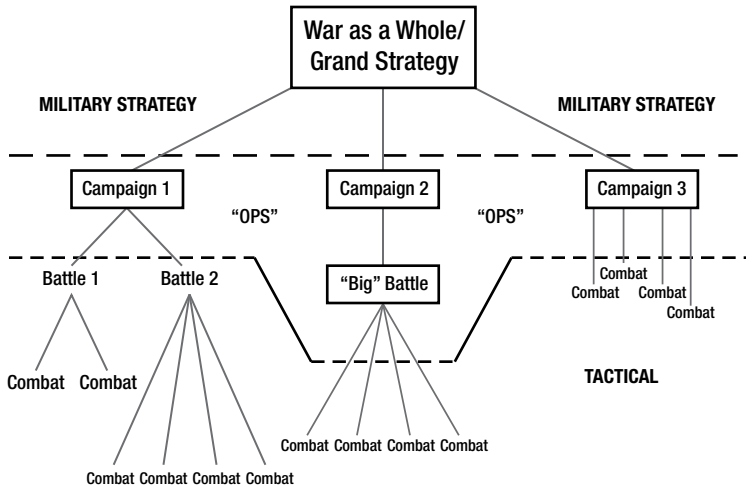


Figure 1. Levels of warfare planning and execution

Nonetheless, Clausewitz saw himself as creating a thoroughly combat-centric theory of war. As recent scholarship has amply shown, he was himself a battle-hardened veteran with firsthand experience in personal armed combat at the tactical level of warfare, and indeed, he sought out this dangerous battlefield experience with pride and relish.¹⁵ It is perhaps this very experience that led Clausewitz to admit that there was an innate “grammar” of warfare—an inner character—that was utterly defined by armed violence at the tactical level, focused on rendering the opponent defenseless so as to impose one’s overall aim or purpose upon them.¹⁶ As he wrote, “Engagements mean fighting. The object of fighting is the destruction or defeat of the enemy. The enemy in the individual engagement is simply the opposing fighting force. . . . [T]he complete or partial destruction of the enemy must be regarded as the sole object of all engagements. . . . By direct destruction we mean tactical success.”¹⁷

Indeed, the key point that guides all of *On War* is the “idea” of combat, whether or not it actually takes place: “However many forms combat takes . . . it is inherent in the very concept of war that everything that occurs must originally derive from combat. . . . [W]henver armed forces, that is armed individuals, are used, the idea of combat must be present. . . .

[T]he fact that only one means exists constitutes a strand that runs through the entire web of military activity and really holds it together.”¹⁸

The idea of combat carries a virtual weight in planning, even when designing fundamentally deterrent and defensive strategies based on limited policy goals.¹⁹ For Clausewitz, political results from military actions, or even threatened military actions,²⁰ could only be guaranteed in the end by individual force-on-force “duels,” which would take place as part of tactical engagements, themselves woven together by commanders as parts of larger battles and campaigns to achieve a strategic behavioral effect within a given theater. Thus he stressed that: “If the idea of fighting underlies every use of the fighting forces, then their employment means simply the planning and organizing of a series of [armed] engagements. *The whole of military activity must therefore relate directly or indirectly to the engagement.* The end for which a soldier is recruited, clothed, armed, and trained . . . is simply that he should fight at the right place and the right time” (emphasis in original, throughout, except where noted).²¹

In short, understanding high-level national policy in its entirety meant understanding the tactical meaning of those policies on the battlefield: “We maintain therefore that only great tactical successes can lead to great strategic ones . . . *tactical successes are of paramount importance* in war.”²²

But what exactly is “the right place and right time” for tactical successes, and what determines tactical success? In answering this fundamental question, Clausewitz logically ended in a different place than combat itself in his final determination of what drove the larger purpose of war, despite war’s inner character being defined by combat. This was in large part because he could not derive the actual historical variations in the types, intensities, durations, and outcomes of what he dubbed “real” warfare simply by focusing on the pure concept of tactical violence alone. Completely counterposed tactical violence was in his view a constant, always based on undiluted efforts to force the other side to submit to one’s will via one-sided victory between small units. But war as a holistic enterprise was obviously quite dynamic in pace, lethality, and consequences, with the final strategic result often being negotiated settlements and partial political outcomes between disputants.²³ As he argued, “Since war is not an act of senseless passion but is controlled by its political object, the value of this object must determine the sacrifices to be made for it in magnitude and also in duration. Once the expenditure of effort exceeds the value of the political object, the object must

be renounced and peace must follow.”²⁴ And this was because, in any given war, social and political groups are fighting for some sort of collectively defined cause, making interstate war fundamentally different from a personal duel in terms of the complexities of costs, benefits, and motivations.

Given his eventual focus on both domestic and interstate politics as the driving force of any “real” war, Clausewitz repeatedly balanced his strong emphasis on disarming battles with an appreciation for socio-economic and political limits. His signal contribution was perhaps the theoretical and empirical argument that the very nature of interstate war meant two things simultaneously: first, unvarnished battlefield disarming of the opponent’s fielded capabilities at a tactical or “theater strategic” level; and second, the organic reality of likely constraints and boundaries on the totality of that self-same destruction, so as to achieve a balance of interests both within one’s own polity and in relations with other powers, including the enemy itself. Indeed, he ended up dubbing the latter dynamic “Real War” in the concluding section and chapters of his work, so as to emphasize the distinction between purely theoretical absolutes and actual war in practice.²⁵ This is extremely important in the context of Asian strategic geopolitics defined by limited bilateral conflicts of interest, in which it is emphatically *not* the case—even in the Japan-China relationship—that bilateral and multilateral political relations are utterly defined by what Clausewitz called “pure hatred.”²⁶

East Asian Geopolitics: Mixed Interests and Limited Disputes

The most central interstate political reality that will constrain, bound, and channel US campaign planning in this arc of Asia is simple yet often glossed over or ignored in ongoing debates. From the Japanese main islands and the Yellow Sea in the farthest north, to the Malacca Straits and the Andaman Sea farthest southwest, this region is defined principally by limited conflicts of interest that exist in a globalized, interdependent economic setting. Furthermore, and just as importantly, these conflicts exist amidst a backdrop of extremely fragmented sovereign political interests represented by complex patterns in bilateral and trilateral ties. Territorial and cultural crises can be expected to erupt unpredictably based on shifting bilateral commitments rather than on strong, multilateral alliances and institutions as exist in Western Europe. In any given

such bilateral dispute, both the main disputants and their neighbors will want to limit hostilities below the level of comprehensive regional warfare between two contending blocks of states.²⁷

The end of warfare, in short—even involving attritional battlefield destruction of frontline forces—is unlikely to be the seeking of some sort of decisive political hegemony by one block of states over another.²⁸ Instead, such unpredictable flare-ups are much more likely to be based squarely upon sharp bilateral enmities fueled by overlapping combinations of negative territorial, ideological, economic, and strategic-security issues. However, simultaneous positive cultural or economic relations will generally predominate in foreign relations in most periods, with negative political-ideological or strategic-security divides taking over only in an unpredictable, up-and-down cycle dependent on domestic politics and economics as much as international events.²⁹

In this evolving context, US conventional force hegemony is on the decline not simply because of the rapid growth of long-range, surface-to-surface Chinese missile capabilities that could conceivably wrest control of the air and sea from the US Air Force and Navy.³⁰ US military preponderance is also undermined by evolving dynamics at the political level.

Something that remains underappreciated in purely defense-centric debates is the wide array of innate political constraints facing any likely operational planning process for East Asia. Even as the United States loses its relative military edge, it is operating amidst an exponential increase in common free-market interconnections and a continued inability of “friendly” regional states to come together behind common goals at a social and political level of relations.³¹ Across bilateral relationships in East Asia, there are markedly different mercantile, energy, fishery, sea lane, and symbolic-territorial concerns of highly varying intensities.³² East Asia is thus severely fragmented in its sovereign politics even as it is becoming more densely interwoven in the economic sphere. This means that any US military intervention will likely not be in support of a clearly shared and collectively defined political cause based in turn on an overarching sense of common values and territorial goals.³³ This of course flies in the face of Washington’s grand-strategic approach and presumption of “collective security” based on broadly and deeply shared liberal principals and treaty commitments.

For instance, sharpening Japan-China disputes include (1) the strategic security concern of keeping open access to key sea lines of communication

for external energy shipments and for outgoing trade; (2) the mercantile interest and security concern of energy and mineral exploitation in disputed areas of oceanic territory; (3) the issue of food security linked to rich fisheries; and (4) certainly not least, highly symbolic territorial disputes with strong “sovereign identity” aspects, often linked to very sensitive historical grievances over past war traumas and linked firmly to internal nationalist movements at elite and popular levels.³⁴ Yet, these quite specific Japan-China concerns are not shared or defined in exactly the same way by other bilateral dyads such as South Korea–China, Indonesia-China, Malaysia-China, and so forth, unlike for instance the fairly uniform, highly ideological, monolithic nature of the old Cold War division of Europe, and indeed, South Korea and Japan often have as much animus and distrust between each other as with China.³⁵

To give a South Pacific example: Australian active participation in multiple different “trilateral” Coast Guard visits and exercises with countries such as Japan, India, and the Republic of Korea could be seen as a grand linking of South Asia, Northeast Asia, and the Asia-Pacific to contain China. However, it is actually done by Canberra less to show a collectively united front towards Beijing than because (1) being “Western,” these are the nations that it has more organic social and political cultural ties with, and (2) Australia has a great fear of a US-Chinese standoff that catches it in the middle. These latter two factors have led to a “soft balance” approach via intraregional trilateral exercises not tied to any particular territorial dispute, rather than “hard balance” in more muscular Southeast Asian-centered patrols with the United States, where the most frictions are actually taking place.³⁶

In short: parties within both Southeast and Northeast Asia are experiencing widely varying degrees of cultural and political friction with a growing and newly assertive China as well as with each other, even as all states, simultaneously, are enriching each other in varying degrees.³⁷ The irony is that this is at least partially due to US design, based on a so-called bilateralist “hub and spokes” system in which, traditionally, the United States was the hub that provided development aid, very generous open-trade preferences (allowing protectionist policies by the bilateral allies), military equipment and training, and finally, basing of US forces and steady US deterrent threats to individual nations (spokes) rather than an overarching multilateral alliance or economic institution.³⁸ Not surprisingly, since the end of the World War II, East Asia has become

economically connected by a complex web of intensive, but still largely bilateral, free trade, expanded trade, and preferential trade agreements; transnational financial investments; and interstate development aid relationships. While multinational corporations and the opening of the Chinese market to investments and manufacturing have multiplied economic ties at a trans-state and interstate level, bilateralism remains the hallmark of sovereign state relations.³⁹

Meanwhile, a bevy of middle or rising middle powers (Australia, Indonesia, Malaysia, Vietnam, South Korea) have become deeply reliant on the massive Chinese economy. For most Southeast Asian states, this means relying on China as a consistent buyer of both lower-end manufactured goods and extractive commodities; for more developed Northeast Asian polities such as South Korea, Japan, and Taiwan, as well as Singapore and Australia, it means that China is a choice destination for high-profit foreign direct investment and manufacturing deals.⁴⁰ East Asia is thus now geopolitically defined by a complex network of material interests involving the first-ever true “intra-Asian” market.⁴¹

What does this mean in the case of an escalation over symbolic, strategic, or resource-rich territories? Interviews of regional experts with extensive diplomatic track-II ties to officials, academics, and think tanks in the region, as well as interviews of operations research analysts and experienced war-game designers, have shown that it remains extremely context-dependent and ambiguous as to whether Southeast Asian and Northeast Asian states will come together in support of collective security goals either across subregions or even within their own subregion.⁴² In the South Pacific, for instance, even culturally western, highly developed Australia is keen for US support but equally keen to view matters of Taiwan, the East China Sea, or even a Vietnam-Philippines-China dispute as a distant affair in terms of its own core interests, being first and foremost concerned with the more nearby power of Indonesia.⁴³ Indeed, there is a low probability that even South Korea, Japan, and Taiwan will see eye to eye on territorial, cultural, energy, and commercial disputes with a rising China, including possible future armed disputes between Taiwan and China.

South Korea, for instance, has profound, millennia-old core cultural connections to mainland China that innately ease relations in comparison to either the tortured recent history of Japan or the increasingly independent, indigenous identity movement in Taiwan. Moreover, the

so-called “Greater Seoul Metropolitan Area” is just as much populated by transnational Chinese as indigenous Koreans, with the pro-China business community generally insistent on not letting ideological, security, and territorial issues undermine mutual profits.⁴⁴ At the same time, however, recent history has already shown that a sudden crisis with the North involving deaths of South Korean soldiers and sailors, in which China takes North Korea’s side or remains effectively neutral in both its regional diplomacy and in UN Security Council deliberations, can suddenly and dramatically dampen cooperative relations based on such foundations.⁴⁵ Elites remain strongly divided on whether Japan or China represents the greater long-term threat to the growth of a genuinely new South Korean polity, with conservatives worried more in a realpolitik sense of rapid Chinese growth (and Chinese lack of condemnation for the North’s volatile excesses), and with progressives focused on the human rights sufferings under both a US-supported series of military autocrats in the Cold War and Japanese abuses towards women and laborers during their 1910–45 occupation period. Conservatives tend to support very strict conditions for any cooperative economic, military, and cultural engagement of a hostile and distrustful North Korea, a position generally supported by Japan but opposed by China. In contrast, progressives are highly critical of their own conservative elites and of the United States, whether in regard to the role of past conservative leaders in the period of Japanese occupation, the causes of the Korean War (i.e., whether it was a true global ideological contest or an indigenous civil war exacerbated by external meddling), or a hard attitude towards the North today, thus calling for relatively unconditional engagement of the North to resolve conflict while distancing South Korea from Japan, in line with Beijing’s preferences.⁴⁶ However, even South Korea would be extremely concerned about a potential Chinese shutdown and blockade of the straits and super-container ports in and around Taiwan, given the reality of sea lines of communication.⁴⁷

Meanwhile, Japan remains extremely concerned about punitive missile attacks against vulnerable US bases on its territory, if the Japanese government and people should choose to allow base assets to be used in a Taiwan crisis. Domestic politicians would be especially concerned about a scenario where the Japanese navy and air force become involved in frontline operations with their ally’s services, as now allowed under new legislative guidelines for interpreting Article 9 of its Peace Constitution (e.g., missile

defense, ISR support, frontline destroyer protection of carriers, or even frontline logistical supply of ammunition, parts, and food for US ships at sea with Japanese logistics assets).⁴⁸ Japanese conglomerates, likewise, are heavily tied into the Chinese economy. Therefore, without substantial “horizontal escalation” of Chinese goals and methods that affect players beyond Taiwan itself, Japanese support in a collective security mission is far from preordained.⁴⁹

Because of such fluidity in relations, all parties desperately want the United States to come to their own quite particular defense and fear “abandonment” in this regard—but will try very hard, nonetheless, to view any bilateral crisis not directly involving them as a localized affair.⁵⁰ Thus multipolar competition in this region, unlike in the Cold War European theater, is fluid, opportunistic, and domestically dynamic, based on strictly limited and bounded conflicts of interest. Any one state is just as likely to sit out a crisis to preserve economic ties with China (or avoid China’s military wrath) as it is to come to the aid of another Asian party who is likewise a friend or ally of the United States.⁵¹ The onus of major military threats and military employment in a crisis rests squarely upon the United States.⁵²

At the same time, these factors taken together arguably also diminish the credibility of any US threats to undertake deep strikes against politically and symbolically charged homeland targets of the adversary. It is not just a competitor’s nuclear arsenal that makes such threatened strikes incredibly risky; it is also to an increasing degree against the interests of the United States and its key friends and allies in a globalized economy.⁵³ Also, threats of strikes on the Chinese mainland may butt up against the reality of large and increasing Chinese foreign aid flows to Southeast Asian nations such as Indonesia for sorely needed infrastructure investment in energy, roads, ports, and railroads, an increasing trend that divides these aid recipients from the United States on economic concerns even as US military cooperation increases.⁵⁴

One could therefore reasonably infer from the ongoing geopolitical circumstances that the overarching campaign goal would be to deny or frustrate another power’s attempts at aggressive maritime denial operations—but without escalation to a wider war.⁵⁵ The second part of this strategic and operational policy goal is often only implied in debates yet is central to the motivations and national interests of each of America’s commitments and bilateral understandings with East Asia powers.

Namely, such parties want the United States to take a leadership role in successfully thwarting any belligerent Chinese efforts at undue regional hegemony, whether the latter takes the form of seizing sovereign territory, lionizing the riches of such territory, or closing off open access to trade and financial deals freely with all states.⁵⁶ However, all would prefer that the United States do the latter without causing a ruinous region-wide war that would have especially negative returns for those Asian parties not directly involved in the given escalating dispute of the moment.⁵⁷

Applying Clausewitz's Framework to East Asia

How should we apply Clausewitz's arguments, concepts, and logic to the mixed and limited aims of East Asian sovereign competition? Clausewitz wound down his epic tome by restating a core thesis: "That the political view should wholly cease to count on the outbreak of war is hardly conceivable unless pure hatred made all wars a struggle for life and death. . . . Subordinating the [strategic] political point of view to the [tactical] military would be absurd, for it is policy that has created war. Policy is the guiding intelligence."⁵⁸ Or in other words: the guiding intelligence of operations would only match the killing hatred of tactical combats in the field if war were truly unmitigated and unfiltered by economics, domestic politics, international politics (including those of allies), weapons technology, financial matters, or in short: "every sort of extraneous matter."⁵⁹ For Clausewitz, the latter all served to create "modifications in practice," so that a theoretically absolute form of warfare, based on regime change, occupation of the enemy's homeland, and/or true physical destruction of nearly all of their latent as well as currently fielded military capacity, was a scenario he viewed as unlikely in most actual historical cases of warfare planning and execution.⁶⁰ Looking back to the Treaty of Westphalia in 1648 from his own perch in the early nineteenth century, Clausewitz warned his own leaders that the example of Napoleon could be ill-suited to many interstate wars, given that Napoleon's military rampages were first and foremost a direct reflection of specific social conditions emanating from the domestic French Revolution.⁶¹ "Only with the rise of Bonaparte have there been campaigns . . . where superiority has consistently led to the enemy's collapse. Before his time, every campaign had ended with the winning side attempting to reach a state of balance in which it could maintain itself. At that point, the progress of victory stopped. . . . This culminating point

in victory is bound to recur in every future war in which the [total] destruction of the enemy cannot be the military aim, and this will presumably be true of most wars.”⁶²

In this regard, the evolving military and economic balance of power in East Asia is not completely unique, as vexing and convoluted as it may seem when compared to the bipolar Cold War. Concern with achieving a balance of military power and national interests in a (hopefully limited) war, in a multipolar and fragmented regional system lacking in clear alliance patterns, has not only happened before but was the normal state of great power affairs prior to the totalizing ideological disputes of the twentieth century.⁶³

As Clausewitz took great pains to describe and explain throughout *On War*, not all political and territorial rivalries lead to wars over completely opposed political stakes. It is precisely the level and type of political stakes that should determine operational military means and goals, including the types of targets and the level of destruction leveled upon one’s opponent. As he noted, “Generally speaking, a military objective that matches the political object in scale will, if the latter is reduced, be reduced in proportion. . . . Thus it follows that . . . wars can have all degrees of importance and intensity, ranging from a war of extermination down to simple armed observation.”⁶⁴

Importantly for the East Asian political context of limited conflicts of interest, ideologically opposed and tightly bound enemy blocks of states remain extremely unlikely as a true geopolitical scenario. Clausewitz finally deduced that wars may be started, fought, and ended long before major battles take place because the attacking side—the side with the “positive purpose”—may be convinced, far short of sustained combat, of “the improbability of victory.”⁶⁵ Alternately, serious destruction could occur via far more intensive use of engagements in lethal ways, thereby destructively imposing costs that outstrip the aggressor’s policy goals. In both cases, notably, he argued that costs could still fall short of a major policy loss by one party based upon an equally lopsided physical victory: “The aim of disarming the enemy (the object of war in the abstract) . . . is in fact not always encountered in reality, and need not be fully achieved as a condition of peace. On no account should theory raise it to the level of a law. Many treaties have been concluded before one of the antagonists could be called powerless—even before the balance of power

had been seriously altered. Not every war need be fought until one side collapses.”⁶⁶

Victory at the strategic as opposed to the tactical level, in other words, was not for Clausewitz an unvarying entity that remained the same in definition from beginning to end of hostilities.

Such mixed, less-than-total outcomes are conceptually and factually possible because, in the absence of completely ideological hostility and enmity, “as soon as preparations for a war begin, the world of reality takes over from the world of abstract thought” so that “the interaction of the two sides tends to fall short of maximum effort.” In Clausewitz’s view, even in highly destructive wars, it would be rare that the “full resources” of both sides would truly “be mobilized immediately,” and indeed, “in many cases, the proportion of the means of resistance that cannot immediately be brought to bear is much higher than might at first be thought.” This is because war is never about the “fighting forces proper” alone, that is, that small percentage of the population and the national budget already mobilized for a war effort.⁶⁷ Instead, domestic politics would ultimately decide just how committed the populations and their leaders would be to drawing upon their own full efforts and the material bounty of their own country. Thus, beyond the “purity” of warfare at the tactical level, “War . . . always lasts long enough for influence to be exerted on the goal and for its own course to be changed in one way or another—long enough, in other words, to remain subject to the action of a superior intelligence.”⁶⁸ And in gauging a nation’s commitment to the continuance of mixed political and military efforts, the dynamic and evolving outputs of the hostilities themselves, in terms of both ongoing costs and benefits, would provide key data for decision makers: “Of even greater influence on the decision to make peace [than offensive success] is the consciousness of all the effort that has already been made and of the efforts yet to come.”

All of this led Clausewitz inexorably towards a conclusion perhaps at odds with the US reigning joint-doctrinal focus on “victory” via “full spectrum dominance”: “We see then that when one side cannot *completely* disarm the other, the desire for peace on either side will rise and fall with the *probability of further successes and the amount of effort these would require*” (emphasis added).⁶⁹ So in armed conflicts defined by limited and mixed interests between many contending parties, the core questions would be: How does one best raise actual costs for the adversary

short of major escalation? How does one best raise the threat of prospective large costs should fighting continue? Throughout hostilities, how does one impact perceived probabilities of adversary disadvantage?

In the first interpretation and description of the problem, limited war could conceivably be extremely limited in means, based on one side convincing the other of the improbability of victory through superior maneuvering and massing of forces for strategic effect. In the second interpretation, the high costs already sustained in attritional battle could lead one to quit the affair before yet more costly damage has occurred via the further mobilization of societies,⁷⁰ or as Clausewitz succinctly put it, wars can end short of actual strategic victory because of “unacceptable cost.”⁷¹ This second category of wars of limited aims meant “destroying enough of the enemy’s power to force him to renounce his intentions.” In such scenarios, “The . . . question is how to influence the enemy’s expenditure of effort; in other words, how to make the war more costly to him. The enemy’s expenditure of effort consists in the *wastage of his forces*, our *destruction* of them.”⁷² One would then use very clear offensive victories at the tactical level of combats and engagements to serve a more limited campaign goal of checking the adversary’s fighting power: “What is the concept of defense? The parrying of a blow. . . . A campaign is defensive if we wait for our theater of operations to be invaded. . . . In other words, our [operational] offensive takes place within our own positions or theater of operations. . . . But if we are really waging war, we must return the enemy’s blows. . . . So the defensive form of war is not a simple shield, but a shield made up of well-directed blows.”⁷³

But toward what operational campaign goal does one direct this “shield made up of well-directed blows”? Despite *On War*’s obvious focus on destruction of the opponent’s forces, Clausewitz still referred to such defensive campaigns as having a “negative aim,” in which victory simply meant convincing the opponent to give up the fight: “If a negative aim—that is, the use of every means available for pure resistance—gives an advantage in war, the advantage need only be enough to *balance* any superiority the opponent may possess: in the end his political object will not seem worth the effort it costs. He must then renounce his policy.”⁷⁴ The point is simply to make the opponent’s strategic geopolitical objectives too costly or perhaps even impossible to achieve within the bounds of their political will and attendant politically available resources.⁷⁵

Therefore, assuming that one gets the boundaries of adversary will and intent right, ongoing diplomatic negotiations should be helped, not hindered, by the threat and use of force at a campaign-level of warfare. In this regard, a viable concept of operations for wars defined by negotiable, limited aims would be based upon posing the credible threat of an operational stalemate that, while not winning per se, would produce a cost-benefit ratio unfavorable for escalating aggression.⁷⁶

Clausewitz and Limited Aims in East Asia

This finally brings us to a conclusion and prescription that may not sit well with the technocratic approach of the US military, which is focused perennially on a worst-case, capabilities-centric method of planning, with a focus on achieving overwhelming advantage at the tactical level of war. In the recent past, this has been appropriately referred to as an “effects-based” approach that relies on characteristics of “war-fighting domains” to supply one’s theory of war, for example “airpower theory” or “sea-power theory.” Such domain-centered theories of war have traditionally existed alongside associated micro-level, technology-driven tactics for acquiring the information needed to map the battlefield and skillful employment of the long-range weapons needed to leverage that information for destructive effect to decisively win force-on-force duels.⁷⁷

In possible contrast, Clausewitz argued that a correct assessment of relative political conditions should be given the utmost, defining role in creating the foundation for all combined political-military planning efforts. And as our brief examination of regional dynamics has shown, even between stiff competitors, support for the overall international system in place is still a defining attribute of East Asian geopolitics. It is within this larger context that Scott Weaver of the US Army’s Strategic Studies Institute has cautioned, “[L]ong range strike and precision attack Air-Sea Battle tactics should not be mistaken for an effective military solution. Taking down [Chinese regional] anti-access systems, if not integrated into a [politically informed] theater campaign, would be wasteful at best, and at worst could lure the U.S. into a broader conflict it did not intend nor have the political will to sustain.”⁷⁸ Or as Clausewitz himself more generally stated nearly 200 years ago: “[A]n attacker can overshoot the point at which, if he stopped and assumed the defensive, there would still be a chance of success—that is, of equilibrium. It is therefore important to calculate this point correctly when planning the

campaign. An attacker may otherwise take on more than he can manage and, as it were, get into debt.”⁷⁹

This calls for devising limited operational campaigns that reflect as closely as possibly Clausewitz’s mantra of correctly assessing the true “policy object” in play between two disputants: “If you want to overcome your enemy you must match your effort against his power of resistance, which can be expressed as the product of two inseparable factors, viz. *the total means at his disposal* and *the strength of his will*. . . . But the strength of his will is much less easy to determine [than his available means] and can only be gauged approximately by the strength of the motive animating it. Assuming you arrive in this way at a reasonably accurate estimate of the enemy’s power of resistance, you can adjust your efforts accordingly.”⁸⁰

The key sentence in this quotation is the last one. “Adjusting your efforts accordingly” depends on, as Clausewitz notes, a complex combination of both the adversary’s means and the “strength of his will.”

Remember that Clausewitz divided his logical, conceptual, and practical attention between wars focused on extreme goals of complete adversary political-territorial capitulation (and probable decimation of the other side’s standing forces) versus wars that were about a new negotiated settlement based on partial conflicts of will. For the latter, Clausewitz admonished would-be military planners that rather than focusing on “a maximum [operational] effort, if a maximum could be defined,” they should instead “adopt a middle course,” in which a commander “would act on the principle of using no greater force, and setting himself no greater military aim, than would be sufficient for the achievement of his political purpose.” And again, referring back to the driving importance of politics and policy at what we would call a “grand strategic level,” Clausewitz cautioned that a prudent planner in a situation of mixed and limited interests “must renounce the need for absolute success in each given case [of combat or battle],” because shooting for a “maximum effort” in every force-on-force clash might easily create a situation in which “all proportion between action and political demands would be lost: means would cease to be commensurate with ends.”⁸¹

This is especially challenging when one considers the literally byzantine array of bilateral interests between and among southeast and northeast Asian nations, all of which themselves have strong ties with mainland China.⁸² As Clausewitz argued, even in the best of circumstances, each

side's actual strategic intentions and motivations during a militarized crisis or limited war are often hazy despite intelligence reports, the statements of diplomats, and military actions in the field,⁸³ a reality that game theorists today argue endlessly about.⁸⁴ "The degree of force that must be used against the enemy depends on the scale of political demands on either side," Clausewitz wrote. "These demands, so far as they are known, would show what efforts each must make; but they seldom are fully known."⁸⁵

In today's world, this naturally brings one into the realm of real-time crisis bargaining, which will innately be infused by political judgments and contextual area expertise. The question for campaign planning (and procurement strategies to support such plans) is thus how to use combined forces in a crisis to bring about adversary responses that supply as much "political data" as possible for the benefit of decision makers, particularly on actual rather than theorized adversary strategic intentions, motivations, and goals.⁸⁶

This, in turn, points to the importance of regional, country, and area experts in both peacetime contingency planning and during "crisis action planning" at an operational level—something not yet done consistently at lower levels of operational design. For instance, this might be done via concerted staffing of geopolitically savvy experts in the operational assessment teams of the strategy division of theater-level air operation centers that are overseeing all combined air operations for a given theater campaign or set of campaigns. Such experts would work with more technically focused officers to immediately assess the likely, evolving political, economic, and social effects of ongoing strikes in the 48–72-hour "joint air tasking cycle" that the Air Force currently uses for planning and executing discrete engagements under a campaign plan.⁸⁷ In terms of immediate operational military objectives, this would be especially pertinent for optimal linking of the achievement of purely tactical measures of combat performance to larger theater-wide military objectives and, ultimately, the commander's overall "intent" that is based on national strategic policy objectives underlying all campaign plans.⁸⁸

To revisit the primary theme of interdependence between the grand-strategic "war as a whole" and tactics on the field (refer back to figure 1): Clausewitz did not conceive of this relationship as a static form of interdependence, with high-level guidance, assumptions, and requirements being irrevocably set in stone for the duration of hostilities. Rather, the

dictates of both levels of thought and action were unavoidably in dynamic, fluid tension with each other, constituting for him a core facet of the nature of war.⁸⁹ Thus, the best “pol-mil planners” (to use today’s terminology), whether civilian or military, would show their brilliance in how they dynamically managed the tension between the strategic, operational, and tactical levels of war—again pointing toward the presence of diverse area expertise to continually re-evaluate campaign strategy during not just higher-level operational design but even during its tactical-level, iterative execution. As argued by Air Force doctrine itself, ideally: “Strategy evolves over time in a continuous, iterative process; there is no static, single, or ‘final’ strategy or plan. Commanders and strategists should never assume the plans they create will remain static or be executed as conceived. . . . Therefore, strategy creation should be cyclic and iterative.”⁹⁰

In this regard, the following point of Clausewitz’s bears close scrutiny, as it describes a very cautious, incremental approach to the operational threat and use of force that will likely motivate future US political decision-makers toward a rising China in militarized crises: “If war consisted of one decisive act, or of a set of simultaneous decisions, preparations would tend toward totality, for no omission could ever be rectified. . . . But if the decision in war consists of several successive acts, then each of them, seen in context, will provide a gauge for those that follow.”⁹¹ A linear, step-by-step decision-making method is likely in a militarized dispute in East Asia even in the midst of lightning-quick information and strike technologies, due to the need to dynamically assess the enemy’s strength of will during a complex crisis with attached globalized economic costs. Or as described again by Clausewitz himself: “When we attack the enemy, it is one thing if we mean our first operation to be followed by others until all resistance has been broken; it is quite another if our aim is only to obtain a single victory, in order to make the enemy insecure, to impress our greater strength upon him, and to give him doubts about his future. If that is the extent of our aim, we will employ no more strength than is absolutely necessary.”⁹²

Of great importance in this part of Clausewitz’s argument are the perceived probabilities of success or failure, with the latter being dynamically influenced as maneuver and combat take place. While recognizing combat as war’s “only effective force in war,” with its aim of destroying enemy forces at a tactical level as a means to an end, he immediately

added the caveat: “That holds good even if no actual fighting occurs, because the outcome rests on the assumption that if it came to fighting the enemy would be destroyed.” Thus, prospective destruction could take the place of actual destruction, assuming that the combined political-military estimates of decision makers were influenced accordingly: “[A]ll action is undertaken in the belief that if the ultimate test of arms should actually occur, the outcome would be favorable.”⁹³ As put by Clausewitz himself, “Thus there are many reasons why the purpose of an engagement may not be the destruction of the enemy’s forces, the forces immediately confronting us. Destruction may be merely a means to some other end. In such a case, total destruction has ceased to be the point; the engagement is nothing but a *trial of strength*. In itself it is of no value; its significance lies in the outcome of the trial.”⁹⁴

As Clausewitz argued, adversary morale will or could ultimately be affected not only by battle damage in and of itself but also by a steady wearing down of their confidence that they could ever realistically achieve their aims through force. Their dynamic, ongoing, perceived “probabilities” of victory would wear down because their forces at an operational level in the theater literally would be outmaneuvered and checkmated, whether by serious physical destruction of frontline forces, via more low-intensity engagements involving geographically contained destruction of units, or even via threats of armed engagements in dynamic campaigns of strategic maneuver that serially presented the opponent with likely losses, if combat were to actually take place.⁹⁵ This would successfully demonstrate to the side overturning the status quo that in the event of fuller hostilities, it could not probabilistically achieve its objectives at an acceptable cost—that is, within the desired sovereign bounds of both resources and time. As the Air Force has noted for its own operations, “Direct effects trigger additional outcomes . . . [that] are often assessed or evaluated in qualitative terms . . . [and] reflect that the principal purpose of military operations is to influence the *behavior* of the adversary. . . . Even pure attrition does not seek a decrease in the size of an enemy force for its own sake. The real purpose of attrition is a weakening of resistance and resolve within the enemy force and its commanders, seeking to incline them toward ceasing resistance altogether.”⁹⁶

Closing

What final conclusions can be drawn from this? Based on deductive application of Clausewitz's conceptual framework to broad East Asian geopolitical realities, whatever the final operational definition of what is now artfully called "joint assured maneuver in the global commons," military planners would be wise to devise as many modular, flexible contingency plans as possible that are geared toward selective but persistent denial of adversary advantage over sustained periods of diplomatic bargaining. In short, the United States military posture in East Asia should be structured for holding key sea lanes, territories, and/or symbolic geopolitical issues "in dispute" on a running, fluid, and opportunistic basis so as to wear down adversary will—if necessary, including the imposition of limited but significant attritional costs alongside the promise of yet more costs to come. This would include plans (or aspects of larger plans) that would deviate substantially from what *Joint Vision 20/20* has dubbed the annihilation-oriented military attainment of full-spectrum dominance via a comprehensive offensive victory at the operational level of war.⁹⁷ Whether in a protracted crisis defined by strategic maneuver or in a limited attritional war of frontline combat, military planners must take great care to provide graduated, partial, and controllable options at the concrete level of campaigns and ultimately engagements and combats, thereby providing decision space to policy makers. **SSQ**

Notes

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Multiple research interviews by the author, all unattributed, including: East Asia geopolitics expert/former official 1, 31 May 2016; East Asia expert 2, 13 July 2016; Southeast Asia experts 1 and 2, 2 June 2016; Southeast Asia expert 3 (nongovernmental organizations and academic analyst), 25 August 2016; Northeast Asia expert, 1 June 2016; Japan foreign and domestic politics experts 1, 31 May 2016, and 2, 2 June 2016; China domestic, foreign affairs and national security analysts 1, 2 June 2016, and 2, 13 July 2016; and Operations research and war game design analyst 2, 11 July 2016. These and subsequent individual sources in turn are part of

ongoing research interviews on East Asia geopolitics and US military force posture, involving former officials and independent experts on both East Asia geopolitical realities and trends as well as expert respondents on naval war gaming, operations, and campaign strategy in the evolving anti-access/area denial environment. Interviews are being funded by the Department of Defense (DOD) MINERVA Initiative, a research grants program launched by the secretary of defense in 2008. Focusing on areas of strategic importance to US national security policy, its goal is to improve DOD's basic understanding of the social, cultural, behavioral, and political forces that shape regions of the world of strategic importance to the United States.

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3. Toshi Yoshihara and James R. Holmes, *Red Star over the Pacific: China's Rise and the Challenge to U.S. Maritime Primacy* (Annapolis, MD: Naval Institute Press, 2010), 14–90.

4. Richard Kugler and Linton Wells II, *Strategic Shift: Appraising Recent Changes in U.S. Defense Plans and Priorities* (Washington, DC: Institute for National Strategic Studies, National Defense University, 2013), vii–xiii, 53–66, 77–86; Evan Braden Montgomery, "Contested Primacy in the Western Pacific: China's Rise and the Future of U.S. Power Projection," *International Security* 38, no. 4 (Spring 2014): 115–49, <http://doi.org/bvhr>; Richard A. Bitzinger, "Military Modernization in Asia," in *Strategy in Asia: The Past, Present, and Future of Regional Security*, ed. Thomas G. Mahnken and Dan Blumenthal (Stanford, CA: Stanford University Press, 2014), 162–81; Toshi Yoshihara, "Japanese Bases and Chinese Missiles," in *Rebalancing U.S. Forces: Basing and Forward Presence in the Asia-Pacific*, ed. Carnes Lord and Andrew Erickson (Annapolis, MD: Naval Institute Press, 2014), 37–65; Lyle J. Goldstein, "The Real Military Threat from China: Anti-Ship Cruise Missiles," *The National Interest*, 22 January 2015, <http://nationalinterest.org/feature/the-real-military-threat-china-anti-ship-cruise-missiles-12085>; Andrew F. Krepinevich, *Maritime Competition in a Mature Precision-Strike Regime* (Washington, DC: CSBA Reports, April 2015); and Henry Holst, "Essay: China's Submarine Solution for the Taiwan Strait," USNI website, 16 July 2015, <https://news.usni.org/2015/07/08/essay-chinas-submarine-solution-for-the-taiwan-strait>. In turn, the latter is based on US Office of Naval Intelligence, *The PLA Navy: New Capabilities and Missions for the 21st Century* (Washington, DC: Department of Defense, 2015).

5. Susan Shirk, *China: Fragile Superpower* (Oxford, UK: Oxford University Press, 2007), 35–104 and 140–254; David Shambaugh, *China's Communist Party: Atrophy and Adaptation*

(Washington, DC: Woodrow Wilson Center Press and University of California Press, 2009), 161–82; Daniel Lynch, “Securitizing Culture in Chinese Foreign Policy Debates: Implications for Interpreting China’s Rise,” *Asian Survey* 53, no. 4 (July/August 2013): 629–52, <http://doi.org/bvbm>; Suisheng Zhao, “Foreign Policy Implications of Chinese Nationalism Revisited: the Strident Turn,” *Journal of Contemporary China* 22, no. 82 (2013): 535–53, <http://doi.org/bvbk>; Haiyang Yu, “Glorious Memories of Imperial China and the Rise of Chinese Populist Nationalism,” *Journal of Contemporary China* 23, no. 90 (2014): 1174–87, <http://doi.org/bvhj>; East Asia geopolitics expert/former official 1, interview, 31 May 2016; East Asia expert 2, interview, 13 July 2016; and China domestic, foreign affairs, and national security analysts 2 and 3, interview.

6. Joint Chiefs of Staff (JCS), *Joint Publication 3-0: Joint Operations* (Washington, DC: Government Printing Office, 11 August 2011), I-13, http://www.dtic.mil/doctrine/new_pubs/jp3_0.pdf.

7. Notably, this goes against the grain of US culture, which some have characterized as a “US Way of War” implicitly premised upon decisive, overwhelming battles; see Russell F. Weigley, “American Strategy from Its Beginnings through the First World War,” 408–43, in *Makers of Modern Strategy: From Machiavelli to the Nuclear Age*, ed. Peter Paret (Princeton, NJ: Princeton University Press, 1986); Beatrice Heuser, *The Evolution of Strategy: Thinking War from Antiquity to the Present* (Cambridge, UK: Cambridge University Press, 2010), 113–19, 137–52, 171–75; Bernhard Brodie, *Strategy in the Missile Age* (Santa Monica, CA: RAND Corporation, 1959), 6–70; and Antulio J. Echevarria II, *Clausewitz and Contemporary War* (Oxford, UK: Oxford University Press, 2007), 133–35, 141–44, <http://doi.org/dsbm9g>.

8. Joint Staff, Director for Strategic Plans and Policy (J5: Strategy Division), *Joint Vision 2020: America’s Military—Preparing for Tomorrow* (Arlington, VA: Department of Defense, June 2000).

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10. Stoker, *Clausewitz: His Life and Work*, 267.

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12. See, for instance, Robert Citino, *Blitzkrieg to Desert Storm*, in *Historical Perspectives of the Operational Art*, ed. Michael D. Krause and R. Cody Phillips (Washington, DC: Center of Military History, US Army, 2005); Peter Paret, “Napoleon and the Revolution in War,” 123–42, Hajo Holborn, “The Prusso-German School: Moltke and the Rise of the General Staff,” 281–95, Gunther E. Rothenberg, “Moltke, Schlieffen, and the Doctrine of Strategic Envelopment,” 296–325, “Russian Military Thought: The Western Model and the Shadow of Suvorov,” 354–75, and Russel F. Weigley, “American Strategy from Its Beginnings through the First World War,” 408–43, all in *Makers of Modern Strategy: From Machiavelli to the Nuclear Age*, ed. Peter Paret (Princeton, NJ: Princeton University Press, 1986).

13. Clausewitz, *On War*, 80–81, 100–112, 260–61, 605–8.

14. *Ibid.*, 585–86.

15. Indeed, Clausewitz felt passionately that he could never receive his due honor, status, and sociopolitical standing from the Prussian state and society without being a central part of at least one major battlefield victory, central to the ongoing war effort against Napoleon, an intensely held belief and desire that would repeatedly embitter him throughout his career, given the penchant for the complex alliance system to appoint him often as an administrator, logistical planner, or on the battlefield, as tactical commander of pitched battles generally on

the flanks of major movements and in a series of rear-area retreats, outside the main area of major offensive hostilities. Nonetheless, despite these professional frustrations, his flank and rear-area defense efforts repeatedly put him in the thick of quite deadly tactical engagements throughout the wars with Napoleon. See Stoker, *Clausewitz: His Life and Work*, particularly the ebb and flow of major campaigns, and battles therein, 53–222.

16. Echevarria, *Clausewitz and Contemporary War*, 62–65, 84, 133–34; Stoker, *Clausewitz, His Life and Work*, 266, 274.

17. Clausewitz, *On War*, 227–28.

18. *Ibid.*, 95–96.

19. *Ibid.*, 97, 386; see also the analysis and interpretation of Clausewitz on this point, Echevarria, *Clausewitz and Contemporary War*, 126, 136–38.

20. Clausewitz, *On War*, 97.

21. *Ibid.*, 95.

22. *Ibid.*, 227–28.

23. *Ibid.*, 529–616.

24. *Ibid.*, 92.

25. *Ibid.*, 579–616.

26. This is seen in repeated admissions by officials and businesspersons, during times of economic downturns involving either power, that the other large economy is needed for technology sharing, labor, trade in finished products, and/or financial capital inputs for new ventures, even given recent tensions since 2009. See, for instance, Tetsushi Kajimoto and Izumi Nakagawa, “Japanese Business Mood Subdued on Uncertainty over China,” *Reuters Business News* (21 July 2015); Bruce Einhorn, “Awkward Timing for China’s Memorial of Japanese Atrocity,” *Bloomberg Business* (12 December 2014); and Michael Schuman, “China and Japan May not Like Each Other, but They Need Each Other,” *Time Magazine Online* (1 December 2013).

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29. South Korea experts/US former officials 1 and 2, Japan foreign and domestic politics experts 1 and 2, Northeast Asia expert, China domestic, foreign affairs, and national security analysts 1 and 2, East Asia geopolitical expert/former official 2, and Asia-Pacific analyst 1, interviews. For concrete examples of this “gray area” of constrained competition, see, for instance, Tuosheng, “Disputes over Territories,” 120–43, Cohen and Kirshner, “The Cult of Energy Insecurity and Great Power Rivalry,” 144–76, and Yuan Peng, “The China-U.S. Handshake in Northeast Asia: The Key to Dual Stability in Bilateral Ties and Regional Equilibrium,” 236–49, in *The Nexus of Economics, Security, and International Relations in East Asia*, ed. Goldstein and Mansfield; Il Hyun Cho, “Democratic Instability: Democratic Consolidation, National Identity, and Security Dynamics in East Asia,” *Foreign Policy Analysis* 8, no. 2 (November 2011): 191–213, <http://doi.org/cfdrkf>; Chung-in Moon and Chun-fu Li, “Reactive Nationalism and South Korea’s Foreign Policy on China and Japan: a Comparative Analysis,” *Pacific Focus* 25, no. 3 (November 2010): 331–55, <http://doi.org/b4m78f>; Ben Blanchard, “China Just Gave Japan an Ominous Warning,” *Reuters Business Insider*, 22 July 2015, <http://www.businessinsider.com/r-china-says-japans-east-china-sea-pictures-provoke-confrontation-2015-7>; Jane Perlez, “Chinese Oil Rig Near Vietnam to Be Moved,” *New York Times*, 15 July 2014, <https://www.nytimes.com/2014/07/16/world/asia/chinese-oil-rig-near-vietnam-to-be-moved.html>; David Lai, *Asia-Pacific: A Strategic Assessment* (monograph; Carlisle, PA: Strategic Studies Institute and US Army War College Press, May 2013), 35–50; Einhorn,

“Awkward Timing for China’s Memorial”; and Schuman, “China and Japan May not Like Each Other.”

30. Operations research and war game design analyst 2; Yoshihara, “Japanese Bases”; Montgomery, “Contested Primacy,” 131–39; Goldstein, “The Real Military Threat from China”; Krepinevich, *Maritime Competition*; Holst, “China’s Submarine Solution”; US Office of Naval Intelligence, *The PLA Navy?*

31. Asia-Pacific analyst 1, Expert on Japanese foreign and domestic policies 1, East Asia geopolitics expert/former official 1, and Expert on Japanese foreign and domestic policies 2, interviews.

32. See, for instance, in the case of Southeast Asia, Sheldon Simon, “Southeast Asian International Relations: Is There Institutional Traction,” and N. Ganesan and Ramses Amer, “Conclusion,” in *International Relations in Southeast Asia: Between Bilateralism and Multilateralism*, ed. N. Ganesan and Ramses Amer (Singapore: Institute of Southeast Asian Studies, 2010), 38–54 and 313–37, respectively; and across both Southeast and Northeast Asia, Tuosheng, “Disputes over Territories,” 120–43.

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35. In regard to vast differences in bilateral relationships between South Korea, China, and Japan: East Asia geopolitics expert/former officials 1 and 2, and South Korea expert 3, interviews; in regard to Southeast versus Northeast subregional interests, Southeast Asia expert 3 (nongovernmental organizations and academic analyst), interview.

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37. China domestic, foreign affairs, and national security analyst 2, interview; see also footnote 35.

38. Bruce Cumings, “Japan and the Asian Periphery,” in *Origins of the Cold War: An International History*, ed. Melvyn P. Leffler and David S. Painter, (London: Routledge, 1994), 215–238; Odd Arne Westad, *The Global Cold War: Third World Interventions and the Making of Our Times* (Cambridge, UK: Cambridge University Press, 2007), 20–27, 30–36, 110–19, 180–89; Calder, *Pacific Alliance*, 32–36, 41–44, 49, 52–53, 62–63, 78–83, 90–92; Ikenberry, “A New Order in East Asia?,” 219–22; Overholt, *Asia, America*, 11–27, 43–44.

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40. See, for instance, Murray L. Weidenbaum, *The Bamboo Network: How Expatriate Chinese Entrepreneurs Are Creating a New Economic Superpower in Asia* (New York: Free Press, 1996); China domestic, foreign affairs, and national security analyst 3, interview.

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42. Southeast Asia experts 1 and 2, East Asia geopolitics expert/former official 2; Operations research and wargame design analyst 2; Naval policy analyst 1, 12 July 2016, interviews.

43. Asia-Pacific analyst 1, interview.

44. Naval policy analyst 1; South Korea expert 2, South Korea expert 3, 14 July 2016, interviews.

45. Japan foreign and domestic policy expert 1, South Korea expert 3, interviews.

46. South Korea experts 2 and 3, interviews.

47. Operations research and wargame design analyst 2, interview.

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51. Southeast Asia experts 1 and 2, June 2, Operations research and war game design analyst 2, Asia-Pacific analyst 1, interviews.

52. Southeast Asia experts 1 and 2, South Korea expert 2, Operations research and war game design analyst 1, interviews.

53. East Asia experts/former officials 1 and 2; Northeast Asia expert, Asia-Pacific analyst 1, interviews.

54. Southeast Asia experts 1 and 2, China domestic, foreign affairs, and national security analyst 3, interviews.

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56. Southeast Asian expert 3 (NGO and academic analyst), interview.

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58. Clausewitz, *On War*, 606–7.

59. *Ibid.*, 580; see also 87–88.

60. *Ibid.*, 579–80; see also 75–77, 87–89.

61. Ibid., 609–10, 580–94.
62. Ibid., 570.
63. Michael Kraig, *Shaping U.S. Military Forces for the Asia-Pacific* (Lanham, MD: Rowman and Littlefield, 2014), 31–57.
64. Clausewitz, *On War*, 81.
65. Ibid, 91.
66. Ibid., 91
67. Ibid., all quotes taken from 79.
68. Ibid., 87.
69. Ibid., 92. Note that all of these conclusions have been borne out by more contemporary political science and historical research. See, for instance, Fred Ikle, *Every War Must End*; R. Harrison Wagner, “Bargaining and War,” *American Journal of Political Science* 44, no. 3 (July 2000): 469–84, <http://doi.org/c247qq>; Catherine C. and Jean-Pierre P. Langlois, “Does Attrition Behavior Help Explain the Duration of Interstate Wars? A Game Theoretic and Empirical Analysis,” *International Studies Quarterly* 53, no. 4 (1 December 2009): 1051–73, <http://doi.org/d3jhwk>; and Dan Reiter, *How Wars End* (Princeton, NJ: Princeton University Press, 2009).
70. On the fact that most wars in fact start with only a fraction of societal assets mobilized for destructive action in the field, with the implication that more can be brought to bear in terms of both people and material assets, see Clausewitz, *On War*, 79–80; and separately, Ikle, *Every War Must End*, 17–22.
71. Clausewitz, *On War*, 91.
72. Ibid., 93.
73. Ibid., 357.
74. Ibid., 94.
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76. Jonathan F. Solomon, “Demystifying Conventional Deterrence: Great Power Conflict and East Asian Peace,” *Strategic Studies Quarterly* 7, no. 4 (Winter 2013): 118–22, http://www.au.af.mil/au/ssq/digital/pdf/winter_13/2013winter-Solomon.pdf; on naval war gaming and naval campaign strategy in the evolving anti-access/area-denial environment, East Asia geopolitics and US military force posture expert respondent, interview, 1 June 2016.
77. Yoshihara and Holmes, *Red Star Over the Pacific*, 73–82; Kraig, *Shaping U.S. Military Forces*, 1–7, 29–30, 224–41; see also Speller, *Understanding Naval Warfare*, 40–71.
78. M. Scott Weaver, “The Limits of Air Sea Battle,” *RealClearDefense*, 12 June 2013, http://www.realcleardefense.com/articles/2013/06/12/the_limits_of_airsea_battle_106648.html.
79. Clausewitz, *On War*, 572.
80. Ibid., 77, 82.
81. Ibid., 585.
82. Ganesan and Amer, “Conclusion,” 313–37.
83. Stoker, *Clausewitz: His Life and Work*, 266–69.
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86. See “General Considerations for Strategy,” in Air Force Doctrine Annex 3-0: *Operations and Planning* (Maxwell AFB, AL: Air University, 9 November 2012), 6–7, <https://doctrine.af.mil/download.jsp?filename=3-0-Annex-OPERATIONS-PLANNING.pdf>. On the importance of perceived and real strategic intentions (interests, motivations) in militarized disputes, including crises and limited wars, see Kraig, *Shaping U.S. Military Forces*, 193–98.

87. Air Force Instruction (AFI) 13-1AOC, *Volume 3: Operational Procedures*, Air Operations Center, 2 November 2011, 22–28, and especially 27–28.
88. Curtis E. LeMay Center for Doctrine Development and Education, “General Considerations for Strategy,” “Basic Implications of Strategy on War and Other Operations,” and “The Effects Based Approach to Operations,” in *Air Force Doctrine Annex 3-0: Introduction to Operations and Planning*, 9 November 2012, 5–7, 13–15, and 20–21, respectively.
89. Echevarria, *Clausewitz and Contemporary War*, 94–95, 126, 140–41, 143.
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91. Clausewitz, *On War*, 79.
92. *Ibid.*, 92.
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Nuclear Proliferation in the Twenty-First Century: Realism, Rationality, or Uncertainty?

Stephen J. Cimbala

Abstract

Whether the spread of nuclear weapons in the twenty-first century should be feared or welcomed has been the subject of considerable debate. Much of this debate presumes the explanatory and predictive power of realist international system theories (realism) and rational deterrence theory (rational deterrence). Although these bodies of thought offer some important insights about the likelihood and consequences of nuclear weapons spread, they omit important aspects of the problem both theoretically and empirically. Unlike during the Cold War, a multipolar world of regional nuclear rivalries may create an unmanageable stress test for hypotheses built on realism or rational deterrence.

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Will the spread of nuclear weapons in the twenty-first century threaten international peace and world order, or will proliferation be contained—and the risk of nuclear war controlled—with as much success as in the preceding century? The optimistic arguments, relatively more acceptant of nuclear weapons spread, have been based at least partly on realist international systems theory (realism) and rational deterrence theory (rational deterrence). Against these arguments favorable to proliferation, skeptics have contended that nuclear proliferation is more to be feared than welcomed. The proliferation pessimists base some of their stronger arguments on organizational theory as it applies to nuclear crisis management and on the technical and procedural constraints related to the operation of nuclear forces.¹

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Of course, in any academic and policy debate, there are schools within schools and nuances within subplots.² But the important fault line is that between those who are convinced that nuclear weapons spread is compatible, more or less, with international stability and those who are equally concerned that nuclear proliferation raises the risks of inadvertent war or deliberate nuclear attack. If the assumptions about realist and rational deterrence theory are not as convincing as hitherto assumed, the character of the debate between the proliferation-acceptant and the proliferation-resistant schools may need rethinking. This article considers the assumptions made about realism and rational deterrence in this debate and asks whether these assumptions are robust with regard to the issue of nuclear proliferation. Historical perspective of the Cold War and the prelude to World War I are illustrative examples.

Realist Theory and its Limits

Some theorists and policy makers predicted that the slow spread of nuclear weapons could be made compatible with international peace and stability by mixing realism and deterrence.³ The argument that the post-Cold War world may be compatible with a hitherto unknown and unacceptable degree of nuclear weapons spread rests on some basic theoretical postulates about international relations. These basic assumptions are derived from the realist or neorealist school of international political thought.⁴ We are interested in the realist-derived assumptions that are specifically related to nuclear proliferation. Realist principles have considerable explanatory power and predictive utility at a very high level of abstraction, thus their appeal to some scholars. Realism also has an inherent pessimism about some aspects of international relations, thus its road-tested user friendliness for worldly heads of state and military planners.⁵ A summary of the major tenets of some of the more important schools of modern realist political theory appears in table 1.

Proponents of international realism confronted nuclear technology with mixed reactions. The nuclear revolution separated the accomplishment of military denial from the infliction of military punishment. The meaning of this for strategists was that military victory, defined prior to the nuclear age as the ability to prevail over opposed forces in battle, now was permissible only well below the level of total war. Less than total wars were risky as never before. Nuclear realists admit that these profound changes have taken place in the relationship between force and

policy. They argue, however, that the new relationship between force and policy strengthens rather than weakens some perennial principles of international relations theory. Power is still king, but the king is now latent power in the form of risk manipulation and threat of war instead of power actually displayed on the battlefield. Peace is now guaranteed by threat of war unacceptable in its social consequences instead of being dependent upon the defender's credible threat to defeat an attack.

Table 1. Assumptions of major realist thought

	Human-nature realism	Defensive realism	Offensive realism
Principal cause of state competition for power	Inherent lust for power on the part of states or governments, based in human nature	Structure of the international system, especially system polarity and its impact on alliance formation	Structure of the international system, especially system polarity and its impact on alliance formation
Amount of power that states want	States seek to maximize power relative to other states; regional or global hegemony is states' ultimate goal	States emphasize preservation of the existing balance of power and favorable incremental adjustment of the status quo	States seek to maximize power relative to other states; regional or global hegemony is states' ultimate goal

Adapted from John J. Mearsheimer, The Tragedy of Great Power Politics (New York: W. W. Norton, 2001), 22.

Note: Mearsheimer is not responsible for changes made by the author or for its use here.

Strong and Weak Assumptions

The nuclear version of international realism has a number of intellectual and policy-prescriptive weaknesses. Systems theorists are not always as careful as they ought to be in crossing over from the abstract and hypothetical-deductive logic of models into the prescriptive worlds of policy analysis and policy making. Simply put: some prominent thinkers are too willing to follow their models over the cliff. Also, in some widely cited versions of realist theory, formal causes are confused with efficient causes. The hypothesized intellectual system morphs into a high-wire player on the world stage instead of a descriptive or explanatory tool for thinking. This bait and switch from intellectual construct to leviathan credits systems with behavior actually attributable to actor perceptions, goals, and capabilities. Statesmen such as Bismarck, Metternich, and Kissinger are no longer writing the play but merely reading their lines.

The first problem for some realist theorists is that, in crossing from the world of abstraction to the universe of actual policy making, their assumptions introduce hidden biases. Assumptions that do no damage

in the world of models (where all assumptions are equal) can be pathologically misguided when they leak into policy-derived explanations or predictions. For example, political scientist Kenneth Waltz explicitly compared the behaviors of states in an international system to the behavior of firms in a market. As the market forces firms into a common mode of rational decision making to survive, so, too, does the international system, according to Waltz, dictate similar constraints upon the behavior of states. The analogy, however, is wrong. The international system does not dominate its leading state actors: leading states define the parameters of the system. The international system, unlike the theoretical free market, is subsystem dominant. The system or composite of interactions among units is the cross product of the separate behaviors of the units.⁶

As international relations theorists Bruce Bueno de Mesquita and David Lalman have noted, whether foreign policy decisions are conceptualized from a realist or a domestic politics perspective influences how we understand the selection of foreign policy goals and the roles of state policy makers.⁷ One distinction between the two perspectives is the assumption made by adherents of each about the role of the unitary actor. Realists assume a stronger unitary actor, making decisions on the basis of the balance of power and other strategic interests created by the state's place in the international order. From the perspective of domestic politics, on the other hand, the unitary actor assumption is weaker. As Bueno de Mesquita and Lalman explain, "Like the realist unitary actor, the domestic unitary actor is responsible for selecting the strategic actions required to implement the society's objectives to the best of his or her ability. Unlike the realist unitary actor, the domestic unitary actor is not charged with defining the aims of foreign policy. These aims originate from the domestic political process."⁸

International politics is a game of oligopoly, in which the few rule the many. Because this is so, there cannot be any system to which the leading oligopolists, unlike the remainder of the states, are subject against their wishes. The system is driven by the preferred ends and means of its leading members on issues that are perceived as vital interests to those states or as important although not necessary vital.⁹ Realists, especially structural realists who emphasize the number of powers and their polarities as determinants of peace and war, assume that some system of interactions exists independently of the states that make it up. This is a useful heuristic for theorists but a very mistaken view of the way in which policy is actually

made in international affairs. Because realists insist upon reification of the system independently of the principal actors within the system, they miss the subsystemic dominance built into the international order. Napoleon Bonaparte and Adolph Hitler, for example, saw the international order not as a system that would constrain their objectives and ambitions but as a series of swinging doors, each awaiting a fateful, aggressive push. Bueno de Mesquita and Lalman, having analyzed competing models of realpolitik and domestic interpretations for international outcomes, found that “a perspective that is attentive to the domestic origins of foreign policy demands gives a richer and empirically more reliable representation of foreign affairs than a realist emphasis.”¹⁰

Attempts by realists to circumvent some explanatory problems create other problems. As international politics specialist Robert Jervis has noted, one can divide international systems theorists according to whether the system is treated as an independent variable, as a dependent variable, or as both.¹¹ Waltz contends that the most important causes of international behavior reside in the structure of the international system, that is, in the number of powers and in their positions relative to one another.¹² Jervis notes that Waltz’s structure omits some important variables and processes that are at neither the system nor the actor level—for example, technology and the degree and kind of international interdependence.¹³ These and other previously cited criticisms of realism are less telling as complaints about its internal logic than they are about its potential for incompleteness in explaining or predicting international interactions. Ironically, Waltz’s earlier major work on this subject, *Man, the State and War*, makes a compelling argument that cogent explanations for war or its absence require all three levels of analysis: first image (the individual); second image (the nation-state and its decision making); and third image (the international system).¹⁴

Formal or Efficient Causes

A second problem in realism theories is the confusion or conflation of formal and efficient causes. System polarity is virtually identical with system structure in many realist arguments. But this near identity of polarity and structure is flawed. Polarity is more the result of past state and nonstate actor behaviors than it is the cause of future behaviors. Cold War bipolarity was the result of World War II, of the presence and distribution of nuclear weapons, and of the fact that leaders perceived

correctly the futility of starting World War III in Europe. Leaders' perceptions of the balance of power are an intervening variable between polarity and outcomes such as stability, including peace or war. In other words, leaders' perceptions, including their risk aversion or risk acceptance, are the efficient causes for international behavior; systems and polarity are formal causes.¹⁵ By analogy, the formal cause of divorces is marriage; the efficient cause, disagreement between married parties.

The difference between efficient and formal causes is important for theories that purport to be empirically testable. Formal causes are proved by an abstract process that follows a deductive chain of reasoning. Efficient causes are demonstrated by observation of temporal sequences and behavioral effects. International systems theorists who emphasize the importance of structure have been more successful at proving formal than efficient causes. There is merit in doing so, and Waltz and others who have argued from this perspective deserve credit for their rigor and for the insights derived from their perspective.¹⁶

The danger for international systems theorists lies in transferring inferences from the realm of deductive logic to the world of policy explanation and prediction. For example, Waltz argues both that: (1) because there were only two Cold War superpowers, each had to balance against the other at virtually any point, and (2) disputes among their allies could not drag the United States and Soviet Union into war because they could satisfy their deterrence requirements through internal balancing rather than alliance aggregation.¹⁷ The first argument is at least partly inconsistent with the second, and neither is confirmed by Cold War evidence. The Americans and Soviets sometimes conceded important disputes to one another in order to avoid the possibility of inadvertent war or escalation, as in the US refusal to expand the ground war in Vietnam on account of expected Soviet and Chinese reactions. And allies sometimes did drag the superpowers into crisis under credible threat of war, as the Israelis and Egyptians did in 1973.

Despite these logical problems in realist theory, it remains influential as time passes for two reasons. First, international relations and security studies are as subject to bandwagoning effects as are other fields. Prominent ideas gather new adherents in leading graduate schools, and the products of those graduate schools carry the ideas far and wide into the profession. Second, realism does have major virtues. Unlike many social science theories applied to international politics and foreign policy, it is

self-consciously aware of the importance of military history and of strategy. Political scientist John Mearsheimer's *The Tragedy of Great Power Politics* shows how the realist perspective can be used to interrogate history for pertinent lessons about policy, as do later works by fellow international affairs scholars Stephen M. Walt and Barry R. Posen.¹⁸ Because of this explicit interdependency between history and theory in realist approaches, realists emphasize the critical role played by grand strategy in a state's effort to define and resolve its security dilemmas.¹⁹

These positives about realism could outweigh its negatives in a world made up of only nonnuclear powers (before World War II) or of only two nuclear superpowers (during the Cold War). But an emerging landscape of multiple nuclear-armed state and nonstate actors changes the context within which prior arguments worked. Realism worked (conditionally) in a world of conventional deterrence, where great powers could still fight major wars at an acceptable cost. Nuclear weapons changed this calculation. One might save realism in a world of nuclear plenty by arguing that nuclear deterrence replaces conventional war fighting as the major stabilizing dynamic. But this argument cannot fast forward from a bipolar nuclear world into a multipolar nuclear system for reasons that realists themselves have acknowledged: multipolar systems, especially those that are unbalanced, are more war prone than bipolar systems.²⁰

Rational Deterrence Theory and Its Limits

Rational deterrence theory as explained and argued by scholars and policy analysts during the Cold War was based on the relationship between the capabilities of states and their willingness to threaten or to use those capabilities under conditions of threat.²¹ In a crisis between two nuclear-armed states, each will estimate the relative costs and benefits of striking first, on one hand, compared to the estimated costs and benefits of waiting to be attacked before retaliating. The logic of rational deterrence theory favors waiting, as opposed to attacking, so long as the defender has survivable second-strike forces, adequate warning information, and post-attack command and control of its nuclear forces to ensure a prompt and unacceptable retaliation against the attacker. Under these conditions, in which the attacker can devise no war plan that provides for a first strike with impunity, the defender has the advantage and deterrence is assumed to withstand the stress of crisis.²²

This model of nuclear deterrence rationality is not to be despised or dismissed casually. It offers important clues as to the development of nuclear force structures and to the posturing of nuclear delivery systems and command and control in times of crisis. For example, weapons and command-and-control systems that are vulnerable to first strikes invite attack and are therefore assumed to be destabilizing. Survivable weapons and command systems, to the contrary, contribute to an arms race and to crisis stability. But despite the fact that rational deterrence leads to useful inferences about force structure and operational habits that are contributory to stability, it falls short of providing sufficient insight into human and organizational behavior that might be more important in crisis management. In addition, rational deterrence theory is not necessarily what it seems, even in its own terms and based on its own interior logic.

That rational deterrence falls short of accounting for the causal relationships in large organizations and small groups that make the decisions for peace or war has been emphasized by political scientist Scott D. Sagan in studies of American and other nuclear crisis management. Sagan is especially informative on the proclivities of military organizations, including their organizational mind-sets and standard operating procedures that could complicate crisis management and contribute to an outbreak of inadvertent nuclear war or escalation. According to Sagan, among the possibly crisis-dysfunctional proclivities of military organizations is their preference for preemption or for preventive war: getting in the first blow, should war appear to be inevitable.²³ This understandable propensity for seizing the initiative in the twilight between peace and war makes sense under many conditions of conventional warfare. But in a crisis between two nuclear-armed states, the organizational proclivity for first strikes becomes more of a liability than an asset: preparations for a preemptive strike or preventive war might be noticed by the adversary and trigger its own preemption. Organizational proclivities or standard operating procedures that drive states toward a reciprocal fear of surprise attack conflict with the political objective of nuclear crisis management.²⁴

Thus the case has been made for the limitations of rational deterrence theory in taking into account variables inside the black box of decision making and organizational behavior. Even critics of rational deterrence on this point concede, by implication, that once outside the black box,

it still makes sense and its logic remains, by and large, compelling. This concession may be premature.

Rational deterrence theory is built on a truncated view of rationality. It is a rationality of means but not of ends. End-rationality would also ask about the implications for society, culture, and polity, including humane values, of the various courses of action being plugged into rational deterrence and systems theory. Does the willingness to engage in a nuclear war to save a society or validate a policy ever make sense? Perhaps it does, in a very scenario-dependent manner. Deterrence theorists contend that socially unacceptable threats of nuclear retaliation are morally good because they work well enough, and they cite the Cold War as evidence in favor of their belief. Neither the United States nor the Soviet Union fired a nuclear weapon against the other's military forces or state territory despite 40-plus years of global rivalry and a number of serious political crises. Trafficking in nuclear fear may be a dirty business, but it works wonders because even politicians and generals overdosed on nationalism or testosterone cannot pretend that nuclear war is truly winnable or define victory at an acceptable cost.

Historical Perspectives

The Cold War provides mixed evidence for the value of nuclear deterrence as a guaranty pact for peace. The absence of large-scale war between the Soviet Union and the United States and their allied coalitions was overdetermined: by politics, technology, memories of World War II, and the ability of both superpowers to get most of their objectives without war.²⁵ Despite all these inhibiting factors, serious confrontations that could have led to an outbreak of war, including nuclear war, marked the Cold War; the Cuban missile crisis of 1962 was only the most publicized and obvious. The peaceful end of the Cold War was an historical anomaly to which nuclear weapons and deterrence made a contribution—but only a partial one. The Cold War endgame was driven primarily by factors internal to the USSR, especially by Soviet Pres. Mikhail Gorbachev's skill in dismantling the old Soviet power structures and his equally breathtaking inability to replace the old order with anything durable and legitimate.²⁶ Gorbachev's desire to hold the Soviet Union together, in competition with Russian Pres. Boris Yeltsin's eagerness to lead the march out from under the Soviet umbrella, created a state of uncertainty within Russia that gave breathing space for diplomatic, as opposed to

military, endgames in Germany. It was a subsystem-dominant endgame with a systemic overlay, not the reverse.

The entire Cold War endgame rested on the willingness of both Soviet and Western alliances to agree to the peaceful reunification of Germany. As late as 1989 this still appeared as a political impossibility, resisted by hard-liners in Russia and in Western Europe. Against the odds it happened, on account of the determination of German Chancellor Helmut Kohl and Gorbachev. Systems logic would have dictated a more cautious approach as less threatening to stability within the Soviet power structures and between East and West Germany. The ebullient personalities of the two heads of state and their willingness to accept risk under extraordinarily fluid political conditions made legitimate the repolarization of the continent of Europe. Nuclear weapons and deterrence did play a supporting role here: military adventurism by hard-liners East and West in those troubled but fruitful political times was harder to advocate or to undertake on account of the enormous American and Soviet nuclear arsenals hanging in the background.

Therefore the peaceful end to the Cold War requires that we acknowledge the significance of realist theory and rational deterrence theory for explaining causal forces that contributed to this unexpected but welcome outcome. Realism and rational deterrence were not irrelevant to explanation and prediction of policy outcomes during the Cold War or in the complicated interactions among states that brought the Cold War to a conclusion without war. System structure and polarity did matter; the “long peace” between 1945 and 1991 cannot be explained without paying careful attention to the sizes of the larger billiard balls, the shape of the table, and the movements back and forth across the table as the balls passed or collided with one another. But the initial velocity and direction for each ball was provided by an actor, not a system, and some balls had enough force or unpredictability to restructure the game, at least temporarily. A bipolar system remained in place from the end of World War II until the end of the Soviet Union, but this bipolarity was highly conditional: for most of the Cold War it was only a bipolarity of military power for mass destruction.

Cold War experience, *inter alia*, shows how realism and rational deterrence offer valuable but highly contingent explanatory and predictive insights pertinent to world politics and foreign policy decision making. Realism and rational deterrence models share with other rational choice

theories the attributes of parsimony and an explicitly defined connection between causal and dependent variables. But as explanations and predictors of behavior related to peace and war, they are containers only as good as the historical understanding that is poured into them.

Deterrence, Crisis Management, and World War I

Consider another example: the July Crisis of 1914. From a systems theory perspective, it made little sense for the great powers to align themselves on two opposed sides of tightly cohesive and antagonistic blocs as opposed to maintaining the flexibility of a five- or six-sided balance of power system. It made even less sense for some states in these alliances, especially Germany, to rely upon prompt mobilization and first-strike offensives as a deterrent when in fact they mainly served as provocations and as proximate causes for escalation. Here it must be conceded that some countries in July and August 1914 were more reliant on prompt mobilization and offensive strategies than others. Germany's Schlieffen Plan, for example, assumed a rapid and decisive victory in the western theater of operations against France while, on Germany's eastern flank, Russian mobilization would lag behind the pace necessary for a prompt offensive against Germany.²⁷ Despite these nations' varying mobilization speeds and reaction times, they shared an inability to understand that they were caught up in a process of risk management in addition to the processes of competitive arms building and the avoidance of military defeat by preemption.²⁸

The system of great power relationships that created a tolerable and mutually beneficial stability, first forged by German Chancellor Otto von Bismarck in the 1880s, was put at risk by leaders who only poorly understood the implications of their preemption-dependent war plans and alliance commitments. Regardless of the variations in detail among the plans and expectations of members of the Triple Entente and Triple Alliance, a shared default was the assumption of irreversibility once the decision to mobilize had been taken. Leaders in countries as otherwise different as Russia and Germany made this fatal assumption of irreversible mobilization. Compared to German prewar mobilization planning, Russian mobilization planning was torn by internal disagreements about strategic priorities: an attack on Austria alone or a simultaneous attack on Austria and Germany. Although the tsar assumed that an option existed for a partial, as opposed to a total, mobilization during the terminal

stages of the July crisis, the Russian general staff had in fact prepared no such option, and he was eventually—and reluctantly—persuaded to order total mobilization.²⁹ This Russian decision in turn accelerated the pace of German mobilization. There is no smugness in this critique. Political leaders in 1914 faced challenging circumstances in foreign and domestic policy. As historian Gordon A. Craig writes of Germany's first chancellor in World War I, Theobald von Bethmann Hollweg, "As soon as hostilities commenced, he found himself in a situation in which nearly all the political parties, the business community, a high proportion of the university professoriate, the bulk of the middle class, and significant portions of the working class were desirous of the most ambitious kind of territorial expansion and were sure that the war would make this possible. Simultaneously, he had to deal with a military establishment that had greater freedom from political control and a higher degree of public veneration than any similar body in the world."³⁰

The July Crisis of 1914 also offers cautionary tales about the validity of rational deterrence theory. Leaders in July and August 1914 should have been deterred for the reason that the military technology of the day favored defensive strategies and protracted war, which would exhaust the treasuries and manpower of the combatants. Therefore, the great powers having been so informed, they would forbear arms. But leaders were undeterred by the prospect of a longer and more destructive war despite the evidence of costs exceeding benefits.³¹ Instead of confronting the evidence, they invented their own version of a future in which rapid mobilization and prompt offensives would expedite a short, decisive war.³²

Equally defiant of rational choice theory was the willingness of the powers to continue the war long after the predictions of short war and decisive victory had been falsified, to the utter destruction of four empires and the economic devastation of all major combatants save the late-arriving United States. The adherence of warlords to dysfunctional plans guaranteeing only stalemate and exhaustion can be blamed entirely—and unfairly—on the generals themselves, as some have done. But what happened to diplomacy and political leadership at the very time it was called upon to think in cost-benefit terms about strategy, that is, the bridge between policy objectives and military operations?³³ As political scientist Colin S. Gray has noted, "Because strategy can only be done through the agency of the tactical, it has to be entirely hostage to the


consequences of tactical performances, friendly and unfriendly. Whether tactical performance advances strategic designs, both grand and lesser, should not be left to be resolved by *fortuna*, and it most certainly cannot be left to the professional or instinctive wishes of narrowly military soldiers.”³⁴

Of course, history does not repeat itself, at least not in detail, so comparisons of present and probable future international systems with the situation that obtained in August 1914 must take into account the differences as well as the similarities that apply.³⁵ The challenge for future leaders in the Middle East, South Asia, and East Asia will be not only to maintain a balance of military power but also to develop the necessary decision-making skills in crisis management and escalation control.³⁶

Conclusion

Realist and rational deterrence theories offer some important insights about international politics, and they have a justifiable center of gravity based on recognition of the importance of military history and strategy. But theorists and policy makers need to be careful in borrowing from realism and rational deterrence theories, for two reasons. First, even within the system-focused internal logic of realist theories, weaknesses exist—apart from the apparent negation of domestic politics. The realist actor is simply too one dimensional. Second, risk-acceptant leaders operating from a perspective of offensive realism and in possession of nuclear weapons are dangerous in a way that is not obvious. They might not *use* nuclear weapons by actually firing them. Instead they could use nuclear weapons to create a new regional ladder of escalation. A new regional ladder of escalation in the Middle East or South and East Asia could be created by combining existing and new nuclear forces with advanced technology for command and control, communications, intelligence, precision strike, and cyber operations.

This combination of older technology (nukes) with new technology for seeing and knowing the battlespace, for stealthy and possibly non-attributable cyber attacks, and for advanced conventional precision-strike weapons could default in crises into excessively fast decision making and preemptive attacks.³⁷ Already, interest on the part of some Asian powers in antiaccess/area denial defense strategies has encouraged attention to countermeasures that would include prompt and longer range air and missile attacks in addition to electronic and cyberwarfare. Two variables will help to determine whether realist and rational deterrence

theory will remain compelling in a world of nuclear plenty: (1) whether the distribution of power among nuclear-armed actors is relatively balanced or unbalanced and (2) whether the aims of nuclear states are status quo or revisionist in their attitude toward the existing distribution of international power and other values. Realism and rational deterrence have a lot to say about the first set of variables but understate the importance of the second set. Whether from a realist or alternative perspective, history is not deterministic. Additional nuclear proliferation beyond the nine existing de facto nuclear weapons states is neither guaranteed nor precluded by systemic or other factors. The relative military potential of state actors matters a great deal for the future of deterrence; so, too, do the aspirations and motivations of the future nuclear heads of state. In addition, leaders' understandings of technology and its implications for deterrence and for warfare are decisive inputs into the equation of decision for war or for peace.³⁸ Emerging and futuristic technologies may turn both neorealist and domestic-focused theorists' assumptions about the future causes of war, about the efficacy of deterrence, and about the rank order of major powers into yesterday's news.³⁹ 

Notes

1. An informative discussion of nuclear proliferation issues appears in Andrew Futter, *The Politics of Nuclear Weapons* (London: Sage Publications, 2015), chapter 3 and chapters 5–7. See also Peter D. Feaver, "Nuclear Command and Control in Crisis: Old Lessons from New History," in *Nuclear Weapons Security Crises: What Does History Teach?*, ed. Henry D. Sokolski and Bruno Tertrais (Carlisle, PA: Strategic Studies Institute and US Army War College Press, July 2013), 205–25. Feaver classifies participants in the proliferation debates as paleo- or neopessimists and paleo- or neo-optimists, with pertinent references for each school.

2. Additional expert discussion on these issues appears in Henry D. Sokolski, *Underestimated: Our Not So Peaceful Nuclear Future* (Carlisle, PA: Strategic Studies Institute and US Army War College Press, January 2016), 4–29; Richard D. Burns and Philip E. Coyle III, *The Challenges of Nuclear Non-Proliferation* (Lanham, MD: Rowman and Littlefield, 2015), 69–94, 133–60; and Matthew Kroenig, "The History of Proliferation Optimism: Does It Have a Future?" in *Moving Beyond Pretense: Nuclear Power and Nonproliferation*, ed. Henry Sokolski (Carlisle, PA: Strategic Studies Institute and US Army War College Press, June 2014), 45–89.

3. Kenneth N. Waltz, *The Spread of Nuclear Weapons: More May Be Better*, Adelphi Papers no. 171 (London: International Institute of Strategic Studies, 1981); also by Waltz, "Nuclear Myths and Political Realities," *American Political Science Review* 84, no. 3 (September 1990): 731–45, <http://www.jstor.org/stable/1962764>; and his chapters in Scott D. Sagan and Kenneth N. Waltz, *The Spread of Nuclear Weapons: A Debate* (New York: W. W. Norton, 1995). The continuing relevance of nuclear deterrence for international peace and stability is argued persuasively in Elbridge Colby, "Is Nuclear Deterrence Still Relevant?," in *Deterrence: Rising Powers,*

Rogue Regimes, and Terrorism in the Twenty-First Century, ed. Adam B. Lowther (New York: Palgrave-Macmillan, 2012), 49–73. The particular challenges posed by globalization for nuclear nonproliferation are discussed in Francois Heisbourg, “Nuclear Proliferation—Looking Back, Thinking Ahead: How Bad Would the Further Spread of Nuclear Weapons Be?,” in Sokolski, *Moving Beyond Pretense*, 17–44. Other arguments for a positive association between the spread of survivable nuclear forces and international stability appear in Martin Van Creveld, *Nuclear Proliferation and the Future of Conflict* (New York: The Free Press, 1993). Waltz’s important work on structural realism applied to world politics is his *Theory of International Politics* (Reading, MA: Addison-Wesley, 1979).

4. For a sorting of realist views on international politics, see John J. Mearsheimer, *The Tragedy of Great Power Politics* (New York: W. W. Norton, 2001), 14–22. See also Hans J. Morgenthau, *Politics among Nations: The Struggle for Power and Peace* (New York: Alfred A. Knopf, 1948). Paul R. Viotti and Mark V. Kauppi divide international political theories into realist, pluralist, and globalist schools, taxonomy similar to that offered by Kalevi J. Holsti. See Viotti and Kauppi, *International Relations Theory: Realism, Pluralism, Globalism* (New York: Macmillan, 1993), 61–227; and Holsti, *Peace and War: Armed Conflicts and International Order* (Cambridge, UK: Cambridge University Press, 1991), 328. See also Holsti’s comments on the roots of realism and neorealism, *Peace and War*, 329–30. An excellent summary and critique of neorealist views is provided by Robert O. Keohane, “Theory of World Politics: Structural Realism and Beyond,” in *Political Science: The State of the Discipline*, ed. Ada W. Finifter (Washington, DC: American Political Science Association, 1983), and reprinted in Viotti and Kauppi, *International Relations Theory*, 186–227.

5. On the other hand, John Mearsheimer is correct to note that realism is inconsistent with much American public opinion and with a great deal of US public diplomacy because it is “at odds with the deep-seated sense of optimism and moralism that pervades much of American society. Liberalism, on the other hand, fits neatly with those values.” Mearsheimer, *Tragedy of Great Power Politics*, 23. Jack Snyder contrasts realism, liberalism, and idealism as rival theories of international relations in his essay, “One World: Rival Theories,” in *Essential Readings in World Politics*, 5th ed., ed. Karen A. Mingst and Jack L. Snyder (New York: W. W. Norton, 2014), 2–10.

6. The term “system” has many uses in international politics and in political science. Structural-realist theories of international politics emphasize the causal importance of system structure: numbers and types of units in the system and the distribution of military and other capabilities among those units. Other variations of systems theory emphasize the interactions among components of the system, including the interdependence of the actors or units. For a concise discussion of systemic theories of international politics, see James E. Dougherty and Robert L. Pfaltzgraff Jr., *Contending Theories of International Politics*, 4th ed. (New York: Longman, 1997), 100–134.

7. Bruce Bueno de Mesquita and David Lalman, *War and Reason: Domestic and International Imperatives* (New Haven, CT: Yale University Press, 1992).

8. *Ibid.*, 17.

9. Mearsheimer’s capstone defense of offensive realism, *Tragedy of Great Power Politics*, provides ample evidence for this point. Vital interests, as used here, refer to interests over which states resist compromise and for which they are willing to go to war. See Donald M. Snow, *National Security: Defense Policy in a Changed International Order* (New York: St. Martin’s Press, 1998), 173–80.

10. Bueno de Mesquita and Lalman, *War and Reason*, 9, 266. These authors acknowledge that there are variations among realist theorists: “We present the (neo)realist view as a paradigm-

matic ideal type within which numerous contending theories currently exist. All such theories share a common core of ideas that derogate domestic politics as a central concern of international affairs by emphasizing external structural circumstances and a common power-or-security enhancing goal as determinants of state actions” (ibid., 13).

11. Robert Jervis, *System Effects: Complexity in Political and Social Life* (Princeton, NJ: Princeton University Press, 1998), 92–93 passim.

12. Waltz, *Theory of International Politics*, 80.

13. Jervis, *System Effects*, 109.

14. Kenneth Waltz, *Man, the State and War* (New York: Columbia University Press, 1959). Explanation and prediction in international politics require three levels of analysis, or images, according to Waltz in this study. His later work, *Theory of International Politics*, as above, relies more exclusively on a single level of analysis: the international system and its interactions.

15. For example, John Mueller argues that US and European Cold War leaders’ memories of the destruction caused by World War II would have created risk-averse perceptions of a possible World War III even without the existence of nuclear weapons. See Mueller, *Atomic Obsession: Nuclear Alarmism from Hiroshima to Al-Qaeda* (New York: Oxford University Press, 2010), 29–42.

16. See Morton Kaplan, *System and Process in International Politics* (New York: John Wiley and Sons, 1957), for an early and pioneering effort for its time. International systems theories are classified and critiqued in Jervis, *System Effects*, 93–124.

17. Waltz, “The Stability of a Bipolar World,” *Daedalus* 93 (Summer 1964): 881–909, <http://www.jstor.org/stable/20026863>; and Waltz, *Theory of International Politics*, 170–1, cited in Jervis, *System Effects*, 118.

18. See Stephen M. Walt, *Taming American Power: The Global Response to U.S. Primacy* (New York: W. W. Norton, 2005); and Barry R. Posen, *Restraint: A New Foundation for US Grand Strategy* (Ithaca, NY: Cornell University Press, 2014), 69–134.

19. For example, see John J. Mearsheimer and Stephen M. Walt, “The Case for Offshore Balancing: A Superior US Grand Strategy,” *Foreign Affairs* 95, no. 4 (July/August 2016): 70–83, <https://www.foreignaffairs.com/articles/united-states/2016-06-13/case-offshore-balancing>. The concept of grand strategy is concisely defined and explained in Posen, *Restraint*, 1–5 passim. See also: B. H. Liddell Hart, *Strategy*, 2nd revised ed. (New York: Meridian, 1967), 353–60.

20. Mearsheimer, *Tragedy of Great Power Politics*, 337.

21. Rational decision making, in the present context, implies that decision makers employ the form of rationality called “expected-utility maximization” with regard to their chosen preferences, regardless of the evaluation of those preferences by outsiders. See Bruce Bueno de Mesquita, *The War Trap* (New Haven, CT: Yale University Press, 1981), 29–33 passim. Bueno de Mesquita offers an alternative model in “A New Model for Predicting Policy Choices: Preliminary Tests,” *Conflict Management and Peace Science* 28, no. 1 (February 2011): 65–87, <http://doi.org/bhk8hx>.

22. For insights on deterrence logic, see Andrew Futter, *The Politics of Nuclear Weapons* (London: Sage Publications, 2015); Paul Bracken, *The Second Nuclear Age: Strategy, Danger, and the New Power Politics* (New York: Henry Holt–Times Books, 2012); Adam B. Lowther, ed., *Deterrence: Rising Powers, Rogue Regimes, and Terrorism in the Twenty-First Century* (New York: Palgrave-Macmillan, 2012); Michael Krepon, *Better Safe than Sorry: The Ironies of Living with the Bomb* (Stanford, CA: Stanford University Press, 2009); Lawrence Freedman, *Deterrence* (Cambridge, UK: Polity Press, 2004); Patrick M. Morgan, *Deterrence Now* (Cambridge, UK: Cambridge University Press, 2003); Lawrence Freedman, *The Evolution of Nuclear Strategy*, 3rd ed. (New York: Palgrave-Macmillan, 2003); Keith B. Payne, *The Fallacies of Cold War*

Deterrence and a New Direction (Lexington, KY: University Press of Kentucky, 2001); Colin S. Gray, *The Second Nuclear Age* (Boulder, CO: Lynne Rienner, 1999); Colin S. Gray, *Modern Strategy* (Oxford, UK: Oxford University Press, 1999), chapters 11–12; Keith B. Payne, *Deterrence in the Second Nuclear Age* (Lexington, KY: University Press of Kentucky, 1996); and Robert Jervis, *The Meaning of the Nuclear Revolution: Statecraft and the Prospect of Armageddon* (Ithaca, NY: Cornell University Press, 1989).

23. In addition to Sagan's works cited earlier, see Sagan, "The Perils of Proliferation in South Asia," in *South Asia in 2020: Future Strategic Balances and Alliances*, ed. Michael R. Chambers (Carlisle, PA: Strategic Studies Institute and US Army War College Press, November 2002), 191–227.

24. On this point, see also Graham T. Allison, *Essence of Decision: Explaining the Cuban Missile Crisis* (Boston: Little, Brown, 1971), especially his discussion of the "organizational process" and "bureaucratic politics" models of decision making.

25. Mueller, *Atomic Obsession*, 40–42 passim.

26. See Raymond L. Garthoff, *Soviet Leaders and Intelligence: Assessing the American Adversary during the Cold War* (Washington, DC: Georgetown University Press, 2015), 74–94.

27. See Fritz Fischer, *War of Illusions: German Policies from 1911 to 1914*, trans. Marian Jackson (New York: W. W. Norton, 1975), and sources in later notes.

28. On the concepts of risk and uncertainty, see Bueno de Mesquita, *War Trap*, 33–40.

29. Stephen J. Cimbala, "Steering Through Rapids: Russian Mobilization and World War I," in *World War I*, ed. Michael Neiberg (Aldershot, UK: International Library of Essays on Military History, 2005), 3–25. See also D. C. B. Lieven, *Russia and the Origins of the First World War* (New York: St Martin's Press, 1983).

30. Gordon A. Craig, "The Political Leader as Strategist," in *Makers of Modern Strategy: From Machiavelli to the Nuclear Age*, ed. Peter Paret (Princeton, NJ: Princeton University Press, 1996), 482.

31. According to Michael Howard, military and political leaders in World War I "were neither blind to the likely consequences of their attacks nor ill-informed about the defensive powers of twentieth-century weapons. None of them expected that the war could be won without very heavy losses." Michael Howard, "Men Against Fire: The Doctrine of the Offensive in 1914," in *Makers of Modern Strategy*, 510.

32. For example, see Gerhard Ritter, *The Schlieffen Plan: Critique of a Myth* (London: Oswald Wolff, 1958), 134–48, for text of Schlieffen's "great memorandum" of December 1905; L. C. F. Turner, "The Significance of the Schlieffen Plan," in *The War Plans of the Great Powers, 1880–1914*, ed. Paul M. Kennedy (London: Allen and Unwin, 1979), 199–221; Holger M. Herwig, "The Dynamics of Necessity: German Military Policy during the First World War," in *Military Effectiveness*, vol. 1, *The First World War*, ed. Allan R. Millett and Williamson Murray (Boston: Unwin Hyman, 1988), 80–115; Fritz Fischer, *War of Illusions*; Lieven, *Russia and the Origins of the First World War*; Sidney Bradshaw Fay, *The Origins of the World War*, vol. 2, *After Sarajevo: Immediate Causes of the War*, 2nd revised ed. (New York: The Free Press, 1966), 446–81; and William C. Fuller Jr., *Strategy and Power in Russia 1600–1914* (New York: The Free Press, 1992).

33. For the notion of a strategy bridge, see Colin S. Gray, *The Future of Strategy* (Cambridge, UK: Polity Press, 2015), 24–40.

34. *Ibid.*, 40.

35. Graham Allison, "Just How Likely Is Another World War?," *The Atlantic*, 30 July 2014, <http://www.theatlantic.com/international/archive/2014/07/just-how-likely-is-another-world-war/375320/>.

36. See Bracken, *The Second Nuclear Age*, chapters 5–7. Also informative on this point is Gary Schaub Jr., “Are Rogue Regimes Deterrable?,” in Lowther, *Deterrence: Rising Powers, Rogue Regimes, and Terrorism in the Twenty-First Century*, 135–61.

37. See, for example: Ellen Nakashima, “In Cyberwarfare, Rules of Engagement Still Hard to Define,” *Washington Post*, 10 March 2013, https://www.washingtonpost.com/world/national-security/in-cyberwarfare-rules-of-engagement-still-hard-to-define/2013/03/10/0442507c-88da-11e2-9d71-f0feafdd1394_story.html; and Choe Sang-Hun, “South Korea Says It Misidentified Source of Cyberattack,” *New York Times*, 22 March 2013, http://www.nytimes.com/2013/03/23/world/asia/south-korea-says-it-misidentified-source-of-cyberattack.html?_r=0.

38. For a pertinent contemporary issue, see Martin C. Libicki, *Crisis and Escalation in Cyberspace* (Santa Monica, CA: RAND Corporation, 2012), 73–121.

39. T. X. Hammes, “Cheap Technology Will Challenge U.S. Tactical Dominance,” *Joint Force Quarterly* 81 (2nd Quarter 2016): 75–84, <http://ndupress.ndu.edu/Media/News/News-Article-View/Article/702039/cheap-technology-will-challenge-us-tactical-dominance/>.

Book Reviews

Cyberspace in Peace and War by Martin Libicki. Naval Institute Press, 2016, 496 pp.

Cyber strategy has not lacked for authors willing to write on the subject, but the abundance of verbiage has not led to an equivalent level of clarity. This milieu of messy generalizations interspersed with occasional insight cries out for a seminal, organizing work of scholarship. *Cyberspace in Peace and War* by Martin Libicki is that work.

It is important to remember that *Cyberspace in Peace and War* is a book of strategy and scholarship. As such, Libicki simultaneously recognizes and highlights the limitations on what we know about cyber strategy. In fact, the number of sections, paragraphs, and even chapters which are questions—not answers—is notable. Libicki's great strength is in recognizing the boundaries of what we know and the limitations of what we can do, placing them within the much better established realm of strategy generally.

One of the remarkable things that *Cyberspace in Peace and War* is able to accomplish is to straddle the boundary between cyber literature and strategic literature. In any such attempt, the chasm between the two is so large that one is constantly at risk of hovering too closely to either one or being lost in the great divide between the two. Libicki navigates this by writing an immense tome divided into brief, digestible, constituent parts. Experts on strategy will feel at home as Libicki presents familiar strategic concepts—and computer scientists will similarly find themselves at ease as Libicki pulls back the curtain on subjects which are well understood within computer science. Nonetheless, he does not content himself with a recitation of what we know and do not know but presses firmly ahead into the void of cyber strategy and begins to fill it with thoughtful light.

The structure of the book invites comparison to Carl von Clausewitz's classic *On War*. However, unlike Clausewitz—who was writing after several thousand years of the history of warfare had already unfolded—Libicki is writing about a form of warfare which has been, to this point, almost completely hypothetical. Clausewitz had the luxury of relying upon extensive past examples in addition to the works of multiple forebears. In contrast, Libicki is forced to rely primarily upon the theoretical innovations of strategists who were not specifically considering cyberspace (including his own prior work).

It is the reliance upon hypotheticals where most books on cyber strategy fall short. The temptation for many strategists—especially those with a practical background in the military—is to speculate as to potential outcomes. Libicki draws upon his deep understanding of strategy to situate our limited knowledge about the cyber realm into the larger strategic literature.

Even as it addresses a weighty topic, *Cyberspace in Peace and War* manages to be a very enjoyable read. Libicki breaks subjects into digestible bites and combines them with prose of the highest order, interspersed from time to time with humorous asides for those paying close attention.

Cyberspace in Peace and War starts out at a simple enough level that it could be included even in basic courses, such as introduction to strategy. In fact, the summary of basic strategic concepts is so good that one could use this as a standalone text on strategy. However, to ignore the significant contribution of the strategic taxonomies for digital ideas and events would be a disservice to any student or syllabus. In fact, while cyber strategy is currently treated as a novelty within strategic planning, both this book and the trends of international relations make clear that in the future one will not be able to treat cyber strategy as an island unto itself—much as one cannot treat airpower or sea power as independent of other aspects of strategy. Consequently, it would be well worth considering including *Cyberspace in Peace and War* in future courses on strategy, even if cyber security is not an aspect of that course.

Computer scientists would certainly benefit from this book. Much as a strategist attempting to learn purely about computers may wish to consult a leading computer scientist, so too should a computer scientist seeking to learn strategy consult one of the foremost living strategists. Undoubtedly, due in part to the different focuses within computer science and strategic studies, some of Libicki's generalizations of computational phenomena and security threats may seem overly hasty, yet they will remain appropriate and helpful when incorporating cyber strategy into education for computer scientists and information officers. Indeed, it is the ease with which Libicki introduces complex strategic concepts to the cyber realm which gives this book tremendous value.

Going forward, one hopes Libicki will keep abreast of changes in the cyber realm with new editions, to keep the empirical information available in this book up to date. Even if that onrushing tide of change proves too great, the concepts here are generally enough applicable that *Cyberspace in Peace and War* will serve as a foundation for strategic planners for many years to come. Perhaps more importantly, the questions posed here—and in the strategic literature these questions are integrated into—will likely serve as a foundation from which much of our future understanding about cyber strategy will spring.

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The New Nuclear Disorder: Challenges to Deterrence and Strategy by Stephen J. Cimbala. Ashgate Publishing Company, 2015, 254 pp.

In this collection of essays, Prof. Stephen J. Cimbala presents a thoughtful analysis that juxtaposes the Cold War standoff between the United States and the Soviet Union with the twenty-first century reality of nuclear proliferation in a multipolar world. Cimbala is a professor of political science at Pennsylvania State–Brandywine where he teaches courses in international relations, politics, national security, and intelligence. Professor Cimbala argues that while the threat of global nuclear war between major power states may be diminished, the potential of a nuclear weapon being employed in anger has increased.

Central to Cimbala's comparative analysis is geography. Physical distances play a significant role in nuclear stability. Cimbala points out the United States and Russia are separated by the world's oceans and landmasses. They built force structures that enabled them to reach over great distances. This geographical barrier offers precious time in a crisis that new nuclear powers will not have. During a crisis, the United States and Russia have escalatory and de-escalatory strategies that signal resolve or willingness to compromise. Bombers can be launched and sent to holding orbits that will take hours to reach, submarines will be flushed and put to sea. Such actions are overt and unmistakable, allowing policy makers, diplomats, and military professionals to analyze the situation and find peaceful resolutions to confrontations.

Cimbala argues this luxury of time and distance is not available to emerging nuclear states. Take, for example, India and Pakistan. If the Indian integrated air defense system detects incoming strike aircraft, how can the government be certain whether or not those aircraft are carrying nuclear weapons? Leadership will have only a few minutes to evaluate adversary resolve, intent, and perceptions before making a decision. There is little room for the diplomatic signaling available to the traditional nuclear powers. A similar dynamic exists with the intercontinental ballistic missile (ICBM) force. However, if an ICBM launch is detected in Russia or the United States, leaders in those states can be certain that they are under nuclear attack, and the response is clear. In India, Pakistan, nuclear-armed Iran, Saudi Arabia, or Israel, such certainty doesn't exist. For Cimbala, this is tremendously destabilizing.

Cimbala artfully weaves geopolitics throughout the book. He offers the possibility that the United States and the USSR did not fight a war because they had no compelling reason to do so. This is an important point when we examine nascent nuclear-armed countries. Historically, major power rivals have almost inevitably come upon a fault line that led to war. This historical reality paused in 1945. Nuclear weapons made the cost of choosing war always much higher than any possible gain. Moreover, the United States and the USSR remained comfortably stocked with plentiful land and natural resources, issues normally at the root cause of war. Ideological differences drove tension between Americans and Soviets, but this never rose to the level of direct armed confrontation. Finally, Americans and Soviets developed their nuclear forces out of genuine fear and existential security concerns. Cimbala suggests these factors are not in place with the new additions to the global nuclear family.

Cimbala makes a convincing argument that restraints that existed between the United States and the USSR are not in place with the new nuclear powers. Thus the environment is destabilized to favor eventual use of a nuclear device. For example, he points out that while Americans and Soviets were ideological rivals, many nascent nuclear powers are religious rivals. Religion and politics are intertwined in many states, and this adds an emotional component that the pragmatic statesmen-bureaucrats of the United States and the Soviet Union did not contend with. Wars with a religious element tend to be longer and more brutal as each side believes their God is with them; with that mind-set, destruction on a biblical scale wrought through nuclear weapons becomes an acceptable alternative. The deterrence strategy employed by the major powers is of little value when we consider this element. Cimbala further ups the ante by raising the specter of a nonstate entity acquiring a nuclear device. The US nuclear force did not deter al-Qaeda from pulling off the attacks of 11 September 2001. If such a group gained control of a nuclear device, there would be no deterrent force that would stop them from using it. Last, according to Cimbala, many nations pursuing nuclear forces now are doing so for prestige. Maintaining their security and protecting strategic interests don't tangibly require a nuclear force.

Interestingly, Cimbala devotes significant time to the 1983 war scare brought on by the NATO exercise Able Archer. This exercise was primarily a command-and-control exercise that was misinterpreted by the Soviets as a prelude to a preemptive nuclear attack. Able Archer meshed with the Soviet's expectation of what a NATO-initiated war would look like. The Soviet military went on high alert while it tried to discern if the threat was real. Cool heads on both sides of the iron curtain prevailed. NATO leaders realized what was happening in Moscow and halted the exercise, easing the crisis. Cimbala's point is that this near war through misperception occurred in 1983 between two states who had studied each other for decades. The United States and the USSR had stable force levels and relations and little reason to go to war. Yet still, they nearly went to war. The implied warning from Cimbala is clear. If such an event can occur between adversaries who know each other very well and are in a state of relative stability, what could result from a miscalculation between closed societies with little understanding of each other and even less experience in nuclear strategy?

Cimbala's discussion on technology and cyberspace is perhaps the most thought-provoking of this book. The amount, speed, and diversity of information that will flow to policy makers will be overwhelming. Cyberspace will impact emerging nuclear states as well as established powers such as the United States and Russia. The ubiquitous news cycle already feeds conflicting, biased reports. Commercial news media during a crisis can be counted on to immediately report news stories without analysis or regard for the political ramifications. All this will be augmented by social media. Social media feeds are the new community gathering points, with even the most absurd opinions quickly reaching the national stage. The information flow during a crisis dwarfs what was available to policy makers 20 years ago and will obfuscate adversary

intents and perceptions. Cimbala further factors in that in cyberspace, actions may be taken with the specific intent of deceiving and misleading populations and their political and military leaders. Escalatory and de-escalatory actions could be clouded in uncertainty in ways not dreamed of in previous generations.

Cimbala closes the book with a contemporary essay on Russia's actions in Crimea and Ukraine. The message here is that while Russia may be down, it is not out. The threat of a destabilizing event between major nuclear-armed powers still exists. Developed global-power nations are not immune to human nature, and geopolitics can quickly destabilize.

The strengths of this book are clear, but it is not without shortcomings. Too frequently, Cimbala bogs his readers down with mathematical reckonings of force levels that offer effective deterrent value; that is, how many missiles, bombers, and submarines must there be to ensure stability and deter an adversary. To an old cold warrior, numbers of missiles, bombers, and submarines offer a comfortable refuge in a complex, multipolar, fast-moving world. Though adequately documented, force levels are not the only determinant for deterrence capability. It's this numbers game that brought on the arms races of the last half of the twentieth century, and it has only marginal value to the twenty-first century.

The analysis and thoughtful prose offered by Cimbala outweigh the shortcomings of this book. *The New Nuclear Disorder: Challenges to Deterrence and Strategy* should be required reading for intelligence analysts, political strategists, and policy makers. There remains the possibility that nuclear weapons will contribute to greater stability globally as they did with the United States and the USSR. New nuclear nations may follow the example set by the superpowers and find they have more to gain through peace than through war. However, they may also fall prey to human passions as populations change and resources become scarce. Suspicion, envy, and honor are part of the human condition and unlikely to be bred out of us any time soon. Cimbala avers that it's not predetermined that a nuclear device will be used in the twenty-first century. However, the very fact he states this betrays the belief that such an event will occur. This book is a must read.

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Ancient Chinese Thought, Modern Chinese Power by Yan Xuetong. Princeton University Press, 2011, 300 pp.

The nature of China's rise or reemergence has become one of the more widely discussed topics of the post-2008 era, particularly as the United States grapples with the changing global order. In 2011, Yan Xuetong authored *Ancient Chinese Thought, Modern Chinese Power*, which became the first major study about why and how China historically "sees" foreign policy, the role of government, and especially power. Yan is the preeminent Chinese international relations theorist and a well-established thinker on the global stage; he has been named one of the Top 100 Public Intellectuals by *Foreign Policy*. His role as a leading thinker within the Chinese intelligentsia is difficult to overstate, particularly as his stature grows internationally.

The book is an attempt to explain how pre-Qin philosophers Hanfeizi, Mozi, Guanzi, Mencius, Xunzi, Confucius, and Laozi developed the Chinese concept of *humane authority*. Humane authority is a pre-Qin idea of the ideal basis of government in which thoughtfully considered proposals were carried out through established norms for the good of the people. This was balanced against hegemony, which sought to accrue power for the sake of it. The key argument is that through stability, well-thought-out support, and a moral base, government can wisely navigate itself. These philosophers developed their theories during the Spring, Autumn, and

Warring States periods in China as a way to interpret which form of leadership worked well and which did not.

Throughout the book, Yan mentions how the concept of the “Sage King” who listened to “capable advisors” was an appealing ideal in China. This is particularly relevant as Pres. Xi Jinping, another contemporary who came of age during the Cultural Revolution, continues to consolidate power across China and cull corruption from the ranks. The lasting impact of the Cultural Revolution cannot be overstated for either man, as it dramatically shaped their lives and, in the case of Yan, made him a committed realist in how he viewed the world. It begs the questions: how much do Yan’s theories influence present Chinese leadership, and how is he influenced by present Chinese leadership?

Yan makes an exceedingly well-researched argument—although dry at times—that the philosophies of these Chinese scholars should be incorporated into the present pantheon of Western-based theories, which continue to dominate international relations theory. While his points are valid, pre-Qin philosophies were developed within a homogenous culture; meanwhile, the majority of Western thought developed among a more heterogeneous group. Integration should happen, but overemphasizing its importance as it relates to interactions between states needs to be understood within the context of its development.

A weaker aspect of this book is Yan’s occasional generalized comments about how US neo-conservatives were working to accrue power for hegemonic purposes. He neglects to mention that neoconservative views were heavily based on Democratic Peace Theory. While it may be a Pollyannaish view of how governments interact, idea of the Neocons was that stability, an overarching theme of the book, was critical to world order. This poor generalization appealed to some policy makers.

While Yan is often referred to as a *neo-comm*, this book places heavy emphasis on the importance of stability and order in global relations, especially as it relates to how China should cooperate with the United States. He advocates cooperation, and the underlying basis for that line of thought should be reassuring to those who fear a twenty-first-century replication of a pre-World War I British-German arms race. While there are distinct similarities in the comparison, the acknowledgement of that threat among policy makers on both sides of the Pacific should serve as a distinct damper upon that potential.

All those who call themselves students of China and those who contemplate the future of the United States in the world should read this book. The research presented here will be a well-appreciated addition to annals on the studies of international relations.

Maj John Barrett, USAF



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