Improving Force Development Within the U.S. Department of Defense

Diagnosis and Potential Prescriptions

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". . . [I]n the next 10 years, I expect the risk of interstate conflict in East Asia to rise, the vulnerability of our platforms and basing to increase, our technology edge to erode, instability to persist in the Middle East, and threats posed by violent extremist organizations to endure." [1]

—General Martin Dempsey, Chairman JCS
January 2014

"Our competitive edge has eroded in every domain of warfare: air, land, sea, cyber and space." [2]

—Secretary of Defense James Mattis
February 2018

The first of these two quotations is taken from General Dempsey's assessment of the strategy and defense program outlined in the U.S. Department of Defense's (DoD's) *Quadrennial Defense Review* of 2014. It is, obviously, not an optimistic take on the future military balance; regrettably, it has proven prophetic. Dempsey made his assessment before Russia intervened forcibly in eastern Ukraine, before the so-called Islamic State or ISIS overran and seized control of large parts of Syria and Iraq, and before it was decided that U.S. forces were going to remain in Afghanistan in significant numbers. All of those developments have placed additional demands on U.S. forces, yet the resources provided to them have not substantially increased.

In light of this, it should come as no surprise that the military balance is eroding from the U.S. perspective, as Secretary Mattis has testified. For several years now, in wargames depicting future

hypothetical conflicts against the nation's most capable adversaries, programmed U.S. forces repeatedly have failed to achieve their primary operational objectives and suffer heavy losses in doing so. Assessments conducted by RAND and published in recent years, for example, show that

- U.S. and allied forces today could not defeat a concerted, short-notice Russian invasion of the Baltic states.[3]
- China's growing military capabilities, combined with unfavorable geographic asymmetries, raise questions about the future credibility of U.S. security guarantees to Taiwan.[4]
- U.S. and allied forces lack satisfactory answers to the growing threat of North Korean nuclear weapons and ballistic missiles.[5]

The U.S. armed forces today are, at once, larger than needed to fight a single major war, failing to keep pace with the modernizing capabilities of great power adversaries, poorly postured to meet key challenges in Europe and East Asia, and insufficiently ready and trained to get the most operational utility from many of their active-component units.[6] The *National Defense Strategy*, published in early 2018, recognizes that trends have been unfavorable, noting that today, for U.S. forces, "every domain is contested—air, land, sea, space, and cyberspace."[7]

This did not happen overnight. DoD's failure to adapt to a deteriorating security environment goes back more than a decade. Multiple reasons can be cited for this failure, including a sense of complacency resulting from the success that U.S. forces experienced in Operations Desert Storm (Iraq) and Allied Force (former Yugoslavia); the resources and attention that have been devoted to counterinsurgency, stability, and counterterrorist operations in

Afghanistan, Iraq, and elsewhere; and, of course, the constraints placed on discretionary spending by the Budget Control Act of 2011. Whatever the causes, there is an urgent need to modernize U.S. military capabilities and operational concepts, lest we and our allies lose further ground to China and Russia. This Perspective examines how things got to this point and what can be done about it.

Diagnosis: A Case Study

DoD's inadequate response to increasingly clear signals that U.S. forces were facing or were about to face serious new challenges from China, North Korea, and Russia provides a case study in the state of its force development process. In the cases of China and North Korea, this failure dates back to the early years of this century, when analyses were beginning to reveal the consequences of China's rapid military modernization efforts and the likelihood that North Korea would develop and field deliverable nuclear weapons.[8] What was the response to these developments, and what does it tell us about the capabilities, motivations, and limitations of key players in the force development process? The following observations are meant to shed light on these questions.

DoD's poor performance was not due to an "intelligence failure." Intelligence projections, of course, are rarely perfect. But the intelligence community (IC) did a credible job of tracking China's progress toward a modern military force and its development of a "counterintervention strategy" aimed at keeping U.S. military power at bay during a conflict in the Western Pacific. The IC's estimates of the growth of China's forces of ballistic and cruise missiles, space and counterspace systems, air and naval forces, surface-to-air missiles, and other sinews of military power were widely

available and sufficiently accurate to support force assessment and development. The same is true for North Korea: Unavoidably, given the secretive nature of the regime, there were sizable error bars around estimates of how much fissile material the DPRK was generating and how soon the Kim dynasty might have an operational nuclear weapon, but the intelligence community provided clear warnings that these were coming—again, with sufficient fidelity to support gaming, analysis, and force development.[9]

The defense analytic community was tracking these developments. Wargaming and analysis by RAND's Project AIR FORCE since the early 2000s pointed both to the growth of China's anti-access/area denial (A2/AD) capabilities and to their potential consequences for future U.S. power projection operations.[10] The Center for Strategic and Budgetary Assessments likewise sounded the alarm with unclassified publications beginning around 2003.[11] Since at least 2008, DoD has had a serviceable set of defense planning scenarios that provide a basis for evaluating joint force capabilities and concepts against reasonable depictions of the relevant threats from China. Those scenarios fueled campaign-level modeling inside DoD that was, by 2010 or so, identifying the same challenges as RAND and others. And gaming done by RAND from 2006 to 2008 suggested that deterring a nuclear-armed North Korea could be highly problematic and that new capabilities would be called for.[12]

Policy direction was clear. In 2012, the White House announced that it would "rebalance" U.S. strategy and resources toward the Asia-Pacific region. The strategy document accompanying the rebalance stated that the United States would "make the necessary investments to ensure that we maintain regional access and the ability to operate freely in keeping with our treaty obliga-

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tions. . . ."[13] At the same time, however, the administration agreed to accept the caps on spending imposed by the Budget Control Act, and there is little evidence of a significant shift in emphasis or resources within DoD to reverse the decline in U.S. power projection capabilities vis-à-vis China. This is a textbook example of DoD failing to respond to national strategy.

The military services have only partially responded to the rising challenge. The Navy and the Air Force have been attentive to the need to modernize major platforms, such as attack submarines, surface combatants, and fighter and bomber aircraft. However, while such modernization is necessary and appropriate, it is not sufficient. China's A2/AD capabilities create uncomfortable problems for our Air Force and Navy, for which they have had no ready answers. For the Air Force, these include serious threats to the survivability of land-based air forces in the Western Pacific and to military satellites, and difficulties in suppressing China's increasingly dense and sophisticated integrated air defenses. Likewise, the Navy faces growing questions about the survivability of its surface combatants, including carrier strike groups, in a conflict with China in the Western Pacific. And neither U.S. air nor land forces

fare well in wargames depicting conflict with Russian forces on the eastern flank of the North Atlantic Treaty Organization (NATO) treaty area. Even as analysis began to identify investment options and operational concepts that had the potential to counter the threat, the services have largely failed to embrace these, as resources have been constrained, and new investments could often be made only at the expense of other priorities in their planned programs.[14]

It appears that DoD's leaders often did not make good use of available information about emerging threats. Although U.S. Secretary of Defense Donald Rumsfeld was an advocate for modernizing U.S. forces, he rejected what he called "threat based planning," pressing instead for a broad-based "transformation" of the U.S. armed forces.[15] Unfortunately, this approach failed to generate clear arguments for or consensus around the military capabilities most needed for meeting emerging operational needs. His successor, Robert Gates, demanded that the services focus on "winning today's wars," pushing through major buys of mine-resistant armored vehicles, Predator-class unmanned aerial vehicles, and other gear for use in Iraq and Afghanistan while truncating the purchase of the fifth-generation F-22 fighter to a level about one-quarter of that which the Air Force had planned for. Without an expressed demand for it from the top, very little of the analysis being churned out by the Defense analytic community found its way into fora that included DoD's top leaders. While Secretary Ashton Carter and his Deputy, Bob Work, began to emphasize the importance of accelerating innovation and modernization within U.S. forces, it is hard to find evidence of substantial increases in investments in the kinds of systems that could quickly and significantly enhance capabilities to confront the nation's most capable adversary states.[16]

Organizations within DoD charged with evaluating emerging challenges, devising responses to them, and advocating for innovation are not strong institutional players. Responsibility for assessing future warfights has been passed from the Office of the Secretary of Defense (OSD) Net Assessment (1970s and '80s) to Joint Staff J8 (1990s) to Program Analysis and Evaluation (2000–2012) to . . . no one (2012–present). In the 1960s and '70s, under the leadership of Harold Brown and William Perry, the Directorate Defense Research and Engineering (DDR&E) played a pivotal role in identifying and promoting the development of new capabilities that, collectively, transformed the ability of U.S. forces to defeat aggression by conventionally armed adversaries. Since then, DDR&E has not been a forceful advocate for such focused capability development.[17] Responsibility for force development today is ill-defined and diffuse.[18] Responsibility for concept development and evaluation, which can only be credibly done within the services, is generally an ad hoc affair at best.[19]

The relative weakness of OSD in force development exacerbates an underlying reality—namely, that it is inherently problematic for civilian staff to challenge the decisions of military services on matters related to force development. The armed forces of the United States have consistently demonstrated tremendous competence in the conduct of military operations, giving their leaders a high degree of credibility when they weigh in on questions of the military balance and priorities for investing in future capabilities. In these circumstances, bringing forward analytically rigorous and clearly laid out arguments for adjustments to the defense program is, for civilians, a necessary but not always sufficient condition for being taken seriously in Pentagon deliberations.

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Congress was slow to grasp the nature and extent of the challenge. As late as 2017, many in Congress, including members and staff on the armed services committees, seemed to lack basic information about the severity of the challenge posed by China and other state adversaries. As clear assessments of adverse trends in the capabilities of U.S. and adversary states belatedly became known in Congress, the typical reaction was shock, anger, and demands to know what DoD was doing about the situation. DoD leaders frequently testify before Congress on the capabilities and readiness of U.S. forces, but those presentations generally lack detailed information either on evolving adversary capabilities or on the results of the Department's assessments of conflict scenarios.

Resources provided to DoD have been insufficient. Cutting across all of these factors is the problem of resource scarcity. The Budget Control Act of 2011, by placing caps on future discretionary spending, has undercut the Pentagon's ability to plan and fund for the present, let alone the future. Arguably, given all of the other demands being placed on U.S. defense resources, a flawless force development process within DoD might have raised people's sense of dread but not actually resulted in the forces and capabilities needed to meet the challenge, because investments in those forces and capabilities could not have been afforded. Adding to the challenge is the fact that resource scarcity fosters a zero-sum mentality that regards proposals for developing new capabilities as threats to existing programs, thus further impeding innovation. Nevertheless, a more effective force development effort within DoD could have raised awareness of the growing gaps between the missions assigned to DoD and the capabilities available to accomplish those missions. And this, in turn, might have led Congress to authorize and appropriate the resources called for to deal with the challenges.

The ramifications of all of this reach well beyond DoD. In an increasingly interdependent world, the United States cannot hope to ensure the safety and well-being of its citizens without the ability to influence decisions and events abroad, especially in Eurasia. Since the early days of the Cold War, the United States' security ties with its primary allies and partners have evolved into multidimensional relationships for the cooperative pursuit of common interests. Hence, the ability to project large-scale military power abroad plays a crucial role in the overall U.S. national security strategy. If the erosion of that capability is not reversed, the consequences could be profound.

Potential Prescriptions

The first thing to keep in mind in any review of force planning is that force planners live in the future and focus on events (wars) that are (mercifully) rare, complex, and unfamiliar phenomena. They must therefore try to persuade people to change their thinking, their priorities, and their actions on the basis of analyses of events that are, inescapably, hypothetical. Using the hypothetical to change the real is always a tough sell, especially when that reality

has behind it years or decades of inertia, and resource constraints make budgeting a zero-sum or negative-sum enterprise. So, other than making some changes on the margins of things from time to time, failure, for the force planner, is the norm.

The second thing is to be wary of one's instinct to blame the analyst. If our leaders screwed up somehow, the reflex assumption is often that someone who was supporting them must have failed them. The IC gets charged with this frequently and not always fairly. As noted earlier, starting in the mid-2000s, multiple organizations were providing DoD with assessments pointing to the dramatic growth of Chinese military capabilities and a declining military balance. For a host of reasons, including but not limited to the Department's focus on conducting counterterrorist, counterinsurgency, and stability operations in the U.S. Central Command area of responsibility, those warnings went largely unheeded by the leadership of the services and by OSD and the Joint Staff. This is not to say that the assessments available to DoD are without flaws or that the processes that develop those assessments cannot be improved. But *"fixing" assessment in and of itself should not be expected to lead to dramatic improvements in force development within DoD.*

General Principles

Specific steps that should be considered will follow, but first, these general principles should guide any attempts at reform.

- **The Department's leadership must engage in force development and, equally important, must be *seen* to be engaged in it**. Even perfectly crafted staff work is useless if it does not reach the decisionmakers who can profit from it. And there are synergistic effects between leader engagement and the quality of the work produced by staffs: If it is known that the boss will be using a product, the system will assign its best people to developing it, and both the process and the product itself will gain credibility. Finally, of course, bureaucratic actors must understand that a price will be paid by those who fail to heed direction from the top. Unless force development guidance to components is seen to have the Secretary's personal imprimatur on it, it is likely to be ignored. And leaders must sustain their engagement over time, making it clear that they will follow up to ensure that action has been taken to implement their direction.

- **The process must be transparent to all key stakeholders.** Assessments of joint force capabilities that are the products of a small, closed process will be regarded with fear and loathing by those left out of the process and will be attacked, no matter how analytically rigorous and fair-minded they may be. Giving everyone their say—in this case, the services, the Joint Staff J8, OSD's Director for Cost Assessment and Program Evaluation (CAPE), OSD Policy, and the relevant Combatant Commands (COCOMs)—can be a torturous process, but there is no substitute for it. This does not mean that the products need to be created by a committee or reflect a unanimous consensus of the stakeholders. They should not. But there should be no surprises when those products are presented to the leadership.

- **The Department should share its assessments with relevant audiences in Congress.** This has not been the norm in the past. The problem, of course, is that if the rationale and analysis underlying DoD's deliberations and decisions are not shared with Congress, how can Congress be expected to understand

and support what is being proposed? A relationship of trust between DoD's force development community and members and staff on the authorizing and appropriating committees is essential to reform. The same is true for the Office of Management and Budget (OMB), where key staff should be brought in to review mature assessments. There is always some risk in providing assessments such as these, which reveal shortcomings in one's program. Those with their own agendas may use such material to argue against the Department's proposals or embarrass the administration. But, if successful, efforts to inform OMB and Congress of the operational challenges facing U.S. forces can pay dividends when DoD seeks support for new initiatives and resources.

How to Proceed

The steps offered here are predicated on the belief that if organizations have in the past consistently failed to perform a particular function in a satisfactory manner, simply exhorting them to do better in the future is probably not going to help. Something—usually organizational processes, incentives, or resources—needs to change.

Glean. First, empower someone to gather, review, and synthesize existing assessments of the warfighting scenarios encompassing the state adversaries in DoD's "4+1" problem set: China, Russia, North Korea, and Iran. The closer that "someone" sits to the Secretary in the bureaucratic hierarchy, the better. The gleaner should be charged with creating, on an urgent basis, four presentations that, collectively, would constitute a baseline assessment of the programmed joint force's ability to achieve warfighting objectives against each of these state adversaries. Each presentation should be reviewed at the flag officer/Senior Executive Service level by a group

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that includes all relevant stakeholders (see foregoing), but it should be made clear from the start that the review group does not have veto power over what goes forward.

Engage. The Secretary should sponsor a series of meetings of the Senior Leadership Council (SLC) or other senior group to review each of the four assessment briefings.[20] The purpose of these meetings is threefold:

- Informational—to ensure that all senior participants in the force development process within DoD have a common picture of the state of affairs.
- Diagnostic—to allow senior leaders to judge for themselves the quality of the assessments available today.
- Motivational—to demonstrate that the Secretary and the Deputy are personally determined to improve both the capabilities of the future joint force and the process by which decisions about the evolution of the force are made.

Improve. Simultaneously, direct someone to begin efforts to generate new and improved assessments of joint force capabilities, starting with evaluations of scenarios depicting conflicts with China and Russia. Essentially, this will mean reconstituting the capability for campaign-level assessment that was discarded in 2012. The Secretary should make it clear that the new chief of assessments has the freedom (indeed, the obligation) to explore a wide range of key variables within the existing suite of defense planning scenarios to ensure that all plausible cases are evaluated. Over time, the chief assessor will be well-positioned to help ensure that the scenarios are improved. Obviously, the same "someone" chosen for the "glean" task should be given this responsibility. (For thoughts on who should have this rose pinned on them, see this Perspective's later section on Organizing Around Force Assessment and Development.)

Focus. Once the SLC or its equivalent has reviewed assessments of all four warfighting scenarios, hold a fifth meeting, the purpose of which is to discuss a list of priority operational challenges facing the end-of-Future-Years-Defense-Program force. These challenges emerge from the assessments of the four scenarios, and, as their name suggests, the challenges should be cast at the operational level of warfare. Once approved and promulgated, the list will be used to focus concept and capability development efforts, with an eye toward filling the most serious gaps and shortfalls in capabilities, as revealed by the assessments. The services should be the primary audience for the list, although the Defense Advanced Research Projects Agency, Strategic Capabilities Office, and research and engineering (R&E) should be encouraged to generate ideas as well. The Secretary should table his draft list at the meet-

ing and invite comment, putting out the final list shortly after the meeting. An illustrative list is provided in the section that follows.

Incentivize. Once the list is finalized, announce that, beginning in six to nine months, the Secretary and Deputy will begin to review proposals that address each of the priority operational challenges *and will allocate money to develop and evaluate the most promising concepts*, irrespective of the proponent. This is critical: If the "prize" for coming forward with the best new concept for, say, defeating advanced integrated air defenses is to have an unfunded mandate added to one's program of record, the leadership is unlikely to spur much innovation. The leadership must declare and then demonstrate that real money (not just research and development start-up funds but actual money to develop, procure, and operate new systems) will flow to organizations that bring winning concepts forward.

Share. When the Secretary is satisfied that DoD has satisfactory briefings that present the Department's assessments of the adequacy of programmed U.S. forces vis-à-vis their adversaries, the Secretary or a representative should brief members and staff of relevant Congressional committees. Relevant personnel on the National Security Council staff and at the Office of Management and Budget should be briefed first.

Focusing Efforts by Articulating Key Operational Challenges

DoD is planning to spend $144 billion on procurement and another $92 billion on research, development, test, and evaluation in fiscal year 2019—an increase of nearly 20 percent over the administration's fiscal year 2018 request for these accounts. This

sum has the potential to fund efforts that can begin to address many of the most glaring shortfalls that have emerged in the capabilities of the joint force to project power against capable adversary states. Experience shows, however, that without strong direction from the top, components (i.e., services and other relevant organizations within DoD, such as Defense Advanced Research Projects Agency and Missile Defense Agency) can spend even sizable increases such as this on their own priorities, which may or may not align with those expressed in the defense strategy and the Secretary's force planning guidance.[21]

Therefore, as a spur to the Department's efforts to reverse the deteriorating balance in military capabilities, *the Secretary should consider issuing a list of priority operational challenges to the Department as a whole, directing that components focus a portion of their efforts on developing new operational concepts and capabilities toward addressing these challenges.*

The operational challenges should be framed according to the following criteria:

- In accordance with the National Defense Strategy, they should be relevant to the sorts of threats posed by the nation's most capable adversaries—China, Russia, and North Korea.
- They should be sufficiently specific that concept developers in the services and elsewhere can focus on solving a discrete operational problem. "Deter/defeat aggression by China" is far too general.
- At the same time, they should be enduring—not subject to change, absent major changes in the threat or the strategy— and general enough so that solutions that emerge from concept development efforts will be applicable across multiple

scenarios. "Defeat attacks by the DF-21D medium-range ballistic missile" is too narrow, for example.
- They must be limited in number. The Department has limited bandwidth even for such critical problems as ensuring the future viability of U.S. power projection operations. Eleven priorities would be excessive; three would be insufficient.

In this regard, the Secretary will need to emphasize that the list of priority challenges is not intended to guide all modernization and concept development efforts within the Department. Rather, it is meant to focus a portion of those efforts on a finite but strategically important set of challenges.

The list that follows is offered as an example of operational challenges that meet these four criteria. Associated with each challenge is the scenario that represents the most demanding environment—the "pacing threat"—for the accomplishment of the operational objective embedded in the challenge. The scenarios set the standard against which proffered new concepts of operations will be evaluated. Where appropriate, a range of key variables within each scenario should be examined to help cope with uncertainty, and in some cases, concepts of operations should be evaluated against the demands of more than one scenario.

Five Illustrative Priority Operational Challenges

1. Delay, damage, destroy mechanized ground forces in contested environments.
- Use a scenario depicting a short-warning invasion of the Baltic states to evaluate operational needs and effectiveness.

2. Locate, identify, and damage or destroy surface naval vessels in contested environments.

- Use a scenario depicting large-scale aggression by China.

3. Rapidly suppress and destroy advanced integrated air defenses.

- Use both the Taiwan invasion and Baltic defense scenarios.

4. Enhance base resilience: Generate and sustain combat power from land and sea bases, both inside and outside of contested environments.

- Use a scenario depicting large-scale aggression by China.

5. Prevent North Korea from attacking targets outside of its borders with nuclear weapons.

- Use a Korean conflict scenario.

Proposals to address each of these challenges should specify how they will do so by making explicit the complete, "end-to-end" operational concept by which key operational tasks (e.g., sinking ships) will be accomplished. Generally, an end-to-end concept incorporates *finders* (intelligence, surveillance, and reconnaissance systems and the targeting functions), *controllers*, who direct the activities of forces, and *shooters* (attack platforms, weapons, and munitions). Simply offering to buy a new antiship missile may not be sufficient if the intelligence, surveillance, and reconnaissance; command and control; communications links; and other elements needed to complete an engagement successfully are not in place.

Two Cross-Cutting Challenges

Because many concepts for addressing the operational challenges will rely on a common "backbone" to support joint and combined operations in a theater of war, the Secretary may also wish to direct components to develop improved supporting infrastructures and capabilities for operations against the most capable adversaries. Two such challenges suggest themselves:

1. Provide resilient command, control, communications, and positioning, navigation, and timing (PNT) services to joint forces in contested environments that pose cyber, electronic attack, antisatellite, and other threats.

- Use both the Taiwan invasion and Baltics defense scenarios.

2. Provide transportation, resupply, maintenance, and other elements of logistics support to joint forces in contested environments.

- Use both the Taiwan invasion and Baltics defense scenarios.

Promulgating a list of priority challenges does not in any way presume that components will be successful in addressing them. Hence, the secretary's fund for promoting innovation is not a blank check. Only proposals that are judged to be technically and operationally feasible, affordable, and effective in the face of an adaptive enemy can expect to gain support.

What would constitute success in this endeavor? In a world in which, unlike the 1990s, the United States faces adversaries of major power status and a regional adversary with nuclear weapons, the goal cannot be to regain the degree of overmatch that U.S. forces have held over regional adversaries since the end of the Cold War. That is not achievable, nor is it necessary. Rather, in general, the goal should be to ensure that U.S. forces have the wherewithal to deter aggression by denying any enemy the prospect of success at the operational level. For example, U.S. forces for the U.S. Pacific Command area of responsibility should be postured and equipped

such that Chinese military leaders will have grave doubts regarding their ability to forcibly seize and occupy Taiwan. Likewise, Russian leaders should expect that any military aggression against NATO would result in severe losses of military personnel and equipment, with dubious prospects for success in seizing and occupying large amounts of NATO territory.

In conjunction with the publication of the priority operational challenges, the Secretary should encourage the leaders of each of the services to ensure that they are giving due attention to concept development. Too often in the past, this has been a largely ad hoc function within the services. As the masters of the operational art within their domains, the services are in the best position to develop innovative approaches to warfighting. Earlier efforts that placed this function in a joint entity (Joint Forces Command) or OSD (the Office of Force Transformation) were bound to fail for a variety of reasons. By backing the list of priority challenges with the funds to implement the most attractive concepts, the Secretary can expect the services to be responsive to this encouragement.[22]

Organizing Around Force Assessment and Development

The "top-down" approach advocated in this Perspective can work only if the Department's leaders are well-informed about both the changing military balance between the United States and its major adversaries and options for redressing unfavorable trends in that balance. The first function is diagnostic; the second is prescriptive. Both rely on a sound analytic foundation that we call *assessment*. Generating rigorous, credible assessments of the capabilities and limitations of one's forces for combat is substantively the most difficult aspect of force development. This is true for several reasons:

Only proposals that are judged to be technically and operationally feasible, affordable, and effective in the face of an adaptive enemy can expect to gain support.

- Wars between nation states are rare events. This makes realistic experimentation difficult and costly, and it means that sound and widely accepted data about the outcomes of engagements and battles, particularly under conditions that have not yet occurred, are hard to come by.[23]
- Combat is a complex and dynamic phenomenon in which intangibles, such as motivation, fear, and decisionmaking acumen, can count for as much as material factors.
- Assessing probable outcomes of conflict is necessarily an interdisciplinary undertaking, involving people from the worlds of intelligence, military operations, gaming, modeling and simulation, and engineering. Successful net assessment, therefore, requires a group of sufficient size and ability to create a critical mass encompassing all of these disciplines.

Add to these factors the reality that assessments of future warfighting scenarios can touch on the core interests of powerful bureaucratic players, and it becomes clear that this is not a job to be taken on by the inexperienced or the faint of heart. Whomever the Secretary chooses to lead the process of developing net assessments should have some background in military operations as well as operations research, be a good communicator, and have the

fortitude needed to manage the process of vetting assessments with stakeholders and, not infrequently, challenging the institutional prerogatives and predilections of some powerful bureaucratic entities. Other considerations:

- Net assessment and force development cannot be done as part-time jobs; they require the full attention of a capable senior official and staff.
- Continuity is crucial. One should not expect an office with constant staff turnover to sustain the experience needed. By the same token, the office head must have the full trust and confidence of the Secretary. This argues for placing the function in OSD, as opposed to the Joint Staff, making the office director a Secretarial appointee, and making the office's deputies and the bulk of the staff career civilian billets.
- The net assessor must be seen as an objective, honest broker.

As has been noted previously, the assessment and force development functions are being performed today, both within DoD itself and in the U.S. defense community more broadly. However, available assessments of the capabilities of U.S. forces have not been well-used by decisionmakers, responsibility for both functions is diffuse, and advocates for investments in future capabilities are not strong bureaucratic players. These factors are partly responsible for the erosion of the competitive edge that U.S. armed forces have heretofore enjoyed.

Organizationally, two options exist for addressing these problems: The Secretary could elect to centralize assessment and force development functions in a single organization within the Office of the Secretary of Defense or try to make some variant of the current federated approach work better.

In a **centralized approach**, whatever office is designated to play the role of net assessor would also have the lead for force development. As noted previously, assessment is a diagnostic function; force development is a prescriptive one. But the two belong together for a number of reasons. First, the class knowledge and the tools that are needed to assess the capabilities and limitations of the programmed force—an understanding of military operations, gaming, modeling and simulation, and other quantitative methods—are the same as those used to evaluate potential enhancements to that force. Second, the assessor, like the force developer, "lives" in the future and is focused on emerging challenges and opportunities. That means that an organization performing both functions would be well-positioned to be a "voice for the future" in deliberations about future investment priorities and resource allocation. By empowering an organization to perform both functions and supporting the work of that organization within the Department's decisionmaking processes, the Secretary could ensure that at least one strong bureaucratic player brings this perspective to the table.

If assessment has become an orphan within the joint community in DoD, force development is a diaspora. As noted previously, CAPE, which had been relied upon to conduct campaign-level assessments of the performance of future U.S. forces in conflict scenarios, divested itself of the capability in 2012, and no one has since picked it up. As its name implies, the Office of Net Assessment (ONA) within OSD still sponsors wargames and analyses of some aspects of the military balance, but ONA has not systematically assessed the primary defense planning scenarios for many

years, nor has it been tightly integrated into the force development process. Within OSD Policy, six separate organizations are responsible for advising on the development of conventional forces, special operations forces, space systems, nuclear and missile defense weapons, and cyber capabilities.

The centralized approach would combine these functions, along with strategy development and scenario writing, into one organization. One option would be to charge the Assistant Secretary for Strategy, Plans, and Capabilities (ASD/SPC), within OSD Policy, with these expanded responsibilities.[24] Another would be to create, in fact or in effect, a new undersecretariate that reports directly to the Secretary. The advantage of the former approach is political feasibility. Its disadvantage is the risk of attention deficit disorder on the part of the Under Secretary for Policy. Experience shows that when operational and planning functions are combined in a single organization, the planning functions invariably suffer from "crowding out": The exigencies of managing ongoing operations will almost always be more urgent than the demands of longer-term planning. The Under Secretaries of Policy; Acquisitions, Technology, and Logistics (now Acquisition and Sustainment and R&E); and Personnel and Readiness all have such operational responsibilities. This makes it very difficult for them to devote sustained attention to the sorts of activities that constitute force planning and development: threat projections, scenarios, wargaming and assessment, concept evaluation.

CAPE has some of the desired attributes of a net assessor and force planner, in that it reports directly to the Secretary, has few "outside the building" responsibilities, and includes staff with analytical abilities.[25] But CAPE, as noted, divested itself of the ability to do campaign-level assessment some years ago. CAPE also has other duties—principally cost estimation, program evaluation, and administering the program review process—which are distinct from assessment and force planning. And because CAPE manages the program review process, it could be perceived as "stacking the deck" were it to have responsibility for evaluating proposed future operational concepts and capabilities as well.

A **federated approach** would leave the principal organizations involved in assessment and force development where they are organizationally but attempt to invigorate them by elevating their visibility and connecting them more directly to the Department's resource allocation and program review processes. Some entity—presumably ONA—would be charged with the "glean" and "improve" functions outlined earlier. It will need modestly greater resources—people and money for external analytical support—to do this well. The analytic resources available to the ASD/SPC would also need to be enhanced and provisions made allowing for the Principal Deputy Under Secretary for Policy to focus on force development issues. This can work if the Secretary and the Deputy Secretary take a hands-on approach along the lines prescribed here. The downsides to this approach are twofold: The advocates for future force development are left without a full-time "four-star" equivalent champion, and the approach lacks an institutional legacy—its long-term viability will depend crucially on the interest and support of future Secretaries of Defense, something that cannot be taken for granted.

Conclusion: Giving the Future a Seat at the Table

Taken together, the approach advocated here has the potential to address the major factors that seem to have been most responsible

for DoD's lagging response to the changing security environment. Specifically, this approach

- creates a mechanism for ensuring that the defense community's assessments of the "state of the force" are reviewed by DoD's leadership and relevant audiences in Congress
- makes provisions for improving the quality of those assessments over time
- changes for the better the incentives that components have for developing innovative capabilities and concepts.

Notably, this approach accomplishes these things without creating any new, large bureaucracies, review groups, or reporting procedures.

Most broadly, this approach offers DoD leaders a means for ensuring that the future needs of the nation's armed forces have "a seat at the table" and get due regard when decisions are made about resource allocation.

Notes

[1] DoD, *Quadrennial Defense Review 2014*, Washington, D.C., 2014, p. 61.

[2] James Mattis, U.S. Secretary of Defense, *House Armed Services Committee Written Statement for the Record*, testimony before the U.S. House Armed Services Committee, Washington, D.C., February 6, 2018. As of June 14, 2018: https://docs.house.gov/meetings/AS/AS00/20180206/106833/HHRG-115-AS00-Wstate-MattisJ-20180206.pdf

[3] David A. Shlapak and Michael W. Johnson, *Reinforcing Deterrence on NATO's Eastern Flank: Wargaming the Defense of the Baltics*, Santa Monica, Calif.: RAND Corporation, RR-1253-A, 2016, p. 1. As of June 14, 2018: https://www.rand.org/pubs/research_reports/RR1253.html

[4] David Ochmanek, Peter A. Wilson, Brenna Allen, John Speed Meyers, and Carter C. Price, *U.S. Military Capabilities and Forces for a Dangerous World: Rethinking the U.S. Approach to Force Planning*, Santa Monica, Calif.: RAND Corporation, RR-1782-RC, 2017, pp. 7–29. As of June 14, 2018: https://www.rand.org/pubs/research_reports/RR1782.html; David A. Shlapak, David T. Orletsky, Toy I. Reid, Murray Scot Tanner, and Barry Wilson, *A Question of Balance: Political Context and Military Aspects of the China-Taiwan Dispute*, Santa Monica, Calif.: RAND Corporation, MG-888-SRF, 2009, p. xix. As of June 14, 2018: https://www.rand.org/pubs/monographs/MG888.html

[5] David Ochmanek and Lowell H. Schwartz, *The Challenge of Nuclear-Armed Regional Adversaries*, Santa Monica, Calif.: RAND Corporation, MG-671-AF, 2008. As of June 14, 2018: https://www.rand.org/pubs/monographs/MG671.html; Bruce W. Bennett, "Deterring North Korea from Using WMD in Future Conflicts and Crises," *Strategic Studies Quarterly*, Vol. 6, No. 4, Winter 2012, pp. 119–151.

[6] Ochmanek et al., 2017, p. xii.

[7] DoD, *Summary of the 2018 U.S. National Defense Strategy of the United States of America*, Washington, D.C., 2018, p. 3. As of June 20, 2018: https://www.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf

[8] In the case of Russia, inattention is more excusable because, prior to Russia's forcible interventions in Crimea and eastern Ukraine, policymakers regarded Russia more as a potential partner than as an adversary.

[9] See, for example, Larry A. Niksch, *North Korea's Nuclear Weapons Program*, Congressional Research Service, Washington, D.C., August 31, 2005.

[10] Many of these assessments are not available to the public, but for a sampling of early unclassified reports, see John Stillion and David T. Orletsky, *Airbase Vulnerability to Conventional Cruise Missile and Ballistic Missile Attacks*, Santa Monica, Calif.: RAND Corporation, MR-1028-AF, 1999. As of June 14, 2018: https://www.rand.org/pubs/monograph_reports/MR1028.html; David Shlapak, David T. Orletsky, and Barry Wilson, *Dire Strait? Military Aspects of the China-Taiwan Confrontation and Options for U.S. Policy*, Santa Monica, Calif.: RAND Corporation, MR-1217-SRF, 2000. As of June 14, 2018: https://www.rand.org/pubs/monograph_reports/MR1217.html; and Roger Cliff, Mark Burles, Michael S. Chase, Derek Eaton, and Kevin L. Pollpeter, *Entering the Dragon's Lair: Chinese Antiaccess Strategies and Their Implications for the United States*, Santa Monica, Calif.: RAND Corporation, MG-524-AF, 2007. As of June 14, 2018: https://www.rand.org/pubs/monographs/MG524.html

[11] See, for example, Andrew F. Krepinevich and Barry Watts, *Meeting the Anti-Access and Area Denial Challenge*, Washington, D.C.: Center for Strategic and Budgetary Assessments, 2003.

[12] Ochmanek and Schwartz, 2008.

[13] DoD, *Sustaining U.S. Global Leadership: Priorities for 21st Century Defense*, Washington, D.C., January 2012, p. 2.

[14] Competing priorities included investments in unmanned aerial vehicles and other capabilities needed to support operations in Iraq and Afghanistan, as well as broad-based modernization of major weapons platforms.

[15] Donald H. Rumsfeld, "Transforming the Military," *Foreign Affairs*, Vol. 81, No. 3, May/June 2002, pp. 20–32.

[16] The "Third Offset" initiative was more geared toward focusing defense research and development activities than to addressing specific A2/AD threats, and it had little to say about future operational concepts.

[17] The recent congressionally mandated reorganization of Acquisitions, Technology, and Logistics may provide an opportunity for Research and Engineering (R&E) to return to such a role.

[18] Within OSD Policy is an Office of Strategy and Force Development, but the office has only limited capacity for assessment, and the Under Secretary for Policy is generally consumed with outside-the-building crisis management and foreign policy concerns, making it difficult for this office to play a forceful role in the resource allocation process.

[19] U.S. Joint Forces Command had this responsibility prior to its unlamented demise. Joint Staff J7 now produces documents about joint operational concepts that generally have no discernible effect on warfighting or capability development.

[20] Essential participants are the Secretary and Deputy Secretary of Defense, the Under Secretaries, Service Secretaries and Chiefs, the Chairman and Vice Chairman, the commander of Special Operations Command, the Directors of CAPE and Joint Staff J8, and the relevant regional combatant commander.

[21] This is not a new phenomenon. Writing in 1971, Enthoven and Smith, both veterans of the budget wars inside the Pentagon, observed that "One cannot reasonably expect the military . . . to change assumptions that are congenial to a position they favor. Nor can one expect traditional views to overturn themselves. It takes searching analysis and proof" (Alain C. Enthoven and K. Wayne Smith, *How Much Is Enough? Shaping the Defense Program, 1961–1969*, New York: Harper and Row, 1971, p. 164).

[22] Recent moves by the Marine Corps to strengthen the role of its Marine Corps Warfighting Laboratory, by the Air Force to create an Air Force Warfighting Integration Capability, and by the Army to stand up a Futures Command appear to be promising developments in this regard.

[23] Indeed, reaching consensus on what factors were responsible for the outcome of past battles and conflicts can be hard, as we have seen in the postwar debates over who "won" operations Desert Storm, Allied Force, and other recent wars.

[24] This is the approach taken by the Senate Armed Services Committee in its draft of the National Defense Authorization Act for Fiscal Year 2019. See U.S. Senate Committee on Armed Services, John S. McCain National Defense Authorization Act for Fiscal Year 2019, p. 5. As of June 26, 2018: https://www.armed-services.senate.gov/imo/media/doc/FY19%20NDAA%20 Summary.pdf

[25] During the 1960s, CAPE's forerunner, the Office of Systems Analysis, played an important and constructive role in assessing joint capabilities and promoting new solutions to operational problems. The Regional Programs office of Program Analysis and Evaluation performed this function in the 1970s. See Enthoven and Smith, 1971.

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