

NON-NUCLEAR CAPABILITIES IN TAILORED DETERRENCE

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As introduced in the 2006 Quadrennial Defense Review (QDR), the vision of “tailored deterrence” involves a “future force [that] will provide a fully balanced, tailored capability to deter both state and non-state threats ... while assuring allies and dissuading potential competitors.”² In this vision, the force will possess “more tailorable capabilities.”³ In addition to a robust nuclear deterrent, the force will include a wider range of conventional strike capabilities, including prompt global strike (PGS) with next generation long-range conventional precision strike systems, and of non-kinetic capabilities; integrated ballistic and cruise missile defenses; and a responsive infrastructure. The force envisaged will be supported by a robust and responsive National Command and Control System; advanced intelligence; adaptive planning; and the ability to maintain access to validated, high quality information for timely situational awareness.⁴

All of the capabilities referred to in this vision are associated with the New Triad introduced in the 2002 Nuclear Posture Review. In reality, the capabilities available for tailoring include all existing military capabilities—the whole defense and security apparatus—and even non-military capabilities.

¹ The views expressed in this paper are the author’s own and not those of the Los Alamos National Laboratory, the National Nuclear Security Administration, the Department of Energy or any other U.S.G. agency.

² *Quadrennial Defense Review Report*, February 6, 2006, p. 49.

³ *Ibid.*, p. 4.

⁴ *Ibid.*, p. 49.

The New Triad concept is unlikely to survive the transition to the next US Administration, but much of the strategic framework it provided can be expected to survive. This framework is evolutionary. Deterrence was central during the Cold War. Nuclear forces were the basis for deterrence and, although conventional forces have always been important and defenses were seen as critical during several periods, neither were seen to be useful in deterring the Soviet Union and, in the case of defenses, of having an impact on a large-scale Soviet nuclear attack. In the new strategic framework, deterrence no longer holds its central Cold War position, and it is no longer expected to be based exclusively (or even primarily) on nuclear weapons. The increasing role of non-nuclear forces and defenses reflects the shift of nuclear deterrence from the center of US and Alliance security calculations, the reduced numbers and roles of nuclear weapons, the growing capabilities of conventional forces and the emergence of defenses.

The expenditure of intellectual capital and other resources on nuclear deterrence were considerable; there have been no comparable investments in the deterrent roles of non-nuclear forces and defenses. In this context, capabilities are not the leading issue—the political cultural and other aspects of tailored deterrence are more significant—but questions about the non-nuclear weapon requirements for tailored deterrence in the transatlantic alliance are significant. What are the instruments of non-nuclear deterrence and what can they be expected to do? Are the existing non-nuclear capabilities of the United States and the Alliance, including missile defenses, adequate? What are the prospects for non-nuclear strategic deterrence using conventional weapons? Is tailoring capabilities realistic for NATO?

What are the instruments of non-nuclear deterrence and what can they be expected to do?

Non-nuclear offensive capabilities (both kinetic and non-kinetic) can in principle be a part of a deterrence by punishment strategy, albeit kinetic capabilities and in particular the threat of overwhelming conventional force are more suited for this role. These forces, particularly Prompt Global Strike (PGS) and possibly non-kinetic capabilities can be part of a deterrence by denial strategy by providing capabilities to create doubt in an adversary's mind that it could successfully carry out a weapons of mass destruction (WMD) or terrorist attack.

To the extent that the credibility of deterrence will increase as the vulnerability to WMD and other attacks of the United States, its forces, interests and allies can be reduced, active and passive defenses are important. Missile and air defenses to protect the US and NATO territory and forward-deployed forces, as well as passive defenses, including capabilities needed to defend potential military and civilian targets from WMD delivered by ballistic and cruise missiles, can play a role in deterrence.

They can increase the credibility of deterrence by punishment strategies, particularly against nuclear- or WMD- armed adversaries. They are more critical to be a deterrence by denial strategy to the extent that their effectiveness can create uncertainties about the effects of an adversary's attack. It is argued that the deployment of ballistic or cruise missile defenses will force states to conclude that proliferating missile technology, or

considering the use of ballistic and cruise missiles against the United States or its allies, is not in their best interests.

In similar fashion, consequence management and post-conflict recovery plans and capabilities are also critical elements of a deterrence by denial strategy. As well, they are argued to further the goals of dissuasion and assurance.

In the non-military arena, diplomacy can promote deterrence beyond its key role in reaffirming or refining deterrence messages, including the delivery of ultimatums. The threat of diplomatic isolation can be a part of a deterrence by punishment strategy.

Sanctions can support deterrence as part of a punishment strategy or, if they involve such measures as financial or technology restrictions or bans, can be part of a denial strategy.

In the same vein, embargos, blockades and other such actions can play a role in punishment or denial strategies. The threat of criminal prosecutions for leaders or others can also be an important deterrence by punishment tool.

For combating nuclear proliferation and terrorism, support for the international nuclear nonproliferation regime can play an important role in deterrence by denial strategies. The Treaty on the Nonproliferation of Nuclear Weapons (NPT) regime, if fully implemented, can reduce access to or the availability of nuclear weapons and materials. This highlights the importance of compliance with the treaty, including the need to address clandestine procurement networks that can be exploited by rogue states and terrorists. Improved nonproliferation efforts, including enhanced export controls, international safeguards,

material protection, control and accountancy (MPC&A) and other cooperative threat reduction efforts, interdiction (via the Proliferation Security Initiative), etc., can enhance the prospects for a deterrent effect. Advances in R&D leading to deployment of more effective technologies to detect, disable, disarm, etc., nuclear weapons may also enhance such efforts. If these measures pose significant challenges or obstacles, they may effectively deter/dissuade nuclear proliferation and terrorism. Even more important are efforts to develop and improve means of attribution through nuclear forensics. Work is proceeding on technologies, techniques and other elements of this challenging problem. The same logic applies to biological and chemical nonproliferation regimes as well.

The role of soft power and especially of incentives of various kinds, from economic and security assistance to development aid to financial or other inducements for restraint have been discussed in terms of the non-military capabilities that may be enlisted in tailored deterrence strategies. Such measures have some history in the nonproliferation context. However, even though they may be elements of broader influence strategies, it is difficult to argue they are related directly to deterrence.

All of these capabilities are intended to strengthen deterrence. They are also expected to provide additional nonnuclear options to the United States and the Alliance in cases where deterrence or dissuasion fails, or are seen as likely to fail. It is also assumed that these capabilities will be needed to take preemptive actions, if deemed necessary.⁵

⁵ See Gen. Klaus Naumann et al. *Towards a Grand Strategy for an Uncertain World: Renewing Transatlantic Partnership* (2007), pp. 93-99; see also *The National Security Strategy of the United States of America*, September 2002, pp. 13-16.

Are the existing non-nuclear capabilities of the United States and the Alliance, including missile defenses, adequate?

Not only did the QDR not develop the concept of tailored deterrence; it did little more than list the capabilities that might be used in tailored deterrence, without a discussion of specific capabilities or of the way they would be brought to bear in specific scenarios.

While future requirements are not clear, they will be based on specific adversaries in specific scenarios. The range of adversaries—state and non-state actors, including their state supporters—creates multiple targets for deterrence.

The Soviet Union and the challenges it posed are gone, and concerns about a resurgent Russia declined over the 1990s. However, differences over NATO expansion, missile defenses and other issues, and a new Russian assertiveness driven by oil and gas revenues, have raised the issue of NATO-Russian relations again. In any event, to address the most worrisome residual Russian threats—those from its old nuclear arsenal—the United States and NATO will need to rely on nuclear deterrence. US commitments to NATO rely on maintaining capabilities sufficient to meet all US alliance obligations.

Against WMD-armed states, the United States and the Alliance will need to bring to bear a range of capabilities, including nuclear deterrence, missile defenses, conventional air, sea and space capabilities to counter any attack or possibly other efforts toward regional destabilization, offensive and defensive information operations, etc. In some cases, a strategic-level signaling strike against WMD could in theory be undertaken. Ultimately, the US objectives will be to destroy WMD and infrastructure, as well as to prevent use

against regional allies or forward-deployed forces and the US homeland. Within this context, specific forces and operational concepts will depend upon the state of concern, as well as US interests and commitments in the region.

Operations against terrorists and their safe havens require the full range of conventional capabilities. The objectives will be designed to disrupt and destroy the terrorists, and to deter state sponsorship, while protecting the US and Allies' territory, forward deployed forces, etc. Long-range strikes and deployment of special operations forces (SOFs) should figure prominently. There may be some value in maintaining a nuclear deterrent threat by holding some targets at risk in state sponsors of terrorism, especially those with missiles and WMD. Precise forces and operational concepts could differ dramatically based upon the terrorists and the sponsor.

Also, there may be other missions and contingencies requiring strategic operations with a strong political-military focus.

In the US concept, tailored deterrence would utilize a portfolio of capabilities tailored to a specific adversary. In each case, the capabilities used would depend on the suite of available overall capabilities. Given the dynamic and fluid threat environment and other uncertainties, tailoring could in theory require a virtually unlimited suite of capabilities. In practice, however, tailoring will have to bring existing capabilities to bear in deterring and dissuading adversaries, as well as reassuring friends and allies. If tailored deterrence today required new capabilities, it would not be very "tailorable," given the long lead

times required for developing and deploying major weapon systems--nor could it be effective, it would seem.

Of course, the QDR recognized that new capabilities would be needed to fully realize the vision. Future requirements are uncertain, but there will be a need to evolve capabilities over time to ensure forces in being can meet emerging and future challenges. In recent years, BMD and the Conventional Trident Modification (CTM) are among the programs touted as necessary enhancements to the non-nuclear part of strategic deterrence capabilities. BMD has proceeded but CTM has not been funded to date. Beyond these programs, likely requirements for US long-range strike (kinetic and non-kinetic) include:

- next generation long-range precision strike systems, including stealthy long-range cruise missiles, non-nuclear ballistic missiles and a new bomber (manned or unmanned, subsonic or supersonic, aerospace);
- guided missile submarines;
- enhanced space capabilities, including a space-based radar, a Space Maneuver Vehicle, etc.;
- non-kinetic strike, including information operations capabilities (offensive and defensive);⁶ and
- enhanced active and passive defenses.

⁶ The suite of technologies referred to as non-kinetic strike capabilities, including information operations, could in principle meet certain counterforce needs, and also create new arenas for action (with minimal costs, and a lesser amount of damage and death). If they are proven technically feasible and appropriately used, such novel capabilities could ameliorate some of the problems associated with military responses without being less effective.

In addition to new systems, there is a clear and recognized need for the procurement of more of the following capabilities:

- strategic air lift;
- manned/unmanned reconnaissance and surveillance assets;
- C² aircraft; and
- SOFs.

To meet future needs will require a modernized, reinvigorated and revitalized defense infrastructure, conventional as well as nuclear. Developing and possibly prototyping a range of adaptable conventional weapon concepts, as well as defenses, will be necessary if the United States and the Alliance is to be confident of their ability to respond to the changing world. It will be important for the United States and the Alliance to proceed on the basis of forces in being than the promise of capabilities embodied in the infrastructure. Infrastructure improvements will not by themselves provide a virtual deterrent. Infrastructure can complement and augment existing capabilities; it cannot replace them.

Tailoring can be done with existing forces, but transformation will be needed over time and will in the long term require US and NATO forces and associated capabilities to be adaptive, flexible and responsive to a fluid security environment. Although credible nuclear forces will remain important, conventional force capabilities and missile defenses

will have an increasing role. Strategic conventional forces will be needed for the full spectrum of contingencies the United States and the Alliance will face.

What are the prospects for non-nuclear strategic deterrence using conventional weapons?

The increasing role anticipated for non-nuclear capabilities in deterrence reflects the US and NATO removal of nuclear deterrence from the center of security calculations, reduced numbers and roles for nuclear weapons and the hope that conventional capabilities can substitute for even more nuclear missions in the future. Is this view sound? Will non-nuclear capabilities deter? The view that conventional weapons can replace many nuclear missions and will increasingly provide for future deterrence is becoming received wisdom, despite the fact that there is little analytic basis for this assumption.

The US conventional superiority evident since the Gulf War created hopes of viable conventional deterrence posture. Although the NPR did not advocate a conventional deterrence posture, it opened up the prospect of a greater role for conventional forces in deterrence. Many argue that US deterrence is increasingly conventional rather than nuclear. This is an issue to the extent that some hold that conventional deterrence will allow the United States to forego nuclear deterrence, at the very least in most contingencies. Such beliefs are largely based on speculations about the behavior of so-called “rogue” states if confronted with overwhelming conventional power.

In this contingency, a regional aggressor might be deterred or it might decide that the best means to negate the conventional advantages of the United States and the West is by threatening or using WMD. The record of conventional deterrence in recent years is mixed at best. The need for asymmetric responses to US conventional power, on the other hand, was clearly one of the lessons of the Gulf War for aspirants to regional hegemony. And it will be even more threatening to US power projection forces in the future, as vulnerabilities to WMD develop as a result of anticipated reductions in conventional weapon platforms and greater dependence on sensor and information systems. In the conventional as in the nuclear realm, every effort to enhance the survivability of weapons and related systems, military bases, troop concentrations and the like, is critical.

In any event, too great a reliance on conventional capabilities for deterrence may be imprudent in the long term for other reasons as well. Conventional deterrence has never been demonstrated to be effective, and its failures are legion. If advanced conventional capabilities are used decisively, and successfully, in battle, and particularly in preemptive actions, they could have a deterrence effect. Despite the new focus on deterring forward, and the development of capabilities to do so, in reality, conventional forces sufficient to deter a threat may not be available in a region of concern in time to prevent aggression. In the Gulf War, for example, it took months before US conventional forces in the region were seen as strong enough to deter further aggression. Current and future conventional forces may not be able to provide an effective deterrent against nuclear, biological or chemical threats from states or terrorists.

Although it is not clear that non-nuclear forces will play a significant role in deterrence by punishment, these capabilities, especially defenses, may be expected to play a greater role in deterrence by denial, but this will depend on technological advances in BMD among other developments. There may be ways to strengthen conventional deterrence, especially in the context of remaining nuclear deterrent capabilities.

Doubts about the efficacy of non-nuclear deterrence today and tomorrow do not suggest that the importance of non-nuclear capabilities will diminish. In fact, they may be expected to grow. They will be central to providing non-nuclear options in cases where deterrence or dissuasion fails, or is seen as likely to fail. In addition, the US and Alliance non-nuclear forces may be needed for such missions as:

- conventional war fighting;
- peacetime training of foreign forces;
- special operations; and
- military government.

In fact, we might expect that existing and future non-nuclear capabilities will contribute as much or more to other strategic objectives than deterrence, and will continue to be pursued not only for deterrence but for these other rationales as well.

Is tailoring capabilities realistic for NATO?

According to General Naumann and others, in a study entitled *Towards a Grand Strategy for an Uncertain World*, NATO “has lost the momentum required for transformation of

its forces.”⁷ As a consequence, they argued, the Alliance was “in danger of losing its credibility.”⁸

These judgments are serious and reflect the longstanding US and Alliance view that the capabilities underlying deterrent threats are a critical aspect of their credibility. There is a real concern about eroding or atrophying capabilities in the Alliance, and the political will to develop credible capabilities in the future. However, the United States has unprecedented conventional military capabilities. The forces available to the United States and the Alliance are highly capable and, although not all are optimized for the emerging world, should be able to meet the real challenges the Alliance confronts in the near term at least if the Allies demonstrate political will. But will the US and NATO be able to transform their forces over time to ensure needed capabilities are developed across the Alliance, that interoperability is optimized and that risk-, responsibility-, and burden-sharing are achieved despite very different capabilities and force levels? Assuming it chooses to do so, there is no reason that NATO cannot move in this direction.

In this context, the concept of tailored deterrence, if accepted by the Alliance, can provide a basis for reshaping capabilities in the longer term, and for identifying the programmatic priorities and resource reinvestments needed to move toward a future force capable of meeting emerging challenges. But it may be possible to move forward even absent agreement on tailored deterrence, and perhaps even deterrence itself. The

⁷ *Towards a Grand Strategy for an Uncertain World*, p. 75.

⁸ *Ibid.*

Bucharest Summit Declaration of 3 April 2008 reaffirmed the need to transform the Alliance's forces and capabilities. According to the declaration:

We have already done much to transform our forces and capabilities ... We will continue this process to ensure the Alliance remains able to meet its operational commitments and perform the full range of its missions. Our operations highlight the need to develop and field modern, interoperable, flexible and sustainable forces. These forces must be able to conduct, upon decision by the Council, collective defence and crisis response operations on and beyond Alliance territory, on its periphery, and at strategic distance, with little or no host nation support. We will also ensure that we have the right kind of capabilities to meet the evolving security challenges of the 21st century, and to do so, we will transform, adapt and reform as necessary.⁹

Among the capabilities highlighted were:

- improving strategic lift and intra-theatre airlift, including mission-capable helicopters;
- strengthening information superiority through networked capabilities, including an integrated air command and control system, increased maritime situational awareness and timely delivery of the Alliance Ground Surveillance capability;
- enhancing the capability and interoperability of special operations forces;
- improving trans-Atlantic defense industrial cooperation; and

⁹ Bucharest Summit Communiqué, 3 April 2008, paragraph 44.

- reforming defense planning processes in order to promote timely delivery of capabilities.¹⁰

At the Bucharest Summit, the Allies also supported missile defenses, reflecting the belief that they could play an important role in enhancing deterrence and defense. The declaration stated:

Ballistic missile proliferation poses an increasing threat to Allies' forces, territory and populations. Missile defence forms part of a broader response to counter this threat. We therefore recognise the substantial contribution to the protection of Allies from long-range ballistic missiles to be provided by the planned deployment of European-based United States missile defence assets. We are exploring ways to link this capability with current NATO missile defence efforts as a way to ensure that it would be an integral part of any future NATO-wide missile defence architecture. Bearing in mind the principle of the indivisibility of Allied security as well as NATO solidarity, we task the Council in Permanent Session to develop options for a comprehensive missile defence architecture to extend coverage to all Allied territory and populations not otherwise covered by the United States system for review at our 2009 Summit, to inform any future political decision.¹¹

The Bucharest declaration also referred prominently at several points to non-military capabilities as well, including non-proliferation efforts.

¹⁰ Ibid., paragraph 45.

¹¹ Ibid., paragraph 37.

For all its fine words, however, the program of the Summit will be difficult to carry out. Moreover, these programs are not the end point. There is a need for more transatlantic cooperation, for greater European coordination on defense capabilities and for expanded NATO-EU cooperation. Again, tailored deterrence can help focus such efforts. If NATO cannot otherwise meet the challenges it faces, the possibility of US-led coalitions of the willing that involve some NATO member states will no doubt be considered as the need arises.

To meet the full spectrum of possible threats, the United States and NATO will require adaptable, flexible and responsive forces. US strategy must recognize that the US forces (nuclear and conventional) are not optimally configured for deterring and countering today's and tomorrow's threats, and that active defenses are currently in development are unavailable in the near term for anything but very limited missions.

Conclusions

Over the last two decades, a dramatically changed security environment and reduced nuclear forces altered the calculus of deterrence and defense. Tailoring deterrence to address emerging threats is a possible response to the new reality. Tailoring can and will have to be done with existing forces, but transformation will be needed over time and will in the long term require US and NATO forces and associated capabilities to be adaptive, flexible and responsive to a fluid security environment. Credible nuclear forces will remain important but conventional force capabilities and missile defenses will have an

increasing role. Strategic conventional forces will be needed for the full spectrum of contingencies the United States and the Alliance will face, including providing non-nuclear options in cases where deterrence or dissuasion fails, or is seen as likely to fail.