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Extended Deterrence and Communicating Resolve

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Introduction: The Curious Case of TLAM-N

American thinking about extended deterrence has always tended to focus on its nuclear-weapon capabilities.[1] It is no different today. The Strategic Posture Commission of the United States—a bipartisan commission appointed by Congress 'to examine and make recommendations with respect to the long-term strategic posture of the United States'—reached the following conclusion on the requirements needed to fulfill U.S. security guarantees to Japan:

In Asia, extended deterrence relies heavily on the deployment of nuclear cruise missiles on some Los Angeles class attack submarines—the Tomahawk Land Attack Missile/Nuclear (TLAM/N). This capability will be retired in 2013 unless steps are taken to maintain it. U.S. allies in Asia are not integrated in the same way into nuclear planning and have not been asked to make commitments to delivery systems. In our work as a Commission it has become clear to us that some U.S. allies in Asia would be very concerned by TLAM/N retirement.[2]

To say that extended deterrence in Asia relies on the deployment of TLAM/N is odd. For 18 years not a single U.S. attack submarine has set sail with nuclear-armed Tomahawk missiles on board. Since 1991, when Presidents Bush and Gorbachev announced coordinated initiatives to withdraw deployed tactical nuclear weapons, the entire TLAM/N force has been in storage.[3]

Moreover, the failure rate of conventionally-armed Tomahawk missiles was over 1% in the 2003 Gulf War.[4] Even if the nuclear-armed variant has a similar failure rate (and, in fact, it is almost certainly higher given its older guidance system) it is highly unlikely the U.S. military would use it in any future conflict.[5] It is hard to see, therefore, what contribution the TLAM/N force has made in the last two decades, or could make in the future, to deterring China or North Korea.

Supporters of maintaining TLAM/N (including at least some members of the Strategic Posture Commission) argue, however, that this analysis misses the point. They make two arguments for TLAM/N. They argue that although it plays no role in deterring adversaries it is useful for assuring allies and, secondarily, for signaling.[6]

The key argument for maintaining TLAM/N is to provide evidence of the United States' commitment towards Japan and hence assure—that is, provide psychological comfort to—Tokyo. Those who make this argument point both to the symbolism of maintaining a nuclear weapon system that would otherwise be scrapped and the fact that nuclear-armed submarines can be deployed in close proximity to Japan.

This argument does, however, not stand up to scrutiny. Ultimately, a nuclear capability will only effectively assure Japan if it enhances deterrence. Putting aside the issue of signaling, which is discussed below, few argue that TLAM/N adds to deterrence (not least because the U.S. has air-launched cruise missiles with substantially similar military characteristics).[7] Rather, proponents of TLAM/N explicitly acknowledge that the issue is whether Japan believes the U.S. has the resolve to defend it (or, perhaps, whether Japan believes that China and North Korea recognize U.S. resolve). Maintaining TLAM/N would do nothing to address this concern. The credibility of any deterrent threat is, as Thomas Schelling argued, related to the costs incurred by the deterrer if its threat is ignored and it fails to act.[8] If China, say, were to commit an act of aggression against Japan that was serious enough to merit a nuclear response, the political (and other) costs to the United States of failing to act would be the same whether TLAM/N were maintained or not.

Whether Japanese officials recognize this problem today, the reality is that a decision to maintain TLAM/N is unlikely to have a significant, lasting effect on assurance. Rather, Japan would, sooner rather than later, simply shift to asking the United States for the next item on its shopping list of desired capabilities.[9] This quest for reassurance will continue endlessly unless the fundamental issue—the 'resolve problem'—is addressed head on.

In addition to assurance, another purported purpose of TLAM/N is signaling: in a crisis, the U.S. could redeploy this system to signal its resolve to an aggressor. Given the availability of plenty of other signaling options, this would seem an insufficient reason to maintain TLAM/N, even if it were suited for signaling. However, it is ill-suited to the task. Signaling is hard and signals are prone to be misinterpreted. This problem is exacerbated in the case of TLAM/N because its unacceptably high failure rate would probably preclude its use—a fact that it is surely prudent to assume China and North Korea are aware of. Signals sent using TLAM/N, therefore, risk being interpreted as bluffs indicating a lack of U.S. resolve. The U.S. President should, therefore, eschew the use of TLAM/N for signaling.

The TLAM/N saga is not unusual. It is a typical example of the problem of extended deterrence.

During the Cold War, for example, the United States deployed numerous systems to Europe—including different types of B61 gravity bombs, three ballistic missiles (Thor, Jupiter and Pershing), a ground-launched cruise missile (Gryphon) and a broad array of nuclear artillery systems—yet these rarely, if ever, made a lasting, appreciable difference to the anxiety levels of European leaders. Certainly, they never addressed, at a fundamental level, European leaders' fears of abandonment by the United States.

This paper explores the question of how the United States can convince allies of its resolve—both now and in the future.

Why Do Allies Question U.S. Resolve?

Conventional military action—let alone nuclear weapons—has little role to play in combating most of the security threats faced by U.S. allies today. Threatening nuclear use in response to a cyber attack on an ally is simply not credible. Similarly, military capabilities do not appear to have any relevance to deterring a Russian cut-off of the gas supply to U.S, allies, or, in the event that deterrence fails (as it frequently does in this case), to compelling Russia to re-instate supply. One key task, therefore, for the United States and its allies is to develop credible plans for preventing and combating the spectrum of threats for which a nuclear response would not be justified, especially those for which there is no military solution.[10]

The only scenarios in which nuclear deterrence might be relevant are those in which the very existence of an ally is under threat. In addition, therefore, to developing strategies for combating threats below the nuclear and military thresholds, the United States is faced with the second important task of assuring its allies that it will, if necessary, use nuclear weapons when their national survival is at stake. This second task is the focus of this paper.

It is not hard to see why allies might doubt U.S. resolve. The use of nuclear weapons would probably invite a response in kind 3that could kill literally millions of Americans. Allies realize that this would, at the very least, give the President pause. In the case of Japan, China's (slowly) growing ability to hold U.S. cities at risk exacerbates this fear.

Moreover, since the end of the Cold War, important political and economic changes are leading allies to ask themselves whether their security really is indivisible from that of the United States. Consider the problem from a Japanese perspective. Over the last decade or so, Sino-U.S. relations have been steadily improving. Most importantly, perhaps, China is now a much more important trading partner for the U.S. than Japan. In 2000, Japanese exports to the U.S. exceeded Chinese exports by $46 billion. In 2008, Chinese exports exceeded those from Japan by $199 billion.[11] This increasing economic interdependence raises the cost of a U.S.-China conflict to both parties (even while making such a conflict less likely). Observing this trend, it is understandable if Japan, in gaming out a possible future conflict with China, asks itself whether it really would be in the American national interest to defend Japan with all available means.

The case of Japan throws the challenge of assuring allies into sharpest relief. But, it is a generic problem. Allies will not be assured automatically; extensive American diplomatic energies will always be required.

In response to this challenge, the United States has deliberately tried to conflate resolve and capabilities in allies' minds in an attempt to demonstrate U.S. resolve through the provision of particular capabilities. In the Foreword to the 2001 Nuclear Posture Review, for example, then Defense Secretary Donald Rumsfeld wrote:

Terrorists or rogue states armed with weapons of mass destruction will likely test America's security commitments to its allies and friends. In response, we will need a range of capabilities to assure friend and foe alike of U.S. resolve.[12]

This strategy could be successful only if the United States were able to develop and deploy effective damage limitation capabilities. In this very special case, U.S. resolve to retaliate with nuclear weapons on behalf of an ally would be enhanced because adversaries would not be able exact unacceptable damage on the United States in response. The requirements for meaningful damage limitation are extremely demanding: effective real-time surveillance to locate enemy nuclear forces (especially mobile missiles), a command and control system capable of adapting targeting plans quickly in response to surveillance data, a large arsenal of highly accurate weapons (both conventional and nuclear) to enable effective counterforce strikes, and an effective missile defense system to 'mop up' any surviving enemy weapons. Indeed, some have argued that the development of American counterforce capabilities was driven primarily by desire to limit damage in an attempt to make the extended deterrence mission more credible.[13]

There is only one important metric in assessing whether damage limitation capabilities are 'effective': whether they could plausibly change the deterrence calculus for an adversary. U.S. adversaries fully realize that for an elected U.S. President (the ultimate nuclear weapon decision maker in the United States), unacceptable damage in defending an ally is almost certainly one nuclear weapon on one major city. (This is, of course, why Chinese analysts are fond of asking whether the United States would swap Taiwan for Los Angeles.) Even with much better damage limitation capabilities than it currently possesses, the United States could not realistically hope to eliminate China's ability to inflict even this 'modest' level of damage. In the case of Russia, the likely scale of damage would be orders of magnitude larger. This reality renders the pursuit of strategically-meaningful damage limitation capabilities futile.[14]

Against this background, the U.S. strategy of demonstrating resolve through capabilities, in practice, boils down to pointing to certain nuclear weapons as symbols of American resolve. The attractions of trying to demonstrate resolve in this way are obvious. Resolve is abstract and hard to demonstrate convincingly. Capabilities are concrete and easy to flaunt. If the U.S. promises to develop or maintain some particular capability for the sake of extended deterrence, allies have something tangible they can take back home. They also have no difficulty assessing whether the U.S. has actually followed through on a promise about capabilities. The truth of American statements about its resolve to defend allies cannot be tested so straightforwardly—at least not short of a severe crisis. Naturally, an ally does not want to enter such a crisis uncertain about whether the U.S. has its back.

It is, therefore, very tempting for the United States to try and demonstrate resolve through capabilities. Unfortunately, this strategy has proven nothing more than a temporary expedient. It causes allies to fixate on capabilities and risks them constantly asking for more. Worse still, if the U.S. tries to withdraw some moribund capability with which it has previously sought to demonstrate resolve, allies are likely to start questioning the United States' commitment.

This is precisely what happened with Japan and TLAM/N. During the 2001 Nuclear Posture Review, the Bush Administration apparently informed the Japanese government that TLAM/N was being preserved especially for Japan's benefit. It should come as no surprise, therefore, that discussions about the withdrawal of TLAM/N worry Japan.

The U.S. needs a new strategy for communicating resolve that does not rely on the provision of capabilities. Indeed, the U.S. should seek to disentangle the concepts of resolve and capabilities in allies' minds.

Does the United States Have Sufficient Resolve to Make Extended Deterrence Credible?

Before considering what such a strategy might entail, it is worth asking the fundamental question of whether the U.S. does have enough resolve to make extended deterrence credible. After all, if nuclear retaliation on behalf of ally would lead to the U.S. incurring unacceptable damage, could a strategy of communicating resolve ever succeed?

Fortunately, it can because extended deterrence, like deterrence more generally, does not require certainty of retaliation.

First, an enemy considering threatening the existence of a U.S. ally must factor in the possibility that the U.S. would use nuclear weapons because the President judged that the threat to the ally also constituted an existential threat to the United States. This adds to the credibility of extended nuclear deterrence. It is enhanced further by the symmetrical, but frequently forgotten nature, of the 'resolve problem'. Just as a U.S. President would probably not sacrifice New York in the defense of Tokyo, so the Chinese leadership would probably not be willing to risk Beijing (and much else besides) to acquire it. This promotes the same extreme caution in Chinese decision makers contemplating an action that might incur a nuclear response as it does in their American counterparts.

Second, even if an enemy could somehow discount the possibility of a direct U.S. nuclear response, it could certainly not ignore the possibility of a conventional response. Even besides the deterrence value of a conventional war with the U.S., such a conflict could escalate—through design, miscalculation or accident—to a nuclear one. This possibility—Schelling's "threat that leaves something to chance"[15]—also adds credibility to extended nuclear deterrence. Its effect does not dependent greatly on the size or composition of the U.S. arsenal.

Admittedly, allies would probably find these lines of reasoning cold comfort. Yet, they are more credible than the attempt to make extended nuclear deterrence plausible by damage limitation capabilities or of allies "going it alone" by procuring their own nuclear weapons and, in the process, forsaking the U.S. nuclear umbrella. Taking advantage of this the U.S. should seek to emphasize that its resolve is fit for purpose.

Demonstrating Resolve

Demonstrating resolve will require effort and creativity. But it is not impossible. Many analysts have argued recently about the importance of allies "not read[ing] in the newspaper about any changes in the American nuclear posture."[16] Avoiding this by waking foreign leaders in the middle of the night to inform them of important changes in missile defense policy is hardly much of an improvement.[17]

In contrast, genuine consultations—before decisions are made—could help to demonstrate resolve by indicating to allies that they are important enough to be included in the U.S. planning process.[18] Just as importantly, it could also be a useful forum for disentangling the concepts of resolve and capabilities.

While dialogue and consultation are important, there is also no reason to suppose that a one-size-fits-all approach will be effective. Different approaches may be required to convince different allies of U.S. resolve. There is no reason why what convinces Estonia of American resolve would also convince Taiwan or, in the future perhaps, Saudi Arabia or the United Arab Emirates.

For this reason, regional specialists—with extensive knowledge of allies' culture—should be engaged. They should be tasked with developing a strategy for communicating resolve. Are public or private statements of resolve more convincing? To whom should such statements be given? Should they be delivered by civilian or military leaders? How often should they be repeated? What words should be used? Where should they be delivered?

Beyond words, what practical steps could the U.S. take to convincingly and acceptably demonstrate resolve? Such steps should curtail its option not to act if an ally is attacked. Stationing troops on an ally's soil to act as a tripwire is an obvious possibility.[19] But what about cultural or educational exchanges? Or even increased tourism? Such steps could help to create a tripwire without the need to station more troops abroad. More generally, anything that ties the U.S. to its allies—enhanced trade, greater military cooperation or strengthened cultural links—makes defending allies more in the U.S. interest and hence communicates resolve.

The United States should expect its allies to be more active partners. In particular, the U.S. should ask them what kind of demonstrations they would find convincing; and it should press them for a full and detailed answer. Like a good marriage, effective extended deterrence requires the continued efforts of both parties.

Just as important as taking steps to enhance the perception of U.S. resolve is to curtail, as far as possible, actions that undermine it

Most importantly, the United States needs to become much more sensitive to the way that its domestic dialogue can affect extended deterrence. For example, American interest in Middle East oil is one factor that ties U.S. security to the security of friendly states in the Gulf. It should

come as no surprise, therefore, that at a recent conference one participant from a Gulf state remarked that every time a U.S. official talks about energy independence, his confidence in the U.S. commitment to his state's security is undermined. Naturally, energy policy—as well as policy on China, Russia, Iran or North Korea—is determined by many more factors than extended deterrence. But, extended deterrence should be weighed into the broader calculus.

Another factor to be considered is how existing allies will respond to the provision of new security guarantees. The problem is most acute in the context of possible future NATO expansion. The United States offers the same security guarantee—Article V of the North Atlantic Treaty—to all member states. If NATO is expanded to new states, which it is not obviously in the U.S. interest to defend with all available means, then existing NATO members might worry even more about U.S. resolve. The effect on existing security guarantees must be weighed into the decision about whether to extend new ones.

Extended Deterrence and Disarmament

Extended deterrence has become the argument par excellence against President Obama's stated goal of a world without nuclear weapons.[20] If the credibility of extended deterrence really did depend upon the size and diversity of American nuclear forces then alliance commitments could be a strong reason for caution in pursuing disarmament. However, if resolve is actually the key, then, at least in the medium term, disarmament can be reconciled with extended deterrence.

Because the concepts of resolve and capabilities have become conflated in allies' minds, contemporary U.S. doctrine calls for more nuclear weapons than are necessary for deterring or responding to existential threats as well as the maintenance of moribund capabilities that "appear to have nothing to do with the possible demands of 'warfighting,' but are important for the psychological/political goal of allied assurance."[21] As argued in this paper, a more sensible approach to assurance is disentangling resolve from capabilities, and finding other, more effective ways to communicate resolve. If successful, this strategy would enable the United States to reduce its arsenal, withdraw weapons from Europe and scrap TLAM/N without sparking a crisis of confidence among its allies.

Of course, if the U.S. were to dismantle capabilities that are genuinely required for deterrence then allies would have reason to worry. Until underlying conflicts are resolved or durably stabilized and a robust collective security architecture capable of protecting states' vital interests is created, nuclear deterrence will continue to play some role and this will impose a limit to reductions.[22] Quite where this limit is can be debated, but most would accept it is far below today's force levels, if the U.S, no longer relied on the size of its arsenal for assurance or dissuasion.[23] What is clear is that this floor depends, in part, on the willingness of all other nuclear-armed states to join the reductions process (once the U.S. and Russia have reduced to a level where it makes sense to include them).

Disagreement would come from those who believe that for extended deterrence to be credible the United States must have effective damage limitation capabilities. In particular, Japanese officials frequently, but privately, voice concerns about the U.S. reducing to below 1,000 warheads. To the extent that these fears have a clear foundation, it appears to be related to the effect of reductions on the feasibility of damage limitation. This argument might be valid if the U.S. currently had effective damage limitation capabilities. However, as discussed above, the United States would incur unacceptable damage today in a nuclear war with China in the defense of Japan. Complaining that effective damage limitation will not be possible if the U.S. arsenal was reduced to below 1,000 warheads, while true, is therefore beside the point; it is not an argument against deep reductions.

Conclusions

The key to extended nuclear deterrence—both now and in the future—is effectively communicating U.S. resolve. To date, the United States has tried to accomplish this by designating certain capabilities (such as TLAM/N) as symbols of U.S. resolve. It has not worked well. A new strategy for communicating resolve is required. Here are five lessons, extracted from the preceding analysis, that policy makers could bear in mind when formulating it.

1. Accept that effective extended deterrence relies as much on culture as capabilities. A strategy for communicating resolve needs to be tailored to each ally and should be developed in consultation with regional specialists who understand how to make demonstrations of U.S. resolve persuasive.
2. Consult with allies before decisions affecting them are taken. When initiating new security guarantees, set up mechanisms for such consultation right from the outset. Use such consultations to force allies to think through how the U.S. could convincingly demonstrate its resolve—and listen to them.
3. Educate allies in nuclear strategy and aim to disentangle the concepts of capabilities and resolve.
4. Be aware of how the U.S. domestic dialogue can undermine perceptions of U.S. resolve.
5. Be realistic from the start about the highly limited set of circumstances in which nuclear weapons are useful.

References

1. Indeed, it has been argued that, during the Cold War, U.S. security guarantees were the central driver for the development of counterforce capabilities. See, for example, Earl C. Ravenal, "Counterforce and Alliance: The Ultimate Connection," *International Security* 6, No. 4 (Spring 1982): 26-43.

2. William J. Perry et al., *America's Strategic Posture: The Final Report of the Congressional Commission on the Strategic Posture of the United States* (Washington, DC: United States Institute of Peace Press, 2009), 26, http://www.usip.org/files/America's_Strategic_Posture_Auth_Ed.pdf.

3. *Nuclear Matters: A Practical Guide* (2008), http://www.acq.osd.mil/ncbdp/nm/nmbook/references/NM_APracticalGuide.pdf, 40-41; Robert S. Norris and Hans M. Kristensen, "U.S. Nuclear Forces, 2009," *Bulletin of the Atomic Scientists* 65, No. 2 (March/April 2009): 59-69.

4. Briefing by Vice Admiral Timothy Keating, 12 April 2003, http://www.defenselink.mil/transcripts/transcript.aspx?transcriptid=2370.

5. For a detailed discussion of this point see Jeffrey G. Lewis, "A Problem with the Nuclear Tomahawk," forthcoming.

6. A third related argument that is sometimes advanced in favor of TLAM/N is that the low-yield of the W80 mod 0 warhead would make nuclear use more credible. This argument is questionable for two reasons. First, the principal (and by far the largest) barrier to the use of a nuclear weapon from the perspective of the U.S. President is the very fact that it is nuclear. It is hard (but perhaps not completely impossible) to imagine a plausible scenario in which the President would judge that the use of a 5kT W80 would be justified in defense of an ally whereas the use of a 100kT W76 warhead would not. Second, even if such a scenario were to arise, the President would still have the option to use air-launched cruise missiles, which although not identical, have substantially similar military characteristics, including a warhead of identical yield. Robert S. Norris and Hans M. Kristensen, "U.S. Nuclear Warheads, 1945–2009," *Bulletin of the Atomic Scientists* 65, No. 4 (July/August 2009): 72-81.

7. This view is most clearly set out by the Secretary of Defense Task Force on Nuclear Weapon Management. They strongly support maintaining TLAM/N to assure Japan even though they acknowledge that "as viewed by the Navy, USSTRATCOM, and the Joint Staff, there is no specific military capability or gap identified that the TLAM-N would satisfy." James R. Schlesinger et al., *Report of the Secretary of Defense Task Force on DoD Nuclear Weapon Management: Phase II: Review of the DoD Nuclear Mission* (December 2008), 25, http://www.defenselink.mil/pubs/pdfs/PhaseIIReportFinal.pdf.

8. Thomas C. Schelling, *The Strategy of Conflict* (Cambridge, MA: Harvard University, 1960), 35-43.

9. Jeffrey Lewis, remarks at "Rethinking U.S. Nuclear Posture," Carnegie Endowment for International Peace, Washington, DC, 29 September 2009, http://www.carnegieendowment.org/events/index.cfm?fa=eventDetail&id=1395.

10. George Perkovich, "Extended Deterrence on the Way to a Nuclear-Free World," paper commissioned by the International Commission on Non-Proliferation and Disarmament, May 2009, http://www.icnnd.org/research/Perkovich_Deterrence.pdf.

11. Figures obtained from http://www.census.gov/foreign-trade/balance/index.html.

12. My italics. A leaked version of portions of the *2001 Nuclear Posture Review* is available at http://www.globalsecurity.org/wmd/library/policy/dod/npr.htm.

13. Ravenal, "Counterforce and Alliance: The Ultimate Connection."

14. Moreover, damage limitation capabilities are not cost effective "at the margin." That is, adversaries can build countermeasures (which might be as simple as more missiles) more cheaply than the United States can overcome them.

15. Schelling, *The Strategy of Conflict*, Chapter 8.

16. Morton H. Halperin, remarks at "The Nuclear Order Build or Break," Carnegie International Nonproliferation Conference, Washington, DC, 6-7 April 2009, http://www.carnegieendowment.org/files/npc_build_or_break4.pdf.

17. Nicholas Kulish and Judy Dempsey, "In Face of U.S. Shift, Europeans Recalibrate," *New York Times*, 17 September 2009, http://www.nytimes.com/2009/09/18/world/europe/18europe.html.

18. Jeffrey Lewis, for example, has talked about the need to develop "software" rather than "hardware" solutions. Lewis, remarks at "Rethinking U.S. Nuclear Posture."

19. This brings up allies' own "resolve problem." Several U.S. allies, including Japan, Saudi Arabia, don't want U.S. troops on their soil, or find them politically problematic. Japanese people's negative attitude to U.S. forces stationed in Okinawa for their defense—brought to the fore by current arguments over the location of the U.S. base—is instructive. Specifically, it demonstrates doubts over how much should be sacrificed for Japanese security are not limited to the U.S. public. See Blaine Harden, "Obama, Japanese Premier at Odds Over Air Station Negotiation," *Washington Post*, 17 November 2009, http://www.washingtonpost.com/wp-dyn/content/article/2009/11/16/AR2009111600428.html.

20. For example, Ralph Cossa, "Nuclear Disarmament: Too Much, Too Soon?" *Japan Times*, 22 April 2009, http://search.japantimes.co.jp/cgi-bin/eo20090422rc.html.

21. Keith Payne, "How Much is Enough?: A Goal-Driven Approach to Defining Key Principles," Third Annual Conference on Strategic Weapons in the 21st Century, Washington, DC, 29 January 2009, 17, http://www.lanl.gov/conferences/sw/2009/docs/payne_livermore-2.pdf.

22. For an in depth discussion of the conditions required for the complete elimination of nuclear weapons see George Perkovich and James M. Acton, *Abolishing Nuclear Weapons*, Adelphi Paper 396 (Abingdon: Routledge for the International Institute for Strategic Studies, 2008). This has been reprinted, in full, along with commentaries in George Perkovich and James M. Acton (eds.), *Abolishing Nuclear Weapons: A Debate* (Washington, DC: Carnegie Endowment for

International Peace, 2009), http://www.carnegieendowment.org/files/abolishing_nuclear_weapons_debate.pdf.

23. Dissuasion (the goal of preventing adversaries from engaging in strategic competition with the U.S. by maintaining an arsenal so large that competition is pointless) is another reason why the U.S. arsenal is currently larger than it needs to be to meet deterrence requirements.