



The Role of Dissuasion in Combating Weapons of Mass Destruction

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"The gravest danger to freedom lies at the crossroads of radicalism and technology. When the spread of chemical and biological and nuclear weapons, along with ballistic missile technology—when that occurs, even weak states and small groups could attain a catastrophic power to strike great nations. Our enemies have declared this very intention, and have been caught seeking these terrible weapons. They want the capability to blackmail us, or to harm us, or to harm our friends—and we will oppose them with all our power."^[1]

President George W. Bush
West Point, New York
June 1, 2002

Introduction

When President Bush signaled United States resolve to combat the spread and use of weapons of mass destruction (WMD) in his June, 2002 West Point speech, he indicated the need for new thinking to answer the challenges of the post-9/11 security environment. Pundits zeroed in on the controversial idea of preempting adversaries prior to WMD use, yet little attention was given to the complementary notion of dissuading them from seeking WMD capability in the first place. Subsequent to Bush's speech, the *National Security Strategy* and *National Strategy for Combating Weapons of Mass Destruction* indicated a role for dissuasion in countering enemy intent to deploy and employ WMD against the United States—but so far, no cohesive dissuasion strategy against WMD has emerged. The reason—dissuasion is complex and it is difficult to analyze the many variables in the equation. This paper highlights some important considerations and concerns in developing a cohesive WMD dissuasion strategy.

Dissuasion As National Strategy

The term "dissuasion" as a strategic concept first appeared during the Bush administration in the 2001 *Quadrennial Defense Review* (QDR) report as one of four defense policy goals; specifically "dissuading adversaries from undertaking programs or operations that could threaten U.S.

interests or those of our allies and friends."^[2] While grappling with what this might mean, one could conclude that countering nascent WMD programs would be the perfect goal for such a concept. However, in further elaboration, the QDR report refers to dissuasion of future military competition in terms of near-peer capabilities. Although not excluding asymmetric competition, dissuasion in this sense highlights the development of overwhelming technological superiority so that potential adversaries are discouraged from investing in direct competition. For some, this may cause an unintended consequence of channeling investment to asymmetric strategies such as WMD procurement to counter overwhelming U.S. advantage. Thus, dissuasion strategies must strike a delicate balance of stifling traditional military competition while discouraging or even countering an asymmetric backlash. This tension, only hinted at in the QDR, indicates the complex and nonlinear nature of dissuasion.

The *National Security Strategy* (NSS), published in September 2002, further indicated a bias toward dissuasion of peer competition: "Our forces will be strong enough to dissuade potential adversaries from pursuing a military build-up in hopes of surpassing, or equaling, the power of the United States."^[3] The NSS discusses WMD defense and consequence management as examples of dissuasive capability: "Minimizing the effects of WMD use against our people will help deter those who possess such weapons and dissuade those who seek to acquire them by persuading enemies that they cannot attain their desired ends."^[4] This points to the interplay of all the defense policy goals, emphasizing deterrence to forestall use of WMD and dissuasion in preventing acquisition.

While the QDR and NSS look at dissuasion in general terms, the *National Strategy to Combat Weapons of Mass Destruction* places it in the context of the three pillars of counterproliferation, nonproliferation, and consequence management.^[5] Nonproliferation measures such as arms control, multilateral agreements, threat reduction assistance, and export controls are traditionally associated with dissuading both potential adversaries from acquiring WMD and supplier states from providing them. This strategy introduces more forceful dissuasion options such as counterproliferation interdiction, later embodied by the Proliferation Security Initiative (PSI). It also indicates a vital role for passive and active defenses (to include missile defense) as well as consequence management in both dissuading and deterring WMD capability. The *National Strategy for Combating Weapons of Mass Destruction* is significant in that it identifies dissuasion as the primary method for preventing acquisition of WMD, while placing it in a role secondary to deterrence and defense in countering the use of existing capability. It also recognizes a myriad of potential actors in the WMD equation: traditional competitors, rogue states, terrorists, and proliferation networks. This indicates a potential for simultaneous peer and asymmetric competition with a diverse set of WMD adversaries.

Considerations For Dissuading WMD Adversaries

The strategic documents of the Bush administration introduced the concept of dissuasion and its potential use in combating WMD. At times vague, at times conflicting, these documents do not address the complexities of developing a comprehensive dissuasion strategy. The remainder of this paper will examine a series of questions that should be considered in any dissuasion scenario, and will apply them in the WMD context.

Who to dissuade?

A dissuasion strategy requires identifying a specific competitor or a narrow list of several competitors. It also works best if that competitor is reasonably predictable.^[6] The numerous actors interested in obtaining or proliferating weapons of mass destruction run the gamut from allies and friends interested in enhancing their own security, to rogues, terrorists, and other

adversaries with malevolent intent toward U.S. interests. In the middle is a shadowy network of suppliers, shippers, and proliferators trading in WMD for personal gain. In this mix, some actors may be dissuaded by U.S. capabilities. Others may not. Still others may be emboldened to accelerate their intended course to gain asymmetric advantage. Further complicating this, certain actions taken to dissuade one set of actors may have the opposite effect on others. This presents a fundamental challenge to U.S. strategic planners—a "one-size-fits-all" strategy is not possible, and tradeoffs and risks must be considered.

The discussion that follows looks at various categories of dissuasion targets, as depicted in the figure below with an approximation of their relative susceptibility to a dissuasion strategy. [See [Table 1.](#)] In general, dissuasion assumes a degree of rationality in the calculus of the opponent. The farther the "dissuadee" is from that the rationality assumption of the "dissuader," the more difficult it will be to successfully execute a dissuasion strategy.

Although we typically do not consider allies and friends as targets of dissuasion, the U.S. strategic capability can serve as an umbrella providing assurances to our allies and discouraging development of unilateral capability with destabilizing consequences. This has been our approach in the Pacific, where the U.S. presence and nuclear capability has been designed to dissuade not only North Korean nuclear aspirations, but also South Korean and Japanese desires as well. However, recent revelations of a covert South Korean effort to enrich uranium[7] indicate that even the strongest assurances may not dissuade our allies from developing WMD capability as a counter to a regional adversary.

More traditional targets of a dissuasion strategy include global or regional powers with current WMD capability (especially nuclear), technological know-how and potential intent to challenge U.S. interests either globally or regionally. In these cases, deterrence is the primary mechanism to counter current capability while a dissuasion strategy can channel development of future capability. For example, U.S. development of the New Triad approach coupled with investment in missile defense may discourage a direct challenge by China or the re-emergence of Russia as a strategic competitor.

Rogue states provide a more difficult calculus, particularly when they seek asymmetric strategies for dealing with U.S. superiority. U.S. capability and resolve against the perceived Iraqi WMD threat have had an unpredictable affect on other actors, with Libya deciding to forgo its nuclear, chemical, and biological programs while North Korea and Iran have seemingly accelerated their WMD aspirations. As troubling has been the continued involvement by these nations in supplying parts, material, and know-how to other actors; as long as their activities can be conducted covertly, they are unlikely be dissuaded from engaging in such behavior.

Finally, the most difficult (if not impossible) targets to dissuade are non-state actors such as terrorist groups, proliferation networks, and individuals. Often ideologically motivated, non-state actors are not limited by international norms and can employ small-scale covert methods to gain asymmetric advantage. WMD becomes highly desirable precisely because these actors cannot compete with the U.S. in other realms. In these cases, dissuasion takes on broader form in which actors are directly prevented from attaining their desired capability (through interdiction or preemption) or are convinced of low probability of achieving operational success (through security, defenses, and threat reduction).

When to dissuade?

The maturity of a WMD program will impact the options available to strategic planners. Dissuasion is more effective earlier in the program life cycle, ideally before WMD aspirations are

a glimmer in the mind's eye. For some, particularly state actors, simply acquiring WMD is the end goal itself. For others, particularly terrorist groups, aims will be achieved only upon the appearance of a mushroom cloud or mass pandemic on CNN.

The figure below approximates the relative primacy of the defense policy goals matched against a WMD program life cycle. [See Table 2.] A critical phase point occurs in the transition from actively seeking WMD to achieving the capability. A successful dissuasion strategy will work primarily to keep the target on the left side of this critical point.

In the acquisition phase, state or non-state actors may be considering or actively seeking WMD. Before an actor develops intent, a combination of assurance and dissuasion may be sufficient to convince him not to consider it. Once he begins actively acquiring WMD, dissuasive strategies provide the primary mechanism to counter this course. Targets for dissuasion include not only the actor seeking WMD itself, but also the proliferation network supplying technology, material, and expertise. Traditional nonproliferation tools are most valuable in discouraging actors from committing to a course of seeking WMD. For nation-states, international norms reinforced through multilateral agreements such as the Nuclear Nonproliferation Treaty (NPT), the Chemical Weapons Convention (CWC), the Biological Weapons Convention (BWC), and the Missile Technology Control Regime (MTCR) are sufficient to dissuade most from seeking WMD capability. For the intransigent few, participation in these regimes provides a thin veneer of legitimacy under which they can conduct covert efforts to seek WMD. Thus, a more aggressive approach is required for those committed to seeking WMD. Counterproliferation, interdiction, and possibly preemption to deny WMD constituent elements may be required. For non-state actors seeking WMD, a more fruitful course is to target the supplier networks with these aggressive measures. These types of proactive measures may not fit certain narrow definitions of dissuasion, but to the extent they induce actors to abandon malevolent courses of action they can be considered a broader form of dissuasion.

Once an actor gains WMD capability, the equation changes. The threat of use is countered predominantly through deterrence and defeat mechanisms. However, as the NSS points out, credible defenses may dissuade adversaries from obtaining such weapons if they believe they cannot effectively use them. U.S. investment in passive defense measures such as chemical suits and medical countermeasures may cause enemies to think hard about deploying WMD against U.S. forces. Active defense capability, such as missile defense, further complicates his calculus. However, such strategies may have the unintended consequence of driving determined adversaries toward other avenues such as substitute biological strains or alternative delivery vehicles such as cruise missiles or suitcase bombs. To counter an opponent with developed WMD capability, dissuasive options are aimed at discouraging upgrades and advancement in technology.

What to dissuade?

In using the term "weapons of mass destruction," we often fail to distinguish among the differences between nuclear, chemical, biological, and missile programs. Each presents unique challenges and demands unique considerations for a developing a dissuasion strategy. Such a strategy should seek to raise the costs of acquiring a certain capability and limit the benefits of possessing such a capability. As a starting point for discussion, the following figure depicts costs as the barriers to obtaining the technology, and benefits as the potential impact or consequences of obtaining such capability. [See Table 3.] Dissuasion strategies should focus on driving up access costs and mitigating consequences to lower the benefits.

- *Nuclear Weapons:* As the most dangerous WMD threat, nuclear weapons represent the *sine qua non* of military and political might. Yet, in a sense, nuclear programs may be

relatively straightforward to dissuade. The only real course of action is to keep the barriers to access of nuclear material unacceptably high. Relatively stringent controls on fissile material, coupled with an overwhelming U.S. nuclear advantage will continue to discourage most of those seeking nuclear technology. With a theoretically finite supply of fissile material, dissuading nuclear programs has a theoretically finite solution: maintaining positive control of the world's nuclear feed stock.[8] Following this strategy requires U.S. investment in detection, monitoring and security technologies, as well as a commitment to shoring up such capabilities among allies and friends.

- *Radiological Weapons:* On the other hand, radiological weapons, sometimes considered a poor man's nuke, are relatively easy to develop. Source material is readily available through commercial and medical instruments, and creation of a "dirty bomb" could be done without significant technological hurdles. Use of such weapons may not have the widespread impact of other WMDs, but may cause significant psychological terror. Raising the barriers to access through improved technology controls may have limited utility. Lowering the impact through preparation, defense, and mitigation measures is likely a more effective course of action.
- *Bio/Chem Weapons:* The dual-use nature of chemical and biological programs provides relatively low barriers to entry and facilitates covert development under the cover of legitimate R&D. Chemical weapons are relatively easy to obtain or develop, although the impact can be fairly localized and easy to mitigate. Non-traditional agents (NTAs) have the potential to increase the impact, and a continued investment should be made in countering the effects of these weapons.

On the other hand, biological weapons hold vast potential for widespread catastrophic effects and will be increasingly attractive to adversaries. As advances in biotechnology continue, the promise of designer or niche weapons may soon become reality. Low infrastructure costs also add to the luster of bio-weapons for an actor wishing to asymmetrically compete with U.S. strategic capability. Dissuasion may be particularly difficult to apply in stifling biological weapons development, yet it is worth further exploration, as other methods are likely to be even less effective.

- *Missile Systems:* Delivery methods are also a target of dissuasion. The nation's commitment to missile defenses is in large part a dissuasion strategy to deal with the proliferation of ballistic missiles. As indicated in unclassified excerpts from the Nuclear Posture Review: "Defenses can make it more arduous and costly for an adversary to compete militarily with or wage war against the United States. The demonstration of a range of technologies and systems for missile defense can have a dissuasive effect on potential adversaries. The problem of countering missile defenses, especially defensive systems with multiple layers, presents a potential adversary with the prospect of a difficult, time-consuming and expensive undertaking." [9]

This focused strategy against ballistic missiles is a prime example of dissuasion, yet it is not without potential downside. Adversaries will likely seek alternative delivery methods such as cruise missiles, remotely piloted vehicles, and low-tech human delivery systems. Channeling competition away from ballistic missiles toward lower end delivery systems only makes sense if the US is better able to detect and defeat these alternatives.

- *Future Threats:* Finally, one of the biggest challenges may be dissuading competition in new technologies that could eventually be applied to create new types of WMD. Nanotechnologies, microelectromechanical systems (MEMS), directed energy weapons,

genomic research, and many others are at early research stages and promise revolutionary changes. Understanding which technologies may be applied for malevolent intent and analyzing ways to channel research for beneficial purposes is a difficult, but important task of a dissuasion strategy. Countering the next WMD before it is developed is the ultimate challenge.

How to dissuade?

As alluded to previously, there are two basic ways of dissuading an adversary or potential adversary. The first is to increase his anticipated costs for developing or acquiring a particular capability. This essentially raises the "barriers to entry," to use business parlance. The second is to reduce the adversary's perceived benefit of possessing that capability, by increasing the risk that he will be unable to attain his objectives. Creating a cost/benefit ratio unacceptable to an adversary requires the U.S. develop and maintain a full spectrum of combating-WMD capabilities, some of which may be designed primarily for the deterrence and defeat policy goals. To emphasize dissuasion may change the relative priority among existing capabilities and suggest new ones for exploration. The table below provides some suggestions for emphasis in each of these areas. [[See Table 4.](#)]

To increase the costs of pursuing a WMD capability, the U.S. and its allies must be willing to inflict penalties unacceptable to the adversary:

- First, to lower the threshold of acceptability, we should seek to delegitimize the possession of WMD, both on the international stage and within the inner circles of the enemy. A cohesive information strategy designed to ratchet up international norms, while also influencing the adversary's base of support should be a primary dissuasion tool. Additionally, since much of the technology requires sophisticated know-how, specifically in the nuclear and biological fields, a primary focus of this campaign should be to reduce the willingness of scientists and technicians to assist in WMD development.
- Second, we can impose political and economic costs through robust multilateral regimes with a willingness to impose serious sanctions, fines, and other penalties on known or suspected violators.
- Third, to complicate an adversary's development program requires active detection and monitoring capabilities, both through international inspections designed to support multilateral regimes and with sophisticated intelligence, surveillance, and reconnaissance (ISR).
- Fourth, programs designed to restrict or deny access to sensitive materials and technology should be emphasized. Export and technology controls, information security, threat reduction, active interdiction, and law enforcement activities all serve to prohibitively raise the cost of obtaining the required ingredients for the WMD stew.
- Finally, primarily for advanced states or rogue states, we can raise the bar by maintaining nuclear force levels while developing missile defenses, which may discourage direct competition with U.S. strategic capabilities.

In reducing an adversary's perceived benefits, we seek to convince him that he cannot obtain his objectives through possession or use of WMD. As the enemy's perceptions are important here, we must first engage in an active information campaign targeted at the adversary himself to signal U.S. capability and resolve to both defend against and defeat his efforts. Second, to enable

follow-on operations, actionable intelligence is a must, and the enemy should be aware of our ability to find his WMD anyplace, anytime. Third, offensive operations designed to hold WMD targets at risk will emphasize global strike and special operations forces (SOF), and include the ability to attack hard and deeply buried targets (HDBT) and agent defeat capabilities tailored to the nuclear, biological or chemical target of concern. Finally, defense and mitigation capabilities are designed to ensure continuity of operations and thwart enemy objectives. Active defense measures, such as missile defenses, can impede delivery systems from reaching target destinations; and passive defenses should be able to mitigate the affects of delivered agents. As the adversary perceives that U.S. investment in these capabilities outpaces his ability to defeat them, he may well be diverted from his intended path. If he is not, the U.S. is well situated to employ these same capabilities in a deter, defend, or defeat role.

Dissuasion: Not Just a French Word

As we begin to prepare for the next QDR, the U.S. has yet to come to grips with the dissuasion concept as outlined in 2001. Dissuading WMD adversaries should be a top priority for the national security community. But to do so requires an understanding of our potential adversaries, the type of programs they may be seeking, and their stage of development—so we may effectively prioritize our capabilities investment. Yet in reality, investments will be driven by the requirements to defend and defeat WMD adversaries. Dissuasion will likely remain a secondary factor. However, a good analytical framework for dissuasion with clear metrics can help focus future investments and capabilities for defending and defeating.

As the Defense Department moves toward capabilities based planning (CBP), a dissuasion strategy will shift away from focus on specific actors (the who) and instead emphasize specific programs and capabilities (the what). Although this changes the complexion of dissuasion, it is not an impossible task. A global approach to keeping barriers high for nuclear, radiological, chemical, biological and missile programs while mitigating their potential impact is a sound dissuasion approach. As part of our overall strategy for combating WMD, dissuasion has a key role to preventing the acquisition of these fearsome weapons. Designing dissuasion into our plans and programs moves the concept from being just another French word toward becoming a viable strategy.

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