

## **Report 44**

### **Missile Defenses and the Taiwan Scenario**

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#### **INTRODUCTION**

Advocates of missile defenses generally point to three dominant rationales for the deployment of defensive systems. The first is defense against small numbers of missiles launched from rogue states. The second is defense against accidental launch from one of the established nuclear weapons states. The third, which is related in part to the first, is sometimes known as the “freedom of action” argument. It posits that countries possessing missiles capable of reaching the United States could potentially deter the latter from intervening militarily in the former’s immediate region by threatening missile-borne retaliation, thus undermining US defense commitments to friends and allies as well as preventing the achievement of objectives in the national interest. While a hypothetical Iraqi ICBM capability in 1990 is often offered as an example, this challenge to US military power projection is most relevant in the current China-Taiwan conflict. This paper explores the implications of proposed US missile defenses for military contingencies involving the US, Taiwan, and China.

#### **MISSILE DEFENSES, ALLIANCE OPERATIONS, AND OFFENSIVE POWER PROJECTION**

Despite significantly differing attitudes about missile defenses, both the Clinton and Bush administrations have proffered versions of the “freedom of action” argument to justify missile defenses. For the Clinton Administration, a forward-leaning explication was offered by then-Undersecretary of

Defense for Policy Walter Slocombe in an article published in the *Washington Quarterly*.<sup>1</sup> The author clearly outlines the threat posed by emerging WMD-armed delivery systems among the rogue states:

In Northeast Asia and the Persian Gulf regions, we have strong commitments, vital interests, and deployed U.S. forces. These are the same regions where potential aggressors are developing ballistic missiles with ranges sufficient to reach the United States.<sup>2</sup>

For the author, the implications are equally grave. Without defenses, he argues, “potential aggressors might think the threat of strikes against U.S. cities could coerce the United States into failing to meet its commitments.”

In response to the question of why nuclear and/or conventional deterrence alone would not be sufficient to avoid this outcome, Slocombe explains that the “prospect of a prompt and overwhelming response” should be complemented by efforts “to contain and reduce the threat by diplomacy and arms control measures” as well as “effective defense.” Thanks to the latter, “an attack would be not only fatal, but futile,” since defenses would “help the United States to retain...our freedom to respond to a regional crisis because they would negate the potential of regional aggressors with small, long-range missile forces to attack the U.S. homeland as a penalty” for maintaining defense commitments with friends and allies. As a result, Slocombe argues that defenses would make the U.S. a more reliable ally.

Within the current administration, similar themes dominate. In his May 2001 speech at the National Defense University, President George W. Bush argued that the post-Cold War world is “less certain” and “less predictable” than its predecessor. The number of declared and undeclared nuclear weapons states has risen, and “some have developed the ballistic missile technology that would allow them to deliver weapons of mass destruction at long distances.” Rogue states seek these weapons with the explicit purpose of intimidating their neighbors, but also to “keep the United States and other responsible nations from helping allies and friends in strategic parts of the world.” This latter indirect reference to the “freedom of action” argument is echoed even more forcefully in the pre-administration writings of key Bush officials, such as current Deputy National Security Advisor Stephen Hadley, who argued in the same issue of *Washington Quarterly* that missile defenses would offset “potential terror weapons...intended to blackmail or coerce neighboring states while neutralizing the ability or willingness of the United States and its allies to intervene.”<sup>3</sup>

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<sup>1</sup> Walter B. Slocombe, “The Administration’s Approach,” *Washington Quarterly*, Summer 2000, Vol. 23, No. 3, pp.79-85.

<sup>2</sup> Ibid, p.79.

<sup>3</sup> Stephen Hadley, “A Call to Deploy,” *Washington Quarterly*, Vol. 23, No. 3, Summer 2000, p.99.

Less clear, however, is an understanding of the calculus that would drive a small, rogue state to risk utter annihilation from a U.S. nuclear response. While arguing that the utility of defenses does not rely on “a judgment that their leaders may be...indifferent to the prospect of retaliation,” Slocombe does indeed argue that these leaders have a different operational code or psychology than their establishment counterparts: less cautious, more indifferent to the suffering of their populations, valuing regime survival above all other human concerns. In his NDU speech, Bush echoed these themes, referring to rogues as “some of world's least responsible states,” for whom “terror and blackmail are a way of life.” Their leaders are “tyrants,” who are driven by an “implacable hatred” of the United States and “care little for the lives of their own people.” As a result, the President argues, “Deterrence is not enough.”

Recent experience, however, seems to undercut the notion of “undeterrable regimes.” For example, the evidence suggests that Saddam was in fact deterred in 1990-91 from using chemical and biological weapons against coalition forces because of the former President Bush's threat of nuclear retaliation. It is not clear why Saddam or any of his fellow rogue state dictators would respond any differently in the “freedom of action” scenario posited by NMD advocates. They may be cruel tyrants, but they also want to survive to exercise their tyranny. If any of these countries threatened or carried out a WMD missile attack against the United States, the U.S. would certainly retaliate against its entire offensive missile infrastructure as well as the national command and control structure, including the leadership. Perhaps the weak link in the deterrence chain is instead the automatic credibility of U.S. resolve to use nuclear weapons at the conclusion of one of these asymmetrical interactions with a smaller state in a strategically significant or even volatile region like Asia or the Middle East. Given the extreme devastation wrought by nuclear weapons and the fact that politicians are unlikely to gamble with thousands of American lives on the basis of a pure, rationality-based, game theoretic model, the future deployment of reasonably effective missile defenses therefore might add an additional layer of credibility for U.S. power projection, since in some cases they may remove the necessity for Washington to launch nuclear weapons.

## **MISSILE DEFENSES, TAIWAN, AND THE FREEDON OF ACTION ARGUMENT**

While the Iraq scenario dominates much of the NMD debate, some observers have explicitly highlighted the potential freedom of action problem posed by a China-Taiwan conflict, even pointing to Chinese behavior as further justification for NMD:

The United States should have no need to deploy an NMD system against China. But if China continues to insist that it is free to use force against Taiwan, continues to deploy more ballistic

missile aimed at Taiwan and at the United States, and continues to threaten to use those missiles against both, then the United States may simply have no choice.<sup>4</sup>

Without NMD, these advocates argue, Chinese threats of nuclear attack against the U.S. and its allies might be sufficient to deter the U.S. from intervening militarily to defend Taiwan. Fears of this outcome were further fueled by Chinese General Xiong Guangkai's now ubiquitous but distorted remark about Washington's unwillingness to trade Los Angeles for Taipei in a nuclear exchange.<sup>5</sup>

To fully address this line of argument, an examination of the role of missile defenses and nuclear weapons in a potential Taiwan scenario is needed. In other words, could one imagine a chain of events in cross-strait conflict that could cross the nuclear threshold and thereby involve U.S. national missile defenses? Two different escalation control problems lie at the heart of this question. The first involves escalation control difficulties between China and the United States in a bilateral context. The latter currently enjoys asymmetric escalation dominance in this relationship, thanks its advantages in force size, readiness, strategic early warning capability, and survivability. A decapitating U.S. first strike would clearly overwhelm the current Chinese ICBM force, which is small (approximately 20 ICBMs) and vulnerable (silo-based, liquid-fueled, no LOW/LUA capability).

The Chinese recognize the vulnerability of their force, which has arguably provided them with only a psychological deterrent to a "bolt from the blue," based by the nagging doubt in the minds of the attacker that at least one silo, previously undiscovered and hidden in a mountain valley under camouflage netting, would survive and eventually strike back. Since 1969, the Chinese have tried to augment the credibility of their deterrent, pursuing a road-mobile, solid-fueled ICBM (DF-31) to increase the survivability of their force and engaging in a costly and ultimately failed effort to build an operational triad. Nonetheless, the absence of U.S. missile defenses has bolstered deterrence stability between the U.S. and China, imperfect and incomplete as the latter's system may be. If NMD were deployed before China were able to deploy the road-mobile DF-31, then a U.S. first strike could potentially wipe out the majority of the force and catch any missed or hidden parts of the arsenal with limited defenses. Deployment of the DF-31, by contrast, would restore a perverse element of strategic stability and escalation control to the relationship.

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<sup>4</sup> Ibid, p.106.

<sup>5</sup> This comment was apparently taken out of context to mean that China would contemplate a pre-emptive strike against the United States to deter the latter from intervening. Such a threat stretches credibility, since China has no real offensive nuclear war fighting options against the United States and would pay a much greater cost in the devastating nuclear annihilation that would follow. Instead, Xiong's comment was likely meant to illustrate what Chas Freeman calls the "asymmetry of fervor" in the Taiwan Strait. In other words, China argues that it ultimately cares more about the fate of Taiwan than the United States, and is willing to prove the point with blood and treasure.

The second escalation control problem centers on the triangular relationship between China, Taiwan, and the United States. Game theory suggests that any triad is more susceptible to escalation than a dyad, because of the exponential increase in interactions. In this particular case, there are escalation problems at every level of the conflict, including low-level crisis, but national missile defenses are probably only relevant to more advanced conflicts involving military forces of all three sides. The potential escalation problems in the triangle are exacerbated by multiple destabilizing trends in the current cross-strait balance. Clearly, the most destabilizing trends are China's continuing deployment of increasingly accurate short-range ballistic missiles opposite Taiwan, as well as its Taiwan-centric military modernization program, refusal to renounce the use of force as a means of reunification, belligerent rhetoric, and large-scale exercising. But it must also be noted that there are trends on Taiwan that increase the chances of escalation, in particular the rise of an offensive orientation in certain defense circles. In the last several years, it seems that Washington's defense-oriented military-to-military exchange and arms sales approach with Taiwan, marked by a focus on theater ballistic missile systems like PATRIOT, strategic early warning radars, and hardening of C4I and facilities, does not seem to be as attractive to the Taiwan side as it once was. This conclusion is bolstered by Taipei's new reluctance to pursue more PAC-3 batteries, as well as decisions to cancel maintenance contracts on the existing PAC-3s and back away from the planned acquisition of strategic early warning radars. Instead, military planners and political leaders have placed an increasing emphasis upon the development of a more robust military deterrence, in response to the growing capabilities of the PRC. The current DPP government itself favors a more active and outward-oriented defense strategy in place of Taiwan's traditional concept of resolute defense or a purely defensive posture.<sup>6</sup> The leadership even seems to support the idea of carrying out offensive operations against the PRC when Taiwan's security is threatened, with an emphasis on the conduct of warfare beyond the main island of Taiwan and the acquisition of more offensive weapons systems designed to strike at Chinese ports, airbases, and missile launchers, such as surface-to-surface ballistic missiles, submarines, land-attack cruise missiles, and air-to-ground munitions. This shift is partly indigenous, but Taiwanese interlocutors often point out that the US Air Force's preferred method of theater missile defenses is "attack operations" against the missile launchers, not active defenses like PAC-2 or passive defenses like hardening of facilities.

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<sup>6</sup> During the 2000 presidential campaign, then-DPP candidate Chen Shui-bian introduced perhaps the most forward-leaning policy, calling for a change from "pure defense" to "offensive defense" (*gongshi fangyu*). This formulation explicitly abandoned the "old concept of attrition warfare" in favor of an emphasis on "paralyzing the enemy's war fighting capability" and "keeping the war away from Taiwan as far as possible." A key principle of Chen's platform is "decisive offshore campaign" or "decision campaign beyond boundaries" (*jingwai juezhan*), calling for Taiwan's military to "actively build up capability that can strike against the source of the threat" using enhanced naval and air forces as well as joint operations and information warfare. These various defense concepts are bundled together under the rubric "preemptive defense," which is marked by the maintenance of a strong deterrence posture during peacetime through the development of information warfare and long-range precision strike. During wartime, however, preemptive measures are necessary, including the suppression of Chinese C4I systems, anti-submarine warfare, and anti-blockade warfare. See Chen Shui-bian, *New Century, New Future: Chen Shui-bian's Blueprint for the Nation – Volume I: National Security* [Xinshiji xinchulu: Chen Shui-bian guojia lantu – diyice: guojia anquan], Taipei: Chen Shui-bian Presidential Campaign Headquarters, 1999).

While this shift in emphasis towards offensive operations may be a logical response to Taiwan's domestic and external challenges, it complicates the maintenance of crisis stability and potentially undermines efforts at escalation control by the United States. The following scenario is illustrative. If China began lobbing missiles around, over, or on the island, analysts agree that there would be great domestic pressure on the Taiwan leadership to “do something,” even if the missiles were warning shots into unoccupied areas as a coercive diplomatic signal. A key political and military objective for both the US and Taiwan would be to stop or degrade SRBM operations. Leaving aside China's nuclear weapons for a moment, an obvious retaliatory option would be air attacks against missiles and their infrastructure on the mainland. Unfortunately, DESERT STORM and ALLIED FORCE revealed the extreme difficulty of interdicting elusive ground targets with airpower, despite a sophisticated global ISR system and state-of-the-art precision-guided munitions. Neither the U.S. nor Taiwan air force could have a high degree of confidence in their ability to interdict Chinese SRBM launches with air attacks, particularly given the additional presence of highly sophisticated Chinese air defense systems like the SA-10.<sup>7</sup> Taiwan could draw on its historical experience and employ special operations forces, but the SOF record against “elusive ground targets” is also less than desultory.<sup>8</sup> Also, the TEL operating area on the mainland would be prohibitively large, as the operating range of SOF is limited by terrain and other factors.

A more attractive option for Taiwan would be land-attack cruise missiles, which open sources suggest is a top R&D priority. But here is the rub. Let's say that unidentified LACMs come skimming over the horizon and start dropping cluster munitions all over Chinese railheads, depots, and other SRBM staging areas. How are the Chinese supposed to know whether those are Taiwanese LACMs or US LACMs fired from a US 688-class submarine lurking offshore? If the Chinese worst-case and assume that the US has “crossed the Rubicon” of attacking targets on the mainland, then they might believe that Washington has decided to climb all the way up the ladder preemptively, including decapitating PRC nuclear forces.<sup>9</sup> Given the current fragile survivability of their nuclear forces and Washington's publicly stated willingness to use nuclear weapons first in a conflict, the Chinese might therefore move them to a higher state of readiness unilaterally, which would likely be visible to U.S. overhead assets. These indicators and warning would almost certainly trigger a series of responses by Strategic Command consistent with prior planning, possibly including a corresponding increase of U.S. alert levels and readiness.

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<sup>7</sup> For some new thinking on using airpower to attack mobile Chinese missiles, see Alan Vick, et al, *Aerospace Operations Against Elusive Ground Targets*, Santa Monica, CA: RAND, 2001.

<sup>8</sup> For a fascinating historical study of special operations against elusive ground targets, comparing MACV/SOG's efforts to interdict the Ho Chi Minh trail with the efforts of SAS and others to interdict Saddam's missiles, see William Rosenau, *Special Operations Forces and Elusive Enemy Ground Targets: Lessons from Vietnam and the Persian Gulf War*, Santa Monica, CA: RAND, MR-1408-AF, 2001.

<sup>9</sup> This fear for the Chinese is not abstract. China can credibly claim to have been threatened with nuclear attack not once but twice, first in the 1950s by Eisenhower and later in 1969 by the Soviets. There has even been a recent revelation about consideration of the move during the Johnson Administration. The desire to prevent this type of “nuclear blackmail” was the primary motivation for China's enormous investment in the development of its own nuclear weapons capability.

At this point, it is important to note that there are factors that mitigate the possibility this chain of events could cross the nuclear threshold. It is very difficult, for instance, to imagine the character and objectives of a Chinese first strike of nuclear weapons against the United States. The PRC force is simply too small and the American triad too robust for an effective counterforce attack, and a counter value attack would simply result in an overwhelming and ultimately devastating American response. The U.S. side can also afford to be more patient in this crisis, given its advantages in strategic early warning and reconnaissance assets as well as an ability to launch under attack. Thus, there is significant room for cooler heads might prevail via the hotline or other channels.

Yet, two developments on the U.S. side complicate the situation, perhaps pushing the Chinese towards more rapid escalation in order to preserve either its defensive deterrent or its attack options. First, an attack on Chinese nuclear forces no longer automatically involves the release of American nuclear weapons. One oft-repeated fear of PLA strategists is that the US has demonstrated the conventional military capability to degrade Chinese nuclear forces, so Beijing might even believe that Washington could achieve the goal of neutering China's nukes without suffering the international opprobrium of using nuclear weapons. In recent public documents, the Pentagon has in fact touted its growing conventional capability in these types of contingencies, principally through the use of airpower.

The second development is the Bush Administration's advocacy of both defensive and offensive deterrence rather than offensive deterrence alone. If the scenario above occurs in an NMD-blessed future, then some might argue that Washington has an incentive to decapitate the Chinese force, removing the potential nuclear threat to the U.S. homeland while remaining confident that even an imperfect NMD could catch the stragglers. The U.S. targeting plan could be divided into at least four levels of targets. The first and minimum essential set includes the entire Chinese nuclear-capable ICBM missile infrastructure - e.g., silos, depots, warhead storage facilities, and brigade headquarters. Fortunately, open sources reveal that these assets are located in relatively isolated, less densely populated areas, limiting collateral damage from blast and fallout.<sup>10</sup> The second set consists of nuclear-capable theater missiles of sufficient range to hit U.S. or allied bases or populations, including Taiwan, as well as missiles that can be moved into range. The third set centers on NCA-level C2 facilities, particularly the national military command center in the Western Hills, Second Artillery Headquarters, Zhongnanhai, and the Central Military Commission facilities at Sanzuomen, though their location in or near Beijing would necessitate much higher levels of direct civilian casualties. The fourth and relatively least essential set of targets are China's conventionally-tipped missiles, which is ironic considering that they initiated the entire sequence of events. In the final analysis, however, escalation raises the stakes well beyond the impact of 500kg warheads.

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<sup>10</sup> For the location of China's nuclear forces, see the following Federation of American Scientists web site: <http://www.fas.org/nuke/guide/china/index.html>. For data about the likely effects of nuclear weapons, see United States Department of Defense, *The Effects of Nuclear Weapons*, Washington: U.S. Government Printing Office, 1977.

If the road-mobile, solid-fueled DF-31 is IOC and flushed from its storage sites, U.S. confidence in a first strike aimed at degrading China's force to a “straggler” level would clearly be reduced. The deployment of transporter-erector-launchers (TELs) mated with warheads would likely increase the necessity or targeting the national command and control facilities listed above, with the final calculation based in part on the level of uncertainty about whether these TEL units have autonomous targeting data and release authority. If they do have the ability to fire after the Chinese NCA has been decapitated, then the U.S. would either have to pre-empt even earlier in the crisis or face the daunting technical challenge of targeting mobile missiles. During the Cold War, Soviet possession of these types of survivable forces actually increased deterrence stability. The superiority of American recce assets and the lack of Chinese strategic early warning, by contrast, would give American planners a higher degree of confidence in their ability to prevail despite Chinese mobility, though the higher level of escalation required would raise the toll in human lives on the Chinese side beyond human comprehension.

## CONCLUSION

The Taiwan scenario demonstrates that escalation control in a triangle of asymmetric capabilities, asymmetric escalation dominance, and “asymmetric fervor” is dangerously unstable. Three immediate policy measures could be recommended:

- Strategic-level dialogue with China on issues related to strategic stability, including nuclear weapons and missile defenses;
- Discussions with China on crisis management, including protocols and alerting procedures;
- Closer coordination with Taiwan on joint warfare, C4I interoperability, crisis communications, and contingency planning, with a focus on demarcation of roles and rules of engagement involving attacks on the mainland.

While these operational measures are no substitute for normalization in overall Sino-US relations or *modus vivendi* in the Taiwan Strait, they would likely reduce uncertainty and misperception and therefore lessen the chance of war.