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BOMBER DETERRENCE MISSIONS: CRITERIA TO EVALUATE MISSION
EFFECTIVENESS

by

Bradley L. Cochran, Col, USAF

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Advisor: Col Charles W. Patnaude

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Biography

Colonel Bradley L. Cochran is currently a student at the Air War College, at Maxwell Air Force Base, Montgomery Alabama. Prior to this assignment he was the Commander, 393d Bomb Squadron, Whiteman Air Force Base, Missouri. As such he was responsible for the conventional and nuclear combat readiness of the men and women in one of only two operational B-2 stealth bomber squadrons in the Air Force.

Colonel Cochran received his commission from the USAF Reserve Officer Training Corps in April 1997. He has served as a C-17 Airdrop Instructor Pilot, B-2 Instructor Pilot, B-2 Wing Weapons Officer, B-2 Weapons School Instructor, Military Legislative Fellow to US Senator John Thune on Capitol Hill and worked within the Operations Directorate (J3), on the Joint Chiefs of Staff. Colonel Cochran has participated in OPERATION NORTHERN WATCH, OPERATION SOUTHERN WATCH and has combat experience in Operations ALLIED FORCE and ENDURING FREEDOM. His academic achievements include a Bachelor of Arts degree in International Relations from Brigham Young University and a Master of Science degree in Aviation Safety Management from the University of Central Missouri.

Abstract

Richard Lebow, in an article he wrote called *Conventional or Nuclear Deterrence: Are the Lessons Transferable*, reviewed a series of wars and crisis from 1898 to 1987. He concluded the *major* factor in determining the success of deterrence was not the size of the military or its capacity to fight. Instead, “it was the degree to which the challenger felt driven to attack” and a belief in the success of that attack.¹ In order for deterrence to be successful, a defender must convince the aggressor not only will it be unsuccessful in its attack, but also the potential cost associated with its aggression far outweighs the chance it will succeed. Patrick Morgan’s immediate deterrence example is the most effective way to persuade the enemy into believing an attack will be unsuccessful. A review of two case studies, North Korea in 2013 and Russia’s aggression into Ukraine in 2014, reveals immediate deterrence is the most effective when six criteria are used. These include:

- 1) A punctuating event occurs, leading to a requirement to display deterrence.
- 2) A specific defender (the deterrer) and aggressor can be identified.
- 3) An established security connection exists with the defender and that connection has a defined security response towards aggression.
- 4) A sufficient amount of force is used in the deterrence effort.
- 5) The defender or the sum of the defender and its allies is militarily stronger than the aggressor.
- 6) The greater the effort put forth to deter action, the more effective the deterrent.

US Strategic Command (USSTRATCOM) should use these six criteria when planning for and evaluating the effectiveness of future bomber deterrence missions.

Introduction

In 1955, General Curtis LeMay, Commander of Strategic Air Command (SAC), launched two B-47 wings totaling ninety aircraft on a simulated bombing mission from Florida to Europe before landing in North Africa.² The next year, General LeMay sent “twenty one B-47 wings on practice missions over the North Pole: eight million combat-capable miles made possible by eighteen tanker squadrons...the Soviets recognized that they simply could not compete with SAC. That was what Curtis LeMay intended: It was intimidation on a global scale.”³ US Strategic Command (USSTRATCOM) conducts similar missions today. These bomber assurance and deterrence (BAAD) missions are designed to deter potential enemies and reassure US allies. USSTRATCOM publicizes these flights using various forms of media, but are these missions effective? Are they achieving the desired results? In-depth access to a nation’s private internal communications would provide the answer. However, without this, the best way is to study the actions of the intended threat or recipient. Yet this is more difficult than it seems.

Numerous authors including Patrick Morgan, Paul Huth, Bruce Russett, Richard Lebow and Janice Stein have all written extensively about evaluating the effectiveness of deterrence. Each provides persuasive arguments with logical evidence. However, they do not all come to the same conclusions when predicting whether deterrence works. In short, proving deterrence works is extremely problematic. As they point out, when studying historical cases, there are so many variables it is hard to even determine whether the cases being studied are similar enough to compare. Therefore they make numerous recommendations in a whole host of scenarios. After reviewing all their arguments, however, six criteria can be used to evaluate the effectiveness of bomber specific deterrence missions. The review and application of these criteria will aid decision makers in determining the effective use of deterrence missions. Of note, although most

of these criteria apply in bomber assurance scenarios, the effectiveness of these criteria in those scenarios is not examined here and should be a topic for another paper.

Bomber deterrence missions are most effective when:

- 1) A punctuating event occurs, leading to a requirement to display deterrence.⁴
- 2) A specific defender (the deterrer) and aggressor can be identified.
- 3) An established security connection exists with the defender and that connection has a defined security response towards aggression.
- 4) A sufficient amount of force is used in the deterrence effort.
- 5) The defender or the sum of the defender and its allies is militarily stronger than the aggressor.
- 6) The greater the effort put forth to deter action, the more effective the deterrent.

To have effective deterrence missions, these criteria should be reviewed, considered and included during the planning of future bomber missions. Using these criteria does not guarantee success as nothing in deterrence is guaranteed, however, using these criteria will aid decision makers in determining the effectiveness of these missions and therefore aid in their decision process as to whether or not to pursue a bomber deterrence mission on a certain occasion.

To explain these six criteria, this paper will first discuss basic deterrence theory and the difference between immediate and general deterrence. It will then discuss which one is more effective and why it is so difficult to determine whether deterrence actually succeeded. Next it will discuss the six criteria to use in evaluating current USSTRATCOM bomber deterrence missions and evaluate these criteria against two bomber case studies, North Korea in 2013 and Russia's aggression into Ukraine in 2014. It concludes with the assertion that evaluating the

effectiveness of deterrence is extremely difficult but if these six criteria are used it will aid decision makers in making the mission more effective.

Deterrence Theory

In order to evaluate whether deterrence works, one must understand what is meant by deterrence. Several definitions are found in political science writings, however, Patrick Morgan, one of the most respected authors of deterrence theory, defines it this way: “Deterrence is a matter of convincing someone not to do something by threatening him with harm if he does.”⁵ In the international security arena this generally means convincing a nation not to attack by threatening retaliation so fierce, the cost would be too great for it to bear, and thus it will decide not to attack in the first place. This is different from a nation who never considers attacking. If this were the case, it would mean “deterrence works best with our friends, or pacifists!”⁶ According to Morgan, inherent within deterrence there must be the threat of an attack.⁷ When evaluating effective deterrence, the question becomes if a nation does not attack did deterrence actually work or was it never going to attack in the first place? One can easily determine when deterrence fails because a deterrence action was taken and yet the attack still occurred. An example of deterrence failing was the French built Maginot line constructed after WWI. The idea of the Maginot line was to slow down the advancing army enough to allow massive reinforcements to arrive, thus making any invasion of France a delayed and costly endeavor. However, in this case, deterrence failed and Germany still invaded. On the other hand, analyzing the effectiveness of successful deterrence cases or even determining which ones those are, is much more difficult. Patrick Morgan says to understand the effectiveness of deterrence, it should first be broken down into two different types. The first type is general deterrence.

General deterrence is a practice by which “the concern is not so much with a specific kind of attack from one particular quarter but with the larger possibility of attack itself.”⁸ In other words, when using general deterrence, retaliation is not directly connected to a specific challenge or threat.⁹ In the world of international security, the practice of general deterrence usually occurs when nations feel insecure, suspicious or even hostility towards them but may not know of a specific threat of attack. This makes it hard to evaluate whether actions taken under general deterrence are effective or not. In most cases, however, general deterrence is less effective. It is less effective because the defender simply feels there may be a threat but does not know from whom. Therefore the defender cannot optimize its actions against that threat. To overcome this, when using general deterrence, nations often take vague actions toward multiple or all nations rather than focus on a specific one. General deterrence actions include building, training, maintaining and upgrading a strong military. They exercise regularly and show a strong capability to respond toward aggression but no actions are aimed toward a specific threat. Normal training is considered enough to "generally" deter. Immediate deterrence on the other hand, is directly tied to a specific threat and requires specific action.

Immediate deterrence situations occur when a threat exists from a specific adversary. In addition, the defender knows and understands the threat and takes specific actions to demonstrate the ability to retaliate. If effective, the adversary subsequently decides an attack is not worth the cost. Patrick Morgan describes the process this way. He says four conditions occur during an immediate deterrence situation:

- 1) In a relationship between two hostile states the officials in at least one of them are seriously considering attacking the other or attacking some area of the world the other deems important.

- 2) Key officials of the other state realize this
- 3) Realizing that an attack is a distinct possibility, the latter set of officials threaten the use of force in retaliation in an attempt to prevent the attack
- 4) Leaders of the state planning to attack decide to desist primarily because of the retaliatory threat(s).¹⁰

Immediate deterrence is considered more effective because if successful, a known aggressor is actually deterred. The problem is, examples of immediate deterrence are limited, mainly because of Morgan's second and fourth point. These points require the defender to understand the true intent of the adversary.¹¹ For example, one must ask was there actually a threat of attack or was it only perceived as such? After the show of force, did an attack occur and if not was it solely because of the show of force? Answering these questions is difficult because most likely the adversary will never come out and say to the world it backed down and decided not to attack. It will subsequently argue it never planned to attack in the first place.¹² Thus, knowing and understanding the true intent of the adversary is near impossible, making evaluating immediate deterrence also difficult. In rare circumstances however, immediate deterrence can be graded.

Richard Lebow, in an article he wrote called *Conventional or Nuclear Deterrence: Are the Lessons Transferable*, reviewed a series of wars and crisis from 1898 to 1987. He concluded the *major* factor in determining the success of deterrence was not the size of the military or their capacity to fight. Instead, "it was the degree to which the challenger felt driven to attack" and a belief in the success of that attack.¹³ Therefore, general deterrence may be good for discouraging challengers from attacking, but does little to dissuade their belief about the successfulness of that attack. Immediate deterrence, on the other hand, is specifically designed and tailored to dissuade

the enemy from believing it will be successful. Thus it is much more effective. When speaking of the two different types of deterrence Patrick Morgan states, “the further from an immediate deterrence situation policy makers find themselves, the less value they should place on deterrence alone.”¹⁴ Because general deterrence is more ambiguous and less effective, USSTRATCOM should use immediate deterrence criteria to determine the effectiveness of bomber deterrence missions. In pursuing immediate deterrence missions, the review and use of the above six criteria will increase the level of effectiveness expected.

Deterrence Evaluation Criteria

A punctuating event occurs, leading to a requirement to display deterrence: The first criterion for evaluation is to determine whether it is a general or immediate deterrence mission. As previously discussed, immediate deterrence is more effective than general deterrence. For it to be an immediate deterrent situation there has to be some type of punctuating event. This may be the massing of troops along the border, overflight by enemy aircraft, limited bombing in preparation of a larger attack or simply a credible announcement of intent to attack. Punctuating events do not occur during normal day-to-day events. Something happens which triggers the knowledge of an impending attack and the need to take action. Recognizing and reacting to the punctuating event is the first step to ensure an effective deterrent.

A specific defender (the deterrer) and aggressor can be identified: For immediate deterrence to succeed, a specific aggressor and deterrer must be identified. Although this seems simple, it is important to establish this up front to prevent an ineffective mission. Furthermore, assigning the aggressor and defender roles are important to understand so later criteria can be effectively evaluated. These include the military strength of each side and the level of

commitment to deterrence by the defender. Defining these actors is another step to plan for immediate deterrence versus a general deterrence mission.

An established security connection exists with the defender and that connection has a defined security response towards aggression: The third step is to evaluate the security connections of the defender. If the United States is not the defender and is coming to the aid of an ally, what security arrangements have been made? Morgan states: one major finding in tracing deterrence success is for the deterrer to have a credible commitment demonstrated by its elaborate ties with the friend or ally it is trying to protect.¹⁵ Huth and Russett write, “the stronger the ties between defender and protégé and the closer the perceived security link between the two states, the more costly it would be for the defender to let the attacker dominate the protégé.”¹⁶ Having a long lasting and committed security arrangement with the defender, therefore, telegraphs to the aggressor the level of resolve and commitment it might be fighting against to have a successful attack. This leads the aggressor to re-evaluate its decision based on the amount of retaliation it might receive. On the other hand, the lack of any strong or lasting commitment with the defender leads the aggressor to believe less of a commitment exists and therefore the attack will likely be more successful. Knowing this relationship will lead planners to evaluate the level and type of force required to make the deterrent more effective.

A sufficient amount of force is used in the deterrence effort: The fourth criterion is to evaluate the amount of force necessary to deter the aggressor. The greater the amount of force displayed, the more seriously the aggressor takes the deterrence. The amount of force demonstrated should be enough to show the aggressor the risk is not worth the potential cost. This implies criteria number two is well evaluated and understood.

The defender or the sum of the defender and its allies is militarily stronger than the aggressor: The fifth criterion is to determine whether the aggressor is militarily weaker or stronger than the deterrer. Paul Huth in his article *Deterrence Failure and Crisis Escalation* reviewed 58 cases of deterrence from 1885 to 1984. He found: “deterrence failed in only 17 percent of the cases when the defender and protégé had equal or better military forces on hand than the challenger.”¹⁷ In other words, of the successful cases, deterrence worked more effectively if the defender was stronger than the aggressor, militarily. In addition, Patrick Morgan agrees and states only “20 percent of wars are initiated by the weaker party,” meaning 80 percent of the time being militarily stronger makes for more effective deterrence.¹⁸ Thus, knowing and understanding the strengths and weaknesses of the aggressor and applying those towards how much force is required, is critical when planning bomber deterrence missions.

The greater the effort put forth to deter action, the more effective the deterrent: The sixth and final criterion for consideration is the “level of [demonstrated] commitment by the deterrer.”¹⁹ This should not be confused with criteria number three or four. The level of commitment is evaluated by the nature of the security arrangement and the amount of force used, but it is also evaluated by the associated deterrent effort put forth by the defender. The greater the effort put forth by the defender, the more believable and effective the deterrent is toward the aggressor because it demonstrates a greater commitment to deter. Although this criterion is critical for leaders and planners to use in evaluating future bomber missions, it is important to note a maximum effort is not always required. Planners should evaluate the proposed effort in relation to the overall strength of the aggressor. The stronger the aggressor, the more demonstrated effort required. The weaker the aggressor, the less demonstrated effort required. In the end, planners should look at the level of effort put forth or proposed and evaluate it

through the lens of the aggressor, to determine the level of commitment demonstrated and thus its effectiveness.

Before continuing, it is important to state, scholars and practitioners debate several other criteria used in determining the success of deterrence. These include evaluating the personalities of civilian leaders in charge. What are the resolve, rationality and credibility of these leaders? Are they rational actors? Are the threats credible or part of a standard practice of showing strength for internal and external political sake? In addition they discuss incentives and how they fit into deterrence theory. All of these criteria are valid points and extremely germane to deterrence theory but are beyond the scope for bomber specific deterrence missions. They are therefore not discussed in this paper. For more information on how these criteria fit into overall deterrence theory, they are discussed in detail in Patrick Morgan's books *Deterrence: A Conceptual Analysis* and *Deterrence Now*.²⁰

North Korea Case Study

The North Korea BAAD mission is a good case study to evaluate these criteria. This mission was flown by B-52s and B-2s over South Korea in March of 2013. The event started in December 2012 when the Democratic People's Republic of Korea (DPRK) launched a long range rocket test.²¹ In response, the United Nations (UN) passed a security resolution condemning the launch as a violation of resolutions 1718 and 1874, which demanded the DPRK not proceed with any more test launches using ballistic missile technology.²² Two months later, in February of 2013, the DPRK conducted an underground nuclear test. The state run Korean Central News Agency said the test was designed "to defend the security and sovereignty in the face of the ferocious hostile act of the US."²³ In response to this nuclear detonation, the UN passed resolution 2094 condemning the detonation.²⁴ In reaction to this latest UN resolution,

North Korea said it was “scrapping” the 1953 truce agreement and threatened to launch a preemptive nuclear strike against the United States and South Korea.²⁵ In addition, a top DPRK general claimed nuclear-tipped intercontinental ballistic missiles were ready to fire. Later, a video was released showing a mock missile attack on US government buildings including the White House and the Capitol building in Washington, D.C.²⁶ Tensions on the peninsula became extremely high. As a deterrent, the United States sent B-52 and B-2 bombers from Anderson Air Force Base, Guam and Whiteman Air Force Base, Missouri to conduct simulated attack missions over South Korea. These missions were highly publicized, with news headlines stating “U.S. Flies B-52s over South Korea” and “U.S. Flies Stealth Bomber Over Korean Peninsula Amid Escalating Tension.”²⁷ Following this show of force, North Korea threatened to attack and placed some of its forces on alert but conducted no real military buildups.²⁸ Shortly after these flights, the tension began to decrease.²⁹

This is an example of a successful case of immediate deterrence. First, there was a punctuating event, which occurred when the DPRK announced the end of the truce agreement between the United States, South Korea and the DPRK and threatened to launch an attack. Second, there was a defined aggressor and defender. In this case, South Korea was the defender with North Korea being the aggressor. Third, the United States had an established security connection with South Korea, which has been in existence for over fifty years. This long lasting connection left little ambiguity in the minds of the DPRK as to whether or not the United States would come to the defense of South Korea. Fourth, sufficient forces were used in the deterrence effort. In addition to the bombers, local forces were there to augment them. These included F-16s, F-15s, A-10s and missile defense forces totaling over 28,000 troops.³⁰ Adding the B-52s and B-2s were just enough to tip the balance and show to the DPRK it was not worth the effort.

Fifth, the defender and its US ally were militarily stronger than the aggressor was. Sixth, the level of effort was more than adequate. Speaking purely of the actual bomber missions, this was a low effort event. Bombers flew directly from Guam and Missouri and back without stopping. They did not require a full deployment forward. One could argue B-52s were deployed forward, however, those same missions could have been flown from bases in the United States just like the B-2 missions and therefore the effort was relatively the same. In this case the effort put forth by a few bombers along with the already established forces in country was enough to demonstrate a serious commitment. Overall, when evaluating these six criteria against this deterrence situation, one can see the effectiveness of using and understanding these six points. In this case all six criteria were applied effectively and thus deterrence was successful. However, a review of another bomber mission shows this is not always the case.

European Case Study

The US bomber deployment to Europe during the Crimea and Ukraine conflict is an example of a less effective deterrence mission. These bomber missions were part of a general deterrence mission. The conflict in Crimea and Ukraine with Russia started in November 2013 when Ukrainian President Viktor Yanukovich announced the suspension of trade with the European Union (EU) and instead opted to revive economic ties with Russia.³¹ He subsequently accepted a \$15 billion bailout from them including a cost reduction on imported Russian gas.³² This break from the EU and a more western leaning population led to mass protests urging Yanukovich to resign. In response, Yanukovich signed a new law banning anti-government protests but they continued and three people died during a clash with police.³³ In January 2014, the United States threatened sanctions against Ukraine if the violence continued. In turn, Yanukovich worked with the opposition party and agreed to overturn the anti-protest laws and

provide amnesty for all detained citizens. However, anti-government protests continued and in February, Russia accused the US of trying to foment a coup, and the EU of seeking a Ukraine “sphere of influence.”³⁴ That same month, the Ukrainian Parliament voted to remove Yanukovich from office and indicted him for the mass murder of anti-government protesters. Yanukovich fled to safety and denounced what he said was a coup.³⁵ In turn, Russia said it would not deal with leaders of armed mutiny and put 150,000 troops on high alert.³⁶

In response, the United States warned Moscow against any military intervention but at the end of February, armed men seized the Crimean parliament and took control of two airports. On March 1, Yanukovich resurfaced in Russia and President Putin won parliamentary approval to invade Ukraine.³⁷ One day later, the US Secretary of State John Kerry condemned Russia’s actions and threatened “very serious repercussions.”³⁸ On March 18, 2014, President Putin signed a bill absorbing Crimea in to the Russian Federation.³⁹ One month later, Russia, Ukraine, the United States and the EU all agreed to hold talks in Geneva on how to de-escalate the crisis but just a few days later Ukraine’s acting president ordered the re-launch of military operations against the pro-Russian forces. The confrontation continued through May, when Pro-Russian separatists in Donetsk and Luhansk in the east declared independence. A few weeks later in early June the United States deployed B-52s and B-2s to Europe to conduct theater training and orientation missions. These missions lasted for two weeks.

One week later, on June 25, Russia’s parliament canceled a resolution authorizing the use of Russian forces in Ukraine.⁴⁰ However, the conflict escalated again when in July, 298 people were killed when Malaysian Airlines flight 17 was shot down in the rebel held territory of eastern Ukraine. In response the United States and EU again announced new sanctions against Russia. Fighting continued until October, when Ukraine and Pro-Russian rebels signed a truce

and Russian troops began a significant withdrawal.⁴¹ Whether the truce will hold is yet to be seen as Russian military equipment and troops have been seen entering Ukraine again.⁴²

Admiral Cecil Haney, commander of USSTRATCOM, described the deployment of bombers to Europe as preplanned training and orientation missions. He said, "This deployment of strategic bombers provides an invaluable opportunity to strengthen and improve interoperability with our allies and partners. The training and integration of strategic forces demonstrates to our nation's leaders and our allies that we have the right mix of aircraft and expertise to respond to a variety of potential threats and situations."⁴³ However, these missions occurred at a very tense time in Europe and even though they were designed as training and orientation missions, news reports did not make that distinction. The Air Force Times for example said, "the B-2 deployment is another show of Washington's effort to reassure allies in the region amid Russia's recent bluster."⁴⁴ Defense One reported, the Air Force deployed "two more nuclear-capable bombers to Europe" and "their fielding comes amid stepped-up efforts by the U.S. military to reassure NATO member countries of the U.S. commitment to collective security against a backdrop of continuing tensions with Russia over its activities in Ukraine."⁴⁵ In essence, the world saw this as both a deterrence and assurance mission even though it was not planned or advertised as such. Since the intent of this mission was partly perceived as deterrence, it is a good case study to determine its effectiveness.

The first criterion is to evaluate the type of deterrence. In this case, there is not a punctuating event causing the deployment of bombers. The sanctions, movement of troops and the invasion of Crimea all could have been considered as such but were not. Therefore it was not in direct response to a punctuating event and should be considered a general deterrence mission. The second criterion, is to define the aggressor and defender. In this case, based on the sanctions

and the threat of “serious repercussions” from Secretary Kerry, the aggressor is presumed to be Russia. However, no public mention from the United States of Russian aggression was made in connection to the bomber deployments. Therefore it was ambiguous. Determining the defender in this scenario is also ambiguous. Was the United States attempting to deter further aggression by Russia into Ukraine, or was the mission to deter Russia from considering further invasion into Europe? Again, since the answers to these questions are unknown, the show of force becomes much less effective. Answering these questions would have led to a much more effective deterrent mission. Third, one must review the established security connection of the defender. In this case, there is no obvious security connection to Ukraine since they are not part of NATO. Without an established security connection Russia was less likely to believe the United States would come to their defense, again leading to a less effective deterrent. Next is to determine whether sufficient forces were used. In this case five total bombers deployed to England. Local forces such as F-16s, F-15s, A-10s, missile defense forces and 64,000 troops were already there, but did the number of bombers add enough strength for deterrence?⁴⁶ During the Berlin airlift, a similar mission was conducted sending nuclear capable B-29 bombers to England to show the United States’ commitment to the airlift and to deter the Soviet Union from interfering. During that time, these bomber missions created an enormous deterrence factor. This was of course a specific event with a specific aggressor and the United States had significant forces elsewhere in Europe to aid with deterrence. It was an immediate deterrence situation. Sending bombers in 2014 with the current US forces in theater did not have the same effect. The recent movement of Russian troops back toward Ukraine is proof of that. Of note, the recent and planned reductions of US forces in Europe will make the United States’ ability to quickly deter aggression there more difficult.⁴⁷ The fifth criterion is to review the strength of the aggressor. In

this case, Russia is strong militarily. They are a former super power with significant military capability. Thus, Russia is much harder to deter. To deter Russia, a significant additional military force would have been required to demonstrate US resolve and commitment. This leads to the sixth criteria, the level of effort demonstrated. Compared to the South Korean example, the actual deployment of bombers to Europe was a much greater effort. Five bombers with support equipment, parts, fuel, and maintenance personnel, deployed for two weeks is a significant effort. Deterrence however, was less effective. In this case the effort put forth was greater, but because the threat was stronger, it was not enough to deter. In short, upon evaluating this deterrence mission against the six criteria, one concludes deterrence was less effective. As stated earlier, although this mission was not effective as a deterrent, it still provided some level of assurance to our NATO partners. However, the effectiveness of assuring the NATO alliance is not studied here.

In reviewing these two case studies, one can see how effective the North Korean deterrence mission was, compared to the European effort. What made the North Korean mission so effective was its tailored approach. Tailored approaches are results of immediate deterrence situations. The European mission as a general deterrent effort was less effective because it was less tailored to the situation. Table 1 in Appendix A illustrates this point. Table 2 demonstrates, using various past deterrence efforts, how these criteria can provide the capability to evaluate other past and ongoing deterrence efforts. Current decision makers could use charts like these to do the same thing to evaluate future deterrence missions.

Conclusion

In conclusion, bomber deterrence missions are the most effective and measurable when they are part of an immediate deterrence situation and the six criteria are reviewed and evaluated

during planning. Decision makers should analyze and apply these criteria prior to forecasting deterrence missions in order to evaluate their potential for success. In addition, the Joint Staff, USSTRATCOM, and Air Force Global Strike Command should standardize these criteria in mission preparation documents and as part of planning discussions for these types of missions. Lemay seemed to understand these six principles. For his North Pole mission there was a punctuating event, there was a specific aggressor and defender with an established security connection. Sufficient force was used, including 21 bomber wings, and although the military threat was arguably of the same strength, the level of effort displayed showed the resolve and commitment to fight that aggression. The Air Force should do the same today when planning these missions. This is not to say overseas bomber training missions are not worth the effort and should only be conducted in immediate deterrence situations. On the contrary, they are great training opportunities and should be accomplished even when immediate deterrent situations do not exist. They should occur regularly in order to maintain the combat readiness of those organizations and thereby aid in general deterrence. However, planners should know they are not the same as immediate deterrence missions and are therefore not effective as such. Finally, these six criteria are not universal principles and cannot predict whether deterrence will work in all situations. However, to be the most effective, decision makers should review, understand and apply these criteria when planning future deterrence missions.

Appendix A

TABLE 1. North Korea and European missions compared to the deterrence criteria

	North Korea Case Study	European Case Study
1) Punctuating Event	Y	N
2) Specific Defender and Aggressor	Y	N
3) Established Security Connection	Y	N
4) Sufficient Force Used	Y	N
5) Defender was Militarily Stronger	Y	N
6) Overall Effort	LOW	HIGH

TABLE 2. Other scenarios evaluated against the deterrence criteria

	Lemay Missions in 1955-1956	Cuban Missile Crisis
1) Punctuating Event	(?)	Y
2) Specific Defender and Aggressor	Y	Y
3) Established Security Connection	Y	Y
4) Sufficient Force Used	Y	Y
5) Defender was Militarily Stronger	Y	N
6) Overall Effort	HIGH	HIGH
	Cold War Overall	Iran's Nuclear Proliferation & Israel
1) Punctuating Event	(?)	N
2) Specific Defender and Aggressor	Y	Y
3) Established Security Connection	Y	Y
4) Sufficient Force Used	Y	(?)
5) Defender was Militarily Stronger	N	Y
6) Overall Effort	HIGH	LOW
(?) Indicates the answer is debatable		

End Notes

- ¹ Patrick M. Morgan, *Deterrence Now* (Cambridge: Cambridge University Press, 2003), 153.
- ² Barrett Tillman, *LeMay* (New York, N.Y.: Palgrave Macmillan, 2007), 124.
- ³ Ibid.
- ⁴ “Punctuating” refers to an event that is out of the ordinary. A disturbing, disrupting or interrupting event that causes one to take action.
- ⁵ Patrick M. Morgan, *Deterrence: A Conceptual Analysis*, 2nd ed. (Beverly Hills, CA: SAGE Publications, Inc., 1983), 28.
- ⁶ Ibid., 35.
- ⁷ Ibid.
- ⁸ Ibid., 43.
- ⁹ Morgan, *Deterrence Now*, 83.
- ¹⁰ Morgan, *Deterrence: A Conceptual Analysis*, 38.
- ¹¹ Ibid., 34.
- ¹² Morgan, *Deterrence Now*, 122.
- ¹³ Ibid., 153.
- ¹⁴ Ibid., 115.
- ¹⁵ Ibid., 153.
- ¹⁶ Paul Huth, and Bruce Russett, “Deterrence Failure and Crisis Escalation,” *International Studies Quarterly* 32, no. 1 (March 1988): 35.
- ¹⁷ Morgan, *Deterrence Now*, 154.
- ¹⁸ Ibid., 108.
- ¹⁹ Ibid., 150.
- ²⁰ Morgan, *Deterrence: A Conceptual Analysis*; Morgan, *Deterrence Now*.
- ²¹ Jethro Mullen, “U.S. says it sent B-2 stealth bombers over South Korea,” *CNN.com*. 28 March 2013, <http://www.cnn.com/2013/03/28/world/asia/korea-us-b2-flights>.
- ²² United Nations Security Council, Resolution 2087, “Non-proliferation/Democratic People's Republic of Korea,” 22 January 2013.
- ²³ Chelsea Carter and Kevin Voigt, “North Korea's war of words escalates--Timeline of a crisis,” *CNN.com*, 10 April 2013, <http://www.cnn.com/2013/04/10/world/asia/north-korea-threats-timeline>.
- ²⁴ United Nations Security Council, Resolution 2094, “Non-proliferation/Democratic People's Republic of Korea,” 7 March 2013.
- ²⁵ Carter and Voigt, “North Korea's war of words escalates.”
- ²⁶ Ibid.
- ²⁷ Brad Lendon, “U.S. Flies B52s over South Korea,” *CNN.com*, 19 March 2013, <http://www.cnn.com/2013/03/19/world/asia/korea-b-52s>; Paul D. Shinkman, “U.S. Flies Stealth Bomber Over Korean Peninsula Amid Escalating Tension,” *U.S. News and World Report*, 28 March 2013, <http://www.usnews.com/news/articles/2013/03/28/us-flies-stealth-bomber-over-korean-peninsula-amid-escalating-tension>.
- ²⁸ Carter and Voigt, “North Korea's war of words escalates.”
- ²⁹ On January 6, 2016, approximately 3 years after the event described here, North Korea detonated another nuclear weapon. Shortly thereafter the US Air Force conducted another B-52 deterrence mission flown from Anderson AFB, Guam to South Korea. Subsequently, on

February 7, 2016, North Korea conducted a space launch, using a long range rocket, and put an object into space. As of the writing of this paper, it is unclear what additional actions the United States will take in its deterrence efforts. Therefore, with this situation still ongoing, it is too early to evaluate this new scenario as either a successful or unsuccessful deterrence effort.

³⁰ Shinkman, "U.S. Flies Stealth Bomber Over Korean Peninsula Amid Escalating Tension."

³¹ Gabriela Baczynska, Pavel Polityuk, and Raissa Kasolowsky, "Timeline: Political crisis in Ukraine and Russia's occupation of Crimea," *Reuters.com*, 8 March 2014, <http://www.reuters.com/article/us-ukraine-crisis-timeline-idUSBREA270PO20140308>.

³² Ibid.

³³ Ibid.

³⁴ Ibid.

³⁵ Ibid.

³⁶ Ibid.

³⁷ Ibid.

³⁸ Ibid.

³⁹ BBC News. "Ukraine crisis: Timeline," *BBC News*, 13 November 2014, <http://www.bbc.com/news/world-middle-east-26248275>.

⁴⁰ Ibid.

⁴¹ Ibid.

⁴² Ibid.

⁴³ Mariano Castillo, "U.S. sends B-2 stealth bombers to Europe," *CNN.com*, 11 June 2014, <http://www.cnn.com/2014/06/10/world/europe/europe-b-2-bombers/index.html>.

⁴⁴ Oriana Pawlyk, "U.S. sends stealth bombers to Europe," *AirForceTimes.com*, 8 June 2014, <http://archive.airforcetimes.com/article/20140608/NEWS08/306080034/U-S-sends-stealth-bombers-Europe>.

⁴⁵ Defense One, "U.S. Sends Two B-2 Stealth Bombers to Europe," *DefenseOne.com*, 9 June 2014, <http://www.defenseone.com/threats/2014/06/us-sends-two-b-2-stealth-bombers-europe/86092/>.

⁴⁶ Nick Simeone, "Breedlove: U.S. Reconsidering Troop Reductions in Europe," *Defense.gov*, 16 September 2014, <http://www.defense.gov/News-Article-View/Article/603250>.

⁴⁷ Ibid.

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