

Ballistic Missile Defence in the 21st Century

Written by Oliver Jones

This PDF is auto-generated for reference only. As such, it may contain some conversion errors and/or missing information. For all formal use please refer to the official version on the website, as linked below.

Ballistic Missile Defence in the 21st Century

<https://www.e-ir.info/2010/03/13/ballistic-missile-defence-in-the-21st-century/>

OLIVER JONES, MAR 13 2010

Assess whether BMD is a Source of Stability or Instability for States in International Relations in the Twenty-First Century.

Ballistic Missile Defence (BMD) is a term that describes a system or systems designed to defeat Ballistic Missiles[1] during the flight of the missile to its Target. These systems are broadly divided into three types of system; Boost Phase Interceptors, Terminal Phase Interceptors, and Mid-Course Interceptors (Taylor and Youngs 2003). These categories essentially define the stage of flight in which a missile will be intercepted and although useful for dividing system types, they share little difference between them when considering the impact BMD weapons in general can have on strategic stability.

This essay aims to assess the implications of Ballistic Missile Defence upon 'stability' within the international system. Ballistic Missile Defence is an objective and program that has the potential to change entirely the strategic landscape of the Twenty-First Century. The programs of the United States of America to achieve this kind of strategic ability in recent history have been the most advanced and significant. Though many other nations have the capacity to produce forms of ABM (Anti Ballistic Missile Weaponry), notably Russia with the development of systems such as the S-400 Triumf (NATO designation SA-21 "Growler"), however these systems are ABM "capable" SAM launchers rather than being specifically developed ABM systems[2] (Federation of American Scientists 2000).

In terms of Ballistic Missile Defence the USA is the most important state to consider when discussing the implications for global stability; this is because the USA has so far been the primary advocate and initiator of any comprehensive BMD program in the Twenty First Century. In the US Ballistic Missile Defence, or as it has been previously thought of as; 'National Missile Defence', 'Strategic Defence Initiative' and more generally as 'Anti Ballistic Missile technology', has, since the 1960's been a major component of American military concern, but it is only in recent years spending[3] on BMD been so significant, which, in turn, clearly signals that the United States plans to go ahead to deploy a significant and dedicated BMD network, political and diplomatic moves have also shown this to be true.

The Implications of the Missile Defence programs of the United States have far reaching consequences not only for the way the United States will be Likely to conduct itself, but also the way in which other states will approach their conduct and relationships with the United States and each other. By using the United States as a 'model' for considering the strategic implications of BMD, it is also possible to use existing data and information on events and responses to draw conclusions on what is essentially a theoretical question (What are the implications, for stability, of a state developing and employing BMD?). This essay plans to use both theoretical arguments and real world scenarios featuring the United States as a basis for analysing the effect that a BMD program would have on stability.

In order to do this it is important to look at the motivations of current US plans for BMD, and how its proponents believe it will improve stability. It is then important to consider, with reference to international stability, what other countries likely responses could be to the BMD program, and also to critically assess the motivations and need for BMD. These latter two categories can largely be seen to be an anathema to the first, allowing the balance of arguments to be effectively assessed.

In conclusion the essay will aim to bring these elements together and assess whether a program of BMD can improve

Ballistic Missile Defence in the 21st Century

Written by Oliver Jones

international stability, or whether it has a detrimental impact on it? It will also highlight some other important issues associated with any country (United States or not) instituting a program of Ballistic Missile Defence.

The Rational for BMD, how it will Improve Stability?

One of the Main thrusts of the arguments that call for BMD, for any nation, is the idea that it is likely to increase international stability by making Ballistic Missiles obsolete, rendering them and the Nuclear, Radiological, Biological and Chemical (NRBC) weapons they are so often associated with obsolete, or less desirable (Gray and Walton 2007). The argument follows from this also that holding effective means of defence against BM (Ballistic Missile[4]) threats no longer requires the defending state to hold large quantities of Nuclear weapons stockpiles. This was an argument picked up by the US government for its current BMD program. The 2002 Nuclear Posture Review identified what was termed a 'new strategic triad' which consisted of "Deterrence, *Defence* [my emphasis] and counter-force" capabilities (Russell and Wirtz 2004)[5]. Any such reductions, the argument follows, in both proliferation and existing stockpiles, can on the surface, only have positive effects.

Another key component of the justification for a BMD complex, in terms of 'stability', is that in an environment where the number of nuclear and other NRBC capable states is increasing that the chances of use of these 'WMD's' and of the Ballistic Missiles to deliver them is significantly increased by this[6]. (Gray and Walton 2007). This stems from both a generally logical idea that the increased global capability for use, plus the increased probability of confrontations between an ever larger number of nuclear (and other NRBC) armed states means that these weapons are more likely to be used. The other aspect of this vision of a less stable future with increased chance of NRBC use is based on judgements about perceived 'irrationality' the leadership of states seeking NRBC weapons and BM delivery systems. This again is especially true of the justifications for the current US BMD programs and doctrine. "Containment [deterrence] is not possible when *unbalanced* [my emphasis] dictators with weapons of mass destruction can deliver those weapons on missiles" (Bush 2002).

The concept that the use of ballistic missiles will be severely increased in the future, virtually destroying stability and balances of power (small states are now able to effectively strike at larger states or at each other for relatively lower cost than previously, and will capitalise on this) is one that clearly supports the implementation of BMD, as both a deterrent and a defence, something that will be a boon to stability and redress the upset of the balance of power. "The more successful the NMD [BMD], the less likely the threat of ICBM's [and other 'Ballistic' missiles]" (Palmore and Melese 2001)

The Failings of the BMD rational for 'Stability': 'Target' State's responses.

Perhaps the most significant opposition to the concept of BMD programs providing for a more 'Stable' international scene in the future comes from a misunderstanding of the motivations and responses of the 'Adversary' States. Key to considerations of this are ideas of theories such as 'The Security Dilemma'[7] , 'Game Theory' also has some important points to raise and can be used to speculate responses from 'target' states.

Perhaps one of the most obvious criticisms of the idea that BMD will increase international stability is the idea that the employment of such systems by one or more states in confrontation will spark an arms race. This relies on classic theories of the 'Security Dilemma', Clearly any development and introduction of BMD will be met with some form of significant reciprocation, in order for states to, at the very least, attempt to maintain the Status Quo. For example cold war Missile developments and stockpiles were consistently matched by opposing sides (or matched based on estimates of an adversary's strength). In the US this saw the growth of concepts such as the 'Bomber' and 'Missile Gap's'. It is logical to conclude that BMD systems may only serve to repeat such events.

Not only could this emergence of BMD defences see an arms race develop over BMD technology, but it could see resurgence in the numbers of Nuclear weapons and delivery systems for these weapons being built. Faced with the real possibility that a majority of warheads may not 'get through' planers may well adopt a saturation approach to countering BMD, and to ensuring the potency of their nuclear arsenals. (Gray and Walton 2007). This can be said to be especially true of developed nuclear States such as the Russian Federation, for whom nuclear weapons and

Ballistic Missile Defence in the 21st Century

Written by Oliver Jones

nuclear capabilities are still vitally important as a demonstrator of their international power and military strength (Pikayev 2004).

A second criticism, one that is closely linked to the idea of new arms races, is the clear and real possibility that by denying the means of Ballistic missiles as a means of achieving strategic parity with the United States. (or any other nation for that matter) states will turn to alternative forces. As Palmore and Melese aptly put it; development of effective ABM technologies carries with it an 'opportunity cost' (2001). States can either find alternate weapons systems and means of delivery for WMD's, such as cruise missiles, which require entirely new systems to be effectively dealt with, the Iraq War of 2003 demonstrated that for the United States, protection from the threat of cruise missiles had been woefully inadequate (Gormley 2003-2004). Game Theory suggests that states, in confrontation with the USA, would immediately switch to other weapons systems for delivery, rendering any BMD program a highly expensive "Maginot Line" (Palmore and Melese 2001). Other alternatives also exist to the use of Ballistic Missiles for adversary states to use, a mere change in targeting strategy to overseas interests of a state that cannot be covered by BMD, or perhaps worryingly the exploration of 'Unconventional Warfare' methods of attack. Whilst it is highly unlikely that any state would provide terror or insurgent groups with NRBC weapons now, in the future, faced with little alternative to redress the strategic balance, many states may well turn to this option. Both recent Chinese defence documents such as "Unrestricted Warfare" (Liang and Xiangsui 1999) and Cuba's action post 'Cuban Missile Crisis'[8] (Amuchastegui 1998) can be seen to support this. The implications decisions such as these could have upon regional and global Stability are monumental.

Finally BMD for many nations, but more importantly the US and Russia (those most capable of developing such systems in the coming years) represents a direct challenge to many of the core themes of international law and relations that have been in existence almost since the end of the Second World War. In pursuing its ABM desires the US has already torn asunder two of the key documents on which nuclear stability rested. The US decision to leave the ABM treaty in 2002 and the withdrawal from arms reduction talks send clear signals.

Targeting Strategies also remain highly important areas to consider, with the introduction of BMD. With the probability of large quantities of warheads 'breaking through' being low, states are likely to return to almost exclusive 'counter-value' targeting, as it cannot be guaranteed that a 'counter-force' attack will by any means work. The possibility of a prepared defence also logically lend itself to the assumption that methods of achieving Strategic Surprise will become far more desirable in an nuclear confrontation, increasing chances of war.

The Failings of the BMD rational for 'Stability': Problems with the theories

Several of the Key assumptions of the arguments that support the notion of BMD as a stability enhancer in the international system contain serious flaws. These flaws are hugely important to consider when detailing the strategic implications of BMD systems, the most important of which are listed below.

First amongst these flaws in the notion that state's currently believed to be in possession of nuclear weapons and BM technology, or those states believed to be seeking BM technology and/or NRBC technology[9] are 1) irrational and 2) seek to use these weapons at the first available opportunity. To presume the leadership of these States are devoid of rationality or the ability to calculate decisions is clearly an error., for example the likelihood of North Korea using nuclear weapons in an BM attack on the US or US interests is clearly very small. Although the North Korean Regime is reprehensible "there's nothing much that they would *do* [original emphasis] with nuclear weapons.... if they ever made a move [to use nuclear weaponry], the country gets destroyed tomorrow. So the only role that nuclear weapons could play for them [N. Korea] is as a deterrent to attack" (Chomsky 2003) and, by extension, as a means of guaranteeing the current leaderships hold on power. It is true that North Korea is also believed to have been in possession of Nuclear explosives[10] since 2006 (Gray and Walton 2007), yet has so far made no use of them in a military sense. This point is further underlined by Michael Quinlan in 'Deterrence and Deterrability' when he points out that "deterrence works by displaying the prospect of costs in terms of values prized by the 'deterree'. For almost every society known to history, physical existence and physical assets are not the only such values; and instruments for executing physical destruction – that is, primarily, military instruments – are therefore not the only possible instruments of deterrence. Political, economic, social, judicial and even religious or similar ones can also sometimes

Ballistic Missile Defence in the 21st Century

Written by Oliver Jones

make a contribution.” (Quinlan 2004)

Another Key concern and flaw in the BMD advocacy arguments is that other states would see the institution of any BMD program as purely defensive in nature. What is clear is that the introduction of a BMD program, far from being seen as a purely defensive measure, can be seen as an aggressive move to alter existing ‘balances of power’ and ‘balances of terror’ entirely into a given state’s favour. This enables any state which has instituted a large-scale BMD program to act offensively and aggressively, destabilising regions and the world as it sees fit. This point again is a point that can be related back to the USA in the recent past “One observer has noted that the NPR moves US strategy away from the idea of mutually assured destruction toward the concept of ‘unilateral assured destruction’” (Russell and Wirtz 2004) a clear message that the US could and would be willing to use its own conventional and even NRBC weapons to destroy an adversary. This is a lesson that comes as being especially potent in the light of recent US moves in Iraq in 2003.

Conclusions

In conclusion therefore it is clear that the concept of BDM has serious implications of international Stability. It is clear that much of the argument that lies behind the idea of BMD promoting stability carries serious flaws or miscalculations. These range from assumptions about the nature of adversaries, to an almost complete failure to consider how adversaries will be quick to respond and adapt to this new strategic environment. In the words of the very NPR document that so strongly advocates the shift in US strategy and the employment of BMD, “adaptive planning” will be key (Russell and Wirtz 2004), a lesson that will not be lost on the majority of strategists. BMD ultimately seems to offer more chances to destabilise the international situation than it seems to offer chances to stabilise it (At least in the short run). However there is an important caveat to this statement, That is, the destabilisation of the current system is not necessarily outside of states interests.

For many states the introduction of instability may well be of benefit to them in the long run. The equation is not so simple as ‘Stability = Good, Instability = Bad’. For example, given that it has already been shown that US BMD can be seen as a direct threat and challenge too many states, giving the US a capacity to act with confidence in its ability to emasculate any attempted response, this vastly improves the bargaining position of the United States and allows it to take much firmer stances when negotiating with states that are its rivals or future rivals, or with states that are regional powers and adversaries for the US.

Ultimately for a State, the decision to employ a BDM complex does not stem solely from the desire to improve international stability, though this may well be amongst the factors, it instead comes from a desire to either improve its own defensive and offensive capabilities. Stability has a severe effect on this, but it is up to the leadership of any such nation state to decide whether the costs that come from a destabilised environment outweigh the potential benefits such a capability could provide, both now and in the future.

The course the new American administration takes over the BMD issue will be an interesting issue to watch, and one that will demonstrate clearly whether the United States still values the potential for greater and unsurpassed military capability over the stability and maintenance of the international system, Ultimately the course that is taken on BMD will be clearly demonstrative of what the US sees as its strategic priorities and the strategic direction it wishes to take.

Bibliography

Amuchastegui, Domingo. “Cuban Intelligence and the October Crisis.” *Intelligence and National Security* 13, no. 3 (1998).

President Bush delivers graduation speech at West Point. Performed by George W. Bush. United States Military Academy, West Point. June 1, 2002.

Chomsky, Noam. *Understanding Power: The Indispensable Chomsky*. London: Vintage, 2003.

Ballistic Missile Defence in the 21st Century

Written by Oliver Jones

Federation of American Scientists. "S-400 SA-20 Triumph." *Federation of American Scientists*. June 16, 2000. <http://www.fas.org/nuke/guide/russia/airdef/s-400.htm> (accessed March 14, 2009).

Gormley, Dennis. "Missile Defence Myopia: Lessons from the Iraq War." *Survival* 45, no. 4 (2003-2004).

Gray, Colin, and Dale Walton. "The Second Nuclear Age: Nuclear Weapons in the Twenty-First Century." In *Strategy in the Contemporary World*, edited by John Baylis, James Wirtz, Colin Gray and Eliot Cohen, 211-227. Oxford: OUP, 2007.

Hellman, Christopher, and Travis Sharp. "The FY 2009 Pentagon Spending Request – Ballistic Missile Defense." *Center for Arms Control and Non-Proliferation*. February 2008. http://www.armscontrolcenter.org/policy/securityspending/articles/fy09_dod_request_bmd/ (accessed March 15, 2009).

Herz, John H. *Political Realism and Political Idealism: A Study in Theories and Realities*. Chicago: University of Chicago Press, 1951.

Liang, Qiao, and Wang Xiangsui. *Unrestricted Warfare*. Beijing: PLA Literature and Arts Publishing House, 1999.

Ministry of Defence. *Missile Defence: A Public Discussion Paper*. Government Paper, London: MoD, 2002.

Palmore, Julian, and Francoise Melese. "A Game Theory View of Preventive Defense Against Ballistic Missile Attack." *Defense & Security Analysis* 17, no. 2 (August 2001): 211-215.

Pikayev, Alexander. "A few speculations on Russia's deterrence policy." *Contemporary Security Policy* 25, no. 1 (2004): 109-122.

Quinlan, Sir. Michael. "Deterrence and Deterrability." *Contemporary Security Policy* 25, no. 1 (2004): 11-17.

Russell, James, and James Wirtz. "United States Nuclear Strategy in the Twenty-First Century." *Contemporary Security Policy* 25, no. 1 (2004).

Taylor, Claire, and Tim Youngs. *Ballistic Missile Defence*. Government Research Paper, London: House of Commons Library, 2003.

United States Government. *The National Security Strategy of the United States of America*. Government Strategy Document, Washington: Office of the President of the United States of America, 2002.

[1] "Missiles are categorised as 'ballistic' if, once their fuel is expended on launch; they then travel under the influence of gravity and air resistance. Modern missiles are launched on a precise trajectory intended to curve up into space, or the outer reaches of the atmosphere, and then descend under gravity to the target. With modern ballistic missiles, the payload, which may comprise one or more warheads, separates from the rest of the missile in space, before it re-enters the earth's atmosphere and continues to the target." (Taylor and Youngs 2003)

[2] This raises questions as to whether these can then be truly considered to come under the term "Ballistic Missile Defence", The S-400 triumph especially falls within the acceptance of the AMB treaty signed by the former USSR and USA (Federation of American Scientists 2000) (though the USA has now withdrawn from this treaty as of 2002).

[3] US declared FY2008 spending on its Ballistic Missile Defence programs was greater than US\$10.4 million. (Hellman and Sharp 2008)

[4] Whether these be ICBM's, IRBM's, MRBM's or SLBM's

Ballistic Missile Defence in the 21st Century

Written by Oliver Jones

[5] Though this concept of a reduction in Nuclear stockpiles is not solely due to the existence of ABM capabilities, clearly it also stems from the 'range' of other options in the "Seamless web of capabilities [offered by the new triad]" (Russell and Wirtz 2004)

[6] This is an especially important point when considering the United States justification for its development of BMD programs and capabilities. This is clearly demonstrated by statements in important government documents which outline future strategy and strategic requirements and that identify "rogue states" as being bent on the acquisition of 'WMD' and on an increasing spread of BM technology. (United States Government 2002).

[7] Any attempt a state makes to increase its own security will cause opponents to reciprocate, therefore undoing or worsening the overall security situation (Herz 1951), as cooperation and communication is decreased and suspicion increases

[8] After the resolution of the Cuban Missile Crisis in 1961 Cuban intelligence agencies instigated operations 'Boomerang' and 'Defensa Activa Revolucionaria' which set up links to Guerrilla and Terror movements across the Americas, In return for funding and training these groups would act as strategic forces on behalf of Cuba in the event of a Cuban-American war, performing attacks on us military and civilian targets. (Amuchastegui 1998)

[9] For example a UK MoD public discussion paper of 2002 identified Iraq, North Korea, Iran and Libya as states with development programs for WMD and the capability to use BM for delivery of said weapons. (Ministry of Defence 2002), Though it is important to note that Libya and Iraq are no longer likely to feature on such a list.

[10] It is unknown whether these are truly 'weapon-ised'

—

Written by: Oliver Jones
Written At: Aberystwyth University
Written For Alastair Finlan
Date written: March 2009