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TIME TO GET INVOLVED: CANADA AND BALLISTIC MISSILE DEFENCE

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Exercise Solo Flight

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INTRODUCTION

The issue of Canadian involvement in Ballistic Missile Defence (BMD) has a long and difficult history. Canada is in the contradictory position of having explicitly declined to take part in the US National level BMD programme on three occasions while simultaneously allowing data from NORAD to be used by that system and also while supporting NATO's BMD initiative. The issue is further clouded by the fact that there are different levels of BMD programmes, which is not understood by many commentators on the subject. While there are many arguments for and against BMD in Canada, the central issues have always been about our relationship with the US and involvement in our own defence and sovereignty on one side and fears about potential negative impacts from BMD and negative Canadian public opinion on the other. Added to this is an increasingly unstable world in which Western relations with Russia have turned to the worse and there are an increasing number of threat states with Ballistic Missile (BM) programmes, notably North Korea and Iran. This paper argues that Canada should join all of its major allies in acknowledging its responsibilities for collective defence and reverse its position on the US National level BMD programme. Canada should request permission to join with our closest ally on BMD as soon as possible. In addition, Canada should join other BMD programmes as appropriate for National Defence needs.

The paper opens with a discussion of the threat and some of the technical aspects and types of BMD. The paper then looks at the history of Canada's previous decisions regarding participation in BMD. This discussion includes those arguments for and against Canada's participation that remain germane to the current situation. Finally, the paper

describes the current arguments on the topic and looks at the decisions on BMD made by our closest allies. The paper ultimately leads to the conclusion that Canada's position on BMD in an increasingly unstable world is unacceptable. Canada should become an active participant in BMD development and in the control and oversight of the systems that come out of these programmes.

DISCUSSION

This section begins with a brief introduction to the technical aspects of BMD including the nature of the threat and the different types or levels of BMD. The historical arguments for and against Canadian involvement are discussed and then the nature and merit of a Canadian role in BMD is developed leading to an argument that Canada should join US National level BMD and should also participate in tactical BMD programmes with the US, NATO and our other allies.

The Threat

In discussing the BM threat, there are two major aspects that must be explored: ability and intent. The ability of a nation to strike relates to the nature of the missiles, which is normally discussed in terms of range. BMs come in four major ranges as seen in Figure 1 below, taken from a US Air Force intelligence assessment:

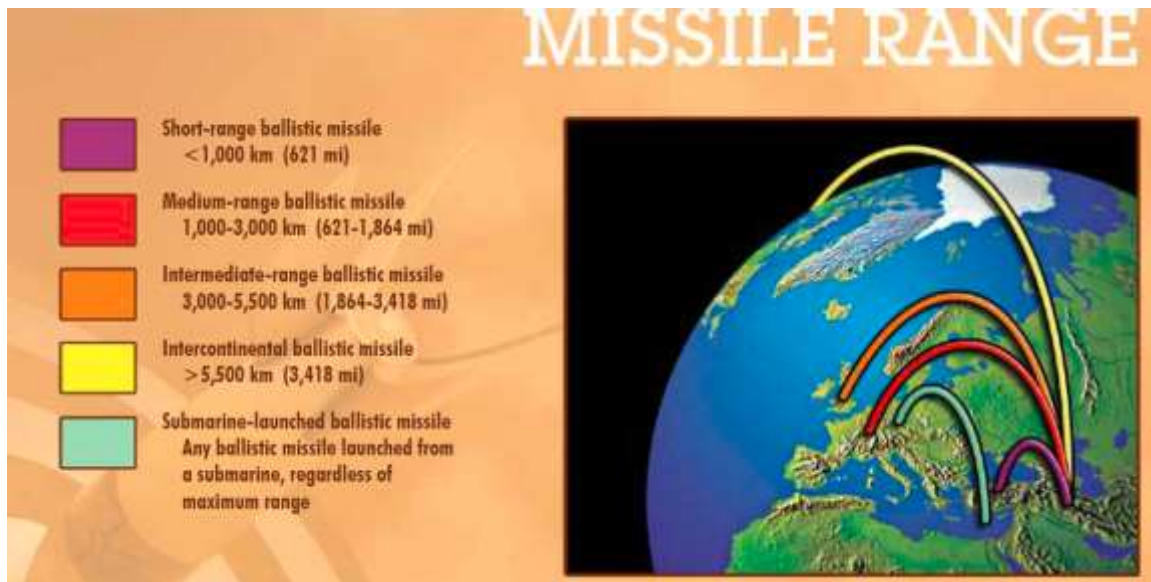


Figure 1 - Ballistic Missile Ranges¹

The range of a BM is important in ways beyond just the reach of the weapon system. The range of a BM is a direct function of the missile's maximum velocity, which means importantly from a BMD point of view, the longer the range of the weapon, the more difficult it is to intercept. In addition, the requirement for higher maximum velocity means an increase in technical complexity. This means that more nations have short range BMs than intercontinental ballistic missiles (ICBMs). This is a key element in the discussion of Canadian participation in BMD as for many years there were only two potential threat nations with fielded ICBMs (Russia and China) capable of reaching Canada. This will be discussed in more detail later, but the BMD systems currently in use or under development do not enable defence against the large numbers of BMs in the inventories of Russia and to a lesser extent China. These BMD systems are not intended as protection against the Russian or Chinese threats (with the exception of a rogue or

¹ *Ballistic and Cruise Missile Threat* (Wright-Patterson Air Force Base: National Air and Space Intelligence Center,[2013]), 9.

accidental launch of one missile).² So while there are many nations capable of threatening some of our NATO and other allies with BMs, the question might be asked, why then this is an issue at all for Canada? Beyond our obvious responsibilities in collective defence, the answer is the increasing capabilities of the BM programmes of North Korea and Iran. North Korea has successfully tested nuclear weapons and Iran has a known nuclear weapon programme (albeit one under significant pressure from external states). Both of these nations have been working on long range BMs, with North Korea conducting a partially successful test of a missile with ICBM range in December of 2012.³ In the matter of intent, North Korea is an increasingly isolated and erratic nation, with a history of provocations up to an unprovoked attack sinking a South Korean submarine with the loss of 46 sailors, and cross border shelling that has killed South Korean civilians.⁴ North Korean propaganda frequently refers to the use of nuclear weapons against Canada's neighbour.⁵ Any North Korean BM attacking the US has a trajectory over Canada, so these threats cannot be taken lightly in this country. Iran, also, has frequently made threatening comments about the US and its Western Allies.⁶ While both the technical capability and intent of these nations to attack the West has been questioned throughout the years⁷, the December 2012 test shows that a nuclear armed North Korea, at least, is close to ICBM capability. Contrary to the numbers of weapons employed by Russia and

² The Standing Senate Committee on National Security and Defence, *Canada and Ballistic Missile Defence: Responding to the Evolving Threat* (Ottawa, On: The Parliament of Canada, [2014]), 6.

³ Frank Harvey, *North Korea, Ballistic Missile Defence and Canada-U.S. Defence Cooperation* (Calgary: Canadian Defence and Foreign Affairs Institute, [2013]), 1.

⁴ Bruce Bennett, "Deterring North Korea from using WMD in Future Conflicts and Crises," *Strategic Studies Quarterly* (Winter, 2012), 121.

⁵ "North Korea Releases New Propaganda Video Showing US Military in Nuclear Flames." <http://www.digitalafro.com/north-korea-releases-new-propaganda-video-showing-us-military-in-nuclear-flames/>, May 4, 2015).

⁶ "Ballistic Missile Threat." <http://www.iranintelligence.com/missiles>. (2015).

⁷ Joseph Cirincione, "Assessing the Assessment: The 1999 National Intelligence Assessment of the Ballistic Missile Threat," *The Nonproliferation Review* 7, no. 1 (2000), 125.

China, the numbers of ICBMs likely to be employed by North Korea or Iran are within the ability of the BMD systems under discussion, in addition to the less likely but possible threat of a rogue or unintentional launch.

Also, nuclear armed nations Pakistan and India both have BM programmes. While these nations do not pose a threat to Canada or its allies now, they are both situated in a volatile part of the world. A nation can change from an ally to an enemy more quickly than Canada could purchase or develop a BMD system.

In addition to the developing threat of direct attack on Canada, the employment in recent years of Anti-Ship Ballistic Missiles (ASBMs) is a cause for concern to the Royal Canadian Navy (RCN). The Chinese DongFeng-21 and Iranian Khaliq Fars missiles are examples of ASBMs that follow a guided ballistic trajectory. The current generation of western naval defence missiles is not designed to defend against this trajectory and these weapons threaten those who would pass on the seas upon their lawful occasions⁸. Potential Canadian involvement in weapon programmes to counter these weapons is complicated by the Canadian stance on the US national BMD programme even though these things are not directly related.

It was the notion of threat, from first the Germans and then the Soviets, that drove Canada and the US together on defence matters as we shall see. Canada is already a co-partner with the US in North American defence and would naturally be equally threatened by any BM attack on the US.

⁸ Rudyard Kipling, *The Naval Prayer*.

Types of BMD

While this is not a technical paper, it is important to understand that there are different types of BMD systems. This information is missing from much of the literature available on this topic. These types of BMD system are differentiated by: when they attack the enemy BM, by the amount of area that they can defend and to a lesser extent by the speed of the weapon that they can engage. This section gleans a few points from a guided weapon system MSC paper on this topic⁹ and first looks at the different options for attacking enemy BMs and then at the three levels of BMD with some examples of fielded and developmental systems. This paper will not go into technical detail.

Options for Attacking an Enemy BM

Figure 2 from the US Missile Defence Agency website shows a basic trajectory of a BM.



Figure 2 - Ballistic Missile Trajectory¹⁰

The three options for attacking an enemy missile (Boost, Midcourse and Terminal) are listed in the figure and each has advantages and disadvantages. Like any guided weapon, the BMD system must detect, track, assess, launch, guide, re-assess and re-launch as necessary in order to destroy the incoming BM. This is challenging for a

⁹ James Campbell, "Ballistic Missile Defence" (MSc Assignment, Shrivenham, UK, 2012).

¹⁰ "The Threat." US DoD, <http://www.mda.mil>

BMD system due to the ranges and speeds involved, but also because the BM is in the atmosphere (“endo-atmospheric”) for part of the trajectory and out for another part (“exo-atmospheric”). This is challenging because the target presents very differently in and out of the atmosphere and the BMD guidance, control and warhead all must be different in or out of the atmosphere; for example the BMD interceptor cannot use control fins exo-atmospherically as there is no air to affect.

Boost phase lasts 1 to 5 minutes and is while the rocket motor is burning. It is thus, when the weapon is easiest to detect and track. It is also before the weapon has separated into possible multiple warheads or deployed decoys as the weapon is still endo-atmospheric. While these arguments are strongly in favour of Boost phase intercept, the question of time and distance are very much against the defending BMD interceptor which must be forward deployed relatively near the BM launch site. Some have argued that Boost phase is the only sensible time for intercept¹¹, while others have said it is impossible¹². Midcourse intercept has the advantage of taking place after the attacking missile has left the atmosphere and is in the most predictable and longest lasting portion of its trajectory, with a duration of up to 20 minutes for an ICBM. However, outside of the atmosphere, the attacking missile is cold and harder to track. It can also easily deploy countermeasure decoys to confuse the BMD. These decoys would not last long due to friction within the atmosphere at the speed the missile travelling, but this is not a problem exo-atmospherically. In addition, many attacking missiles deploy multiple independent

¹¹ Richard Garwin, "Boost-Phase Intercept -- Not if, but When," *Inside Missile Defense* (July 12, 2000).

¹² Michael Fabey, "NRC: Dump Boost -Phase Ballistic Missile Defense," *Aviation Weekly*, (12 September 2015).

re-entry vehicles (MIRVs) during Midcourse complicating the BMD system's challenge as seen in Figure3.



Figure 3 - SS 20 IRBM showing three MIRVs¹³

The final option is to attack the missile during the Terminal phase. The atmosphere will aid in discriminating decoys and will heat the target allowing for easier tracking. However, the target is now maneuvering and harder to hit. In addition, time and distance again begin to play a significant role as the weapon comes down to earth necessitating that the defending system be fairly close to the attacking missile's target with this phase only lasting up to 5 minutes.

Ideally, the BMD system is able to take advantage of a layered approach. If forward deployment of the system is available, then that should be used to attack the missile in the Boost phase. However, it is not always possible (as an example, in the North Korean case, the BMD system would have to be deployed in or over China, which is unlikely to happen). The system is then required to attack the target in one of the other

¹³ NASIC, 8.

phases. This brief discussion of attack options is provided to introduce the complexity involved in a BMD system.

The next sections briefly discuss the three types of BMD system based on area defended.

Area BMD (ABMD)

An ABMD system is designed to defend a fairly small location or tactical position such as a town, airfield or a group of ships. ABMD systems are generally less sophisticated and are limited by the speed of the interceptor. The American Patriot and French SAMP/T (which fires variants of the Anglo-French-Italian Aster missile) are examples of fielded ABMD systems.

Theatre BMD (TBMD)

TBMD systems are able to cover larger areas up to and including a small country if employed to engage incoming BMs in their terminal phase. If forward deployed, some TBMD systems have the ability to cover a huge area by destroying the BMs during their boost phase. As an example, a US destroyer armed with Standard Missile-3 (SM-3) missiles can cover an area roughly the size of Belgium if employed against BMs in the terminal phase, but could theoretically cover an area close to the size of Europe if employed against boost phase BMs. Examples of fielded TBMD systems are the US SM-3 and Theater High Altitude Area Defense (THAAD) systems and the Israeli Arrow.

National BMD (NBMD)

The only NBMD system in operation uses the US Ground Based Midcourse Interceptor (GBMI), which is able to defend the Continental US from its bases in Alaska and California. The GBMI relies on a network of shore and sea based sensors around the northern hemisphere to provide detection and tracking of BM targets. The SM-3, when employed against Midcourse targets, is currently able to provide some NBMD as well.

While a NBMD system would be required to protect Canada, ABMD and TBMD systems may also be required as long as governments send armed forces assets into potential harm's way. This was seen in the 1991 Gulf war.

Canada's BMD History

The next section covers the historical decisions which Canada has made regarding BMD, including those issues that are still relevant to the situation today. Although Canada elected not to join, the paper argues that the weight of the relevant arguments for joining the US BMD programme historically is still in favour of Canadian participation.

Lester B. Pearson – 1968

Canada and the US have cooperated on North American defence since the 1938 mutual defence statements based on the growing German threat.¹⁴ It should be noted that the key responsibility of this cooperation from a Canadian perspective has been to ensure that no threat comes to the US from Canada. This includes the concept of "defence against help" introduced by Nils Brvik.¹⁵ In this concept, a smaller and weaker state near

¹⁴ Donald Barry and Duane Bratt, "Defense Against Help: Explaining Canada-U.S. Security Relations," *American Review of Canadian Studies* 38, no. 1 (2008), 64.

¹⁵ *Ibid*, 63.

a major power must do enough self-defence to ensure that the large state does not assume the defence and sovereignty tasks of the smaller state. If Canada has done enough self-defence over the years, it is arguably only just enough.

After the USSR had successfully tested a hydrogen bomb in 1953, it was realized that Canada and the US would have to work closely together to achieve aerospace defence of such a large area. Cooperative aerospace defence of North America was formalized in a 1958 agreement standing up what is known as the North American Aerospace Defense Command (NORAD). Numerous authors have pointed out that joining with the US for cooperative defence has been a “real bargain for the Canadian Government, allowing it to enjoy a level of security it could never have reached with its own resources”¹⁶. The Canadian Department of Foreign affairs stated in a memorandum to Canadian Prime Minister Louis St. Laurent in 1957 that it would be “very difficult indeed for the Canadian Government to reject any major defence proposal which the United States Government presents with conviction as essential for the security of North America”¹⁷. And this is central to the argument for Canada joining BMD. Given that we accept the notion of the collective defence of North America, if the US is going to build a defensive system, why wouldn't Canada join? To decide to be on the outside of a defensive system means deciding to be on outside of the protection provided by that system and on the outside of the decision making regarding the system's use. And this says nothing of the potential damage to the relationship between the two nations or the loss of potential industrial benefits. However, when the US began considering the

¹⁶ Alex Macleod, Stephane Roussel and Andri Van Mens, "Hobson's Choice. does Canada have any Options in its Defence and Security Relations with the United States," *International Journal* 55 (Summer 2000), 341.

¹⁷ Barry and Bratt, 72.

deployment of a BMD system 10 years later in 1967, the Canadian PM Lester Pearson was opposed because he believed that such a system would destabilize the existing strategic stability¹⁸. On the other side of the equation was the possibility of reducing the importance of NORAD and the value of the Canada-US defence relationship. In the end, the US did not need Canada for BMD and decided to use an exclusively American Command to exercise control over the BMD system. Canada was able to decline without significant US objections.¹⁹ And in 1972, the US and USSR signed an Anti-Ballistic Missile Defence (ABM) treaty which resulted in the practical cancelation of the BMD system under consideration at that time and perhaps indicating that the US had doubts about the value or feasibility of BMD, which then relied on the use of nuclear warheads.²⁰

The crisis of 1968 had introduced the central questions in the Canadian debate over BMD cooperation with the US. These issues still remain key today. Is a BMD system beneficial to the existing world order? Does refusal to join leave Canada vulnerable or with a loss of sovereignty as the US could make defensive decisions for us? Does Canadian refusal to join matter to the US? Is the mutual defence arrangement, and particularly the uniquely bi-national NORAD, hurt if Canada does not join?

¹⁸ Phillip Lagassé, "Canada, Strategic Defence, and Strategic Stability: A Retrospective and Look Ahead," *International Journal* 63, no. 4 (Autumn 2008), 923.

¹⁹ *Ibid*, 923.

²⁰ Don Barry, "Canada and Missile Defence: Saying no to Mr. Bush," *Journal of Military and Strategic Studies* 12, no. 3 (2010), 14.

Brian Mulroney – 1985

The next phase in the Canadian debate over BMD began when US President Ronald Reagan announced the Strategic Defense Initiative (SDI) in March of 1983.²¹ SDI was a very ambitious research programme aiming for complete defence using ground and space based elements. It was so advanced in its objectives that it was given the nickname “Star Wars”.²² This time the US invited Canada, and other nations, to join the programme in 1985, but Canadian Prime Minister Brian Mulroney had serious reservations about SDI. He feared an arms race in space, was concerned about public opinion and did not think that there would be much economic benefit for Canada.²³ Concerned with how rejection would be taken in the US, his response was a compromise. He declined to join the programme on a “government to government” basis, but encouraged Canadian industry to get involved and defended the legality of SDI research under the existing ABM treaty.²⁴ The issue of a future role for NORAD in SDI was put off until the research programme resulted in a deployed system. SDI died with the end of the Cold War, but there was real fallout for the Canadian military this time as “DND and the Air Force were excluded from the Joint Strategic Defence Planning Staff and the aerospace strategic planning process and ... denied membership on the United States Inter-Agency Air Defence Initiative Steering Group”²⁵. In addition, DND was denied access to significant technical material on air defence for the first time. And because

²¹ Roger Handberg, "The Symbolic Politics of Ballistic Missile Defense: Seeking the Perfect Defense in an Imperfect World," *Defense & Security Analysis* 31, no. 1 (25 Feb 2015), 46.

²² *Ibid*, 46.

²³ Barry, 14.

²⁴ Lagassé, 26.

²⁵ James Fergusson, "Not Home Alone. Canada and Ballistic Missile Defence," *International Journal* 56, no. 4 (Autumn 2001), 680.

there was no space based arms race or strategic fallout from SDI, the loss to the Canada-US defence relationship was for no practical value.

Paul Martin – 2005

The end of SDI did not mean an end to BMD research, which continued throughout the 1990s. Although with the end of the Cold War, the focus turned to small numbers of accidental or rogue launches for NBMD to defend against rather than on defence of the entire US against a mass Soviet missile attack.²⁶ In addition, the political impact and fear caused by the use of a small number of short range BMs in the first Gulf war in 1991 was a wakeup call that BMs were not just for the major powers and could be very significant.²⁷

George Bush Jr. came to the Presidency in 2000 with the intention of deploying NBMD systems and he withdrew from the ABM treaty in 2002 to further that intention. Bush believed, and rightly as events proved, that the US could deploy an NBMD system with the ability to intercept small numbers of ICBMs without affecting the strategic balance with Russia. This was largely due to the end of the Cold War and improved East-West relations.²⁸ It seemed this time that Canada would join the programme. The Americans were keen to have Canada join, indeed US Ambassador to Canada, Paul Cellucci, stated “I don’t want to entertain the possibility that we might not be in it

²⁶ Handberg, 46.

²⁷ Mika Kamei, "Japan, Canada and the U.S. Missile Defense Program: A Comparative Analysis of Middle-Power Relations with a Superpower" (M.A., University of British Columbia), 20.

²⁸ Lagassé, 928.

together”.²⁹ In addition, successive Liberal Ministers of Defence and Foreign Affairs supported joining based on the threat and on preserving NORADs role in aerospace defence. Prime Minister Paul Martin was also interested in repairing Canada-US relations after Canada had refused to join the 2003 invasion of Iraq. Formal communication between DND and the US DOD seemed to indicate that an agreement was imminent, but domestic politics reared its ugly head. Martin had a minority government and two of the opposition parties declared that they would force an election if Canada joined the BMD programme, so Martin declared in 2005 that Canada would not take part in the US BMD programme.³⁰ The Americans were puzzled, with Ambassador Cellucci stating “We simply cannot understand why Canada would in effect give up its sovereignty, its seat at the table, to decide what to do about a missile that might be headed towards Canada”³¹. Some have opined that the decision was pure anti-Americanism³², but either way Canada had decided not to join based on politics and public opinion, and against the advice of the Ministers of Defence and of Foreign Affairs.

NATO BMD – 2001 to the Present

While Canada has officially declined to participate in its own defence against BMs, the situation within NATO has unfolded differently. In 2001, NATO decided to begin the study of BMD and by 2010 NATO had unanimously decided that BMD was part of its core task of collective defence³³. Dalhousie Professor Frank Harvey discusses

²⁹ Brian Bow, "Defence Dilemmas: Continental Defence Cooperation from Bomarc to BMD" *Canadian Foreign Policy* 15, no. 1 (April, 2009), 18.

³⁰ Barry, 29.

³¹ Barry and Bratt, 79.

³² Brian Bow, 354.

³³ "Ballistic Missile Defence." http://www.nato.int/cps/en/natolive/topics_49635.htm

the ramifications of this decision; “Canada now officially endorses the logic, strategic utility and security benefits of ballistic missile defence; the debate is essentially over, but only in terms of protecting European and American territory and populations”³⁴. Dr. Harvey further describes that although this is true, “Prime Minister Harper is still refusing to engage in bilateral discussions with our most important NATO ally to negotiate BMD architecture to protect Canadian territory and population”³⁵. Canada accepts the threat for the other members of NATO and accepts the notion of collective defence for them without apparently seeing the need to address Canada’s defence.

Canada’s Role in BMD

While the central arguments for and against Canadian participation in BMD have been seen above, this section further develops the argument for Canadian participation in US BMD programmes.

The Canada-US Defence relationship

It is a truism in Canadian foreign relations that the relationship with the US is the most important. Central to that relationship has been the shared defence burden since 1938. As pointed out during the 1950s Louis St. Laurent administration above, Canada should not object to American programmes to defend North America. Of course it would be different if the American action runs counter to Canadian national aims, but this is not the case with BMD. This is particularly apparent as Canada supports BMD in the NATO context.

³⁴ Harvey, 5.

³⁵ Ibid, 6.

BMD and Small Nuclear Actors

Without BMD, there are limited options for dealing with any actor employing nuclear armed BMs. This could give a state such as North Korea power and influence beyond what they should have. And the traditional deterrent of Mutually Assured Destruction (MAD) is not a guarantee against a country with imponderable motivations such as North Korea.³⁶ Even if MAD was possibly adequate, it is surely immoral to hold the lives of millions of North Koreans or Iranians hostage to control the actions of their rulers when there are other options such as BMD to limit these states' power and influence.³⁷

Industrial Benefits

Another facet of participation in the US BMD programme is the possibility of industrial benefits for Canadian industry.³⁸ The BMD programme is worth 10s of billions of dollars, none of which will be spent in Canada unless it takes part in development. Weapon development projects such as F-35³⁹ and NATO Seasparrow have brought economic benefit to Canada from Canadian defence spending. Systems purchased without being in the development programme such as the SM-2 or RGM-84 Harpoon do not bring economic benefit back to Canadian industry. Although the level of payback in F-35, for example, continues to be argued, it is surely true that some economic benefit is better than none.

³⁶ Frederic Labarre, "Is Missile Defence Moral?" *International Journal* 60, no. 2 (Spring 2005), 562.

³⁷ *Ibid*, 568.

³⁸ James Fergusson, *Canada and Ballistic Missile Defence, 1954-2009. Déjà Vu all Over again* (Vancouver: UBC Press, 2011), 84.

³⁹ Andre Deschamps, "Meet the F-35 Lightning II - Canada's Next Fighter," *Canadian Military Journal* 11, no. 1 (Winter, 2010), 45.

BMD aspects to Allied Weapon Programmes

Another reason to reverse Canada's stated position on BMD is the fact that many existing weapon programmes now have a BMD aspect. For example, the US Navy Standard Missile programme has a strong BMD element as discussed above. The Anglo-French-Italian Aster programme also has a BMD variant and the NATO Seasparrow programme is also considering a BMD variant. It will be impossible for the Canadian Surface Combatant project to pick a weapon system for that new class of ship without becoming involved in a BMD programme. A fact complicated by our Government's current stance on BMD.

Free-Riding

A failure to "pull its weight" in continental defence has long been a critique of Canadian defence spending.⁴⁰ Canada has a much lower population than the US, but has never spent as much on defence on a per capita basis as its neighbour to the south. The current disparity is not abnormal with the US spending more than 4 times per capita what Canada spends⁴¹. With Canada explicitly agreeing to the necessity of BMD within the NATO context, the question must be asked; is Canada's current unwillingness to join the US on BMD simply a matter of wanting to get by without paying for its share? Are we assuming that US BMD will protect Canada or our deployed troops whether or not we are in the programme? Professor Harvey believes that a desire to "free-ride" on the US, and to a lesser extent on other allies, in this area is the most plausible reason for Canada's

⁴⁰ Barry and Bratt, 66.

⁴¹ "Defence Budget by Country." <http://www.globalfirepower.com/defense-spending-budget.asp>. May 6, 2015).

position.⁴² While the lack of Canadian defence spending is frustrating, Dr. Harvey's argument seems weak as the US has not asked Canada for a significant financial contribution. Canadian contribution in terms of relatively small amounts of development funding, of real estate for sensors or in terms of equipping RCN warships with the ability to join US BMD efforts would not be hugely expensive.

Morality aspects

When considering nuclear weapons and any related systems, it is important to consult Canadian views of morality. Canadian security analyst Frederic Labarre has pointed out that “nuclear weapons are abhorrent in their nature, being indiscriminate, disproportionate and anti-political”⁴³. Labarre's point is that any system designed to reduce the impact of nuclear weapons or restrict their use can only be a good thing. In addition, proliferation of BMD systems will lessen the impact on friendly nations of rogue states developing nuclear capable BMs. This may lessen the desire of more nations to acquire nuclear weapons and may aid in non-proliferation and disarmament activities.⁴⁴ This argument is in line with Canada's desire to be a stabilizing influence on the world's stage.

Comparison with Key Allies

Another key factor to consider in the discussion of Canada and BMD is to look at what Canada's key allies beyond the US have done. This paper has already discussed that

⁴² Harvey, 6.

⁴³ Labarre, 553.

⁴⁴ Ibid, 569.

NATO has decided that BMD is a core function of collective security, but how have nations such as Japan, the United Kingdom and Australia decided to approach BMD?

Along with Canada, Japan was asked to join the US BMD programme in 2002. While Canada declined to join in 2005, Japan did join in 2003 and in fact has become an enthusiastic supporter of the programme.⁴⁵ Japan has deployed both naval SM-3 and ground based Patriot Block 3 and is considering THAAD and the ground based SM-3 system.⁴⁶ Why the difference? Japan has a similar desire for close defence relations with the US, but also has a significantly closer threat as she is within range of SRBMs from North Korea, China and Russia. This threat is obviously a major driver for Japan.

So perhaps Japan, with its proximate threat, is not a good comparison to Canada. The United Kingdom and Australia form better comparisons as both have very close defence and other relations with the US, but are also remote from the major BM threats. In the UK, the facilities at RAF Menwith Hill and RAF Fylingdales have formed part of the US BM warning system since the 1950s and 1960s respectively.⁴⁷ The US and the UK signed a Memorandum of Understanding in 2003 for cooperation on BMD issues, which has led to the upgrade of the RAF Fylingdales facility to be part of the US NBMD system.⁴⁸ The UK has participated in BMD development as part of the MBDA Aster missile programme with France and Italy and has upgraded its Type 45 air defence destroyers to play a role in BMD.⁴⁹ Australia also formally agreed to cooperate with the

⁴⁵ Kamei, 5.

⁴⁶ "Defense Ministry to Study New Missile Defense Systems." *Japan Times* June 21, 2014.

⁴⁷ Claire Taylor, *UK Participation in US Missile Defence* (UK House of Commons Library, 2008), 2.

⁴⁸ Ian Williams, "Missile Defence - UK," <http://missiledefenseadvocacy.org/intl-cooperation/united-kingdom/> (accessed May/6, 2015).

⁴⁹ "Royal Navy Destroyer to Join Ballistic Defence Trial." UK Government, 6 March, 2013 (accessed May/6, 2015).

US on BMD and is in the process of building Air Warfare Destroyers that are capable of being fitted with SM-3 and is participating in BMD research with the US.⁵⁰ The justifications behind why the UK and Australia have decided to join BMD are, of course, complicated. However, these two nations with the most similar defence situations to Canada have agreed to join the US in BMD development, while we have not.

BMD a Destabilizer?

An argument against BMD is that it is not, in fact, a defensive system and ultimately will be destabilizing to the world order by giving the US too much dominance.⁵¹ While any weapon system could be destabilizing if deployed provocatively, US BMD as currently being developed is not capable of affecting the strategic balance among great powers in that it cannot cope with the number of missiles that Russia and China are capable of firing.

Does BMD Work and is it Worth the Cost?

There is no doubt that all BMD is technically difficult and particularly NBMD. Critics have charged that, like Star Wars before it, it will never work and is a great waste of money. This argument is specious for two reasons. Firstly, the GBMI system has had some successes showing that even NBMD is possible and that the system is providing some protection and deterrence. As well, the TBMD and ABMD level systems such as

⁵⁰ Andrew Davies and Rod Lyon, "Ballistic Missile Defence. how Soon, how Significant and what should Australia's Policy be?" *Strategic Insights* (May, 2014), 12.

⁵¹ "Missile Defence." Yorkshire Campaign for Nuclear Disarmament, <http://www.yorkshireend.org.uk> (accessed 2 May 2015).

SM-3, THAAD and Patriot Block 3 have performed quite well in testing.⁵² More importantly for the question of Canadian involvement, is that the US is spending the lion share of the money and will regardless of the Canadian position. Overall cost is thus a red herring for the Canadian debate.

The Standing Senate Committee on National Security and Defence

The final factor to be discussed is the 2014 report by the Canadian Standing Committee on National Security and Defence.⁵³ This bipartisan Committee studied the issue of Canadian involvement in BMD at length and the report is a strong call for Canada to join in BMD based on the threat and on Canada's role with the US and other allies. In fact, the Senators were unanimous in their support of a Canadian role in BMD.

CONCLUSION

It is clear that the issue of joining the US in Ballistic Missile Defence has been hard for Canada. Canadian popular opinion is not fond of spending money on defence and has elements of suspicion of our neighbour to the south. However, Canadian participation in the US BMD programme is sensible and necessary. Canada and its closest allies are at threat from the BMs of nuclear armed North Korea. Additional nations such as Iran also pose a possible threat to Canada. And, Canadian Armed Forces members and warships deployed overseas come under threat from the proliferating BMs in many parts of the world. Even without these factors, the importance of the Canada-US defence relationship is such that Canada should participate unless it has strong objections

⁵² Senate, 14.

⁵³ Senate.

to BMD. It does not, as its formal position in agreement with NATO BMD and the unanimous position of the Senate report clearly show. Other factors such as the decisions in favour of BMD by our key allies, economic benefits for Canadian industry and the moral superiority of a defensive anti-nuclear weapon are strongly in favour of Canadian participation in BMD. The objections to BMD that it is destabilizing or ineffective were explored in the paper and discounted. Based on these arguments, Canada should reverse its position on the US NBMD programme and request permission to join as soon as possible. Canada should provide funding, as well as any needed real estate to the US NBMD system. In addition, Canada should join other BMD programmes as appropriate for National Defence needs including adding a BMD requirement to the RCN's CSC project.

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