

# Reinventing The Wheel

The Future of America's  
Nuclear Triad

By: Kevin M. Miller



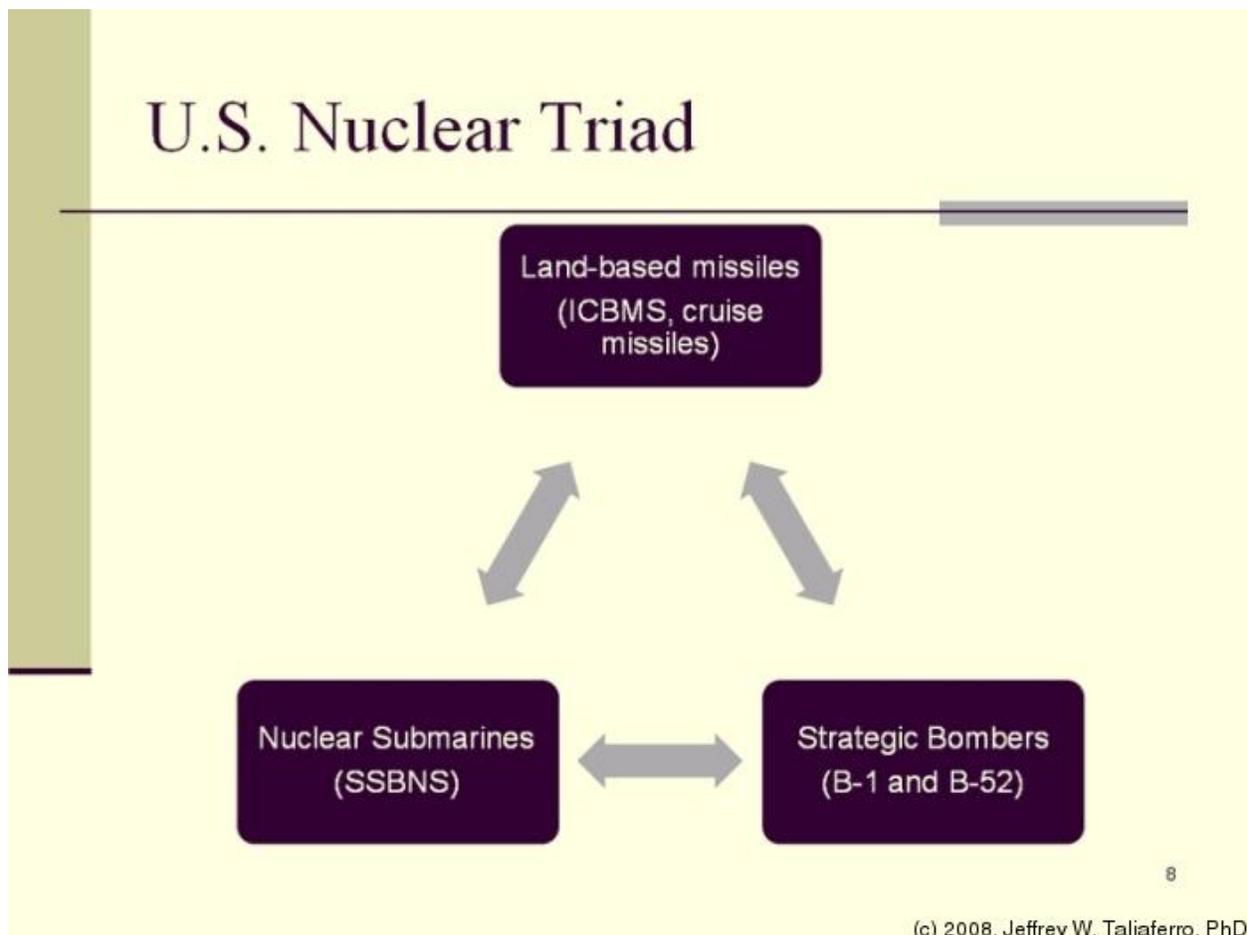
## **Reinventing the Wheel: The Future of the Nuclear Triad**

In the years immediately following the second world war the United States began to talk about what is now known as the first off-set. In this first off-set it wasn't assumed that American predominance would shape world events, though it was assumed that America's advancement in nuclear weaponry would not be surpassed for many years if not decades. This changed with the detonation by the Soviet Union of a nuclear device on August 29, 1949. This caused much consternation and bewilderment in the American defense establishment as the Soviets were not expected to successfully detonate a nuclear weapon for at least 10 years. And although it was discovered that soviet spies at Los Alamos, the secret Manhattan Project facility, this development necessitated the sort of outside thinking that produced the first off-set. In the first off-set American made missile technology, avionics, submarines, and surface warfare ships were produced for the explicit purpose of advancing the policy of MAD or mutually assured destruction. This policy was meant to counter the possible domino effect that could occur around the world as the worlds other superpower, the Soviet Union, fomented revolution's through the world, and also to protect our allies and interest around the globe. This off-set brought many new technologies to the forefront of American might and defense policy including, Submarine launched ballistic missiles, Minutemen intercontinental ballistic missiles, advanced surface combatant warfare systems, jet fighters, bombers, and space flight to name a few.

After Vietnam the second-offset was undertaken by the defense establishment that prioritized precision munitions, more powerful land and air weaponry, more deadly surface

combat vessels, and quieter submarines. The third off-set is currently underway and has already in part been realized. Whether it's unmanned aerial vehicles, unmanned submersibles, stealthier more powerful aircraft, missile shields like SDI, or new weapon systems like laser cannons, and rail guns.

There is something else that I think should be included in the third-offset that relates to the nuclear triad which was established during the first off-set.



I believe that an order for America to maintain its predominance in the Nuclear sphere, and an order to provide security for America and its partners in the 21st century and beyond. It will be required for the United States to revisit the tenets of the nuclear triad, some which are already being questioned on a daily basis. What with Russia exploring the possibility of nuclear torpedoes for surface warfare, and violating the terms of the intermediate nuclear forces treaty (INF) by deploying tactical nuclear missiles on their frontiers. And China weaponizing the South China Sea, and placing their nuclear deterrents on a heightened state of alert. These recent developments should give pause to any reasoning mind as relates to how credible a deterrent our nuclear forces truly are. It's worth noting that the United States has made huge advances in the field of missile defense in recent years, with multiple successful kill vehicles test, and the successful launching of a fourth generation of Minutemen Intercontinental Ballistic Missiles. However the Chinese have countered with a road mobile intercontinental ballistic missile of their own. This missile, which is capable of reaching the East Coast of the United States, from Xian Jiang province in China, should be of concern to all interested parties.

What is required in this new and threatening security paradigm is something that I'm calling Deployed Nuclear Assets or DNA. This new way of perceiving the security paradigm incorporates a relatively new battle space, namely outer space itself, an order to provide a credible and offensively capable nuclear deterrent. The new nuclear deterrent that I speak of will help to negate the burgeoning missile capabilities of the two most threatening countries to the

United States; Russia, and China. This capability would effectively transform the nuclear triad to the nuclear quadrangle, or DNA capabilities, by weaponizing space. There are many positives to weaponizing space first. Including but not limited to; gaining true first strike capabilities, owning the space before anyone else is able to enter it, defeating defensive weapons system measures, and gaining greater accuracy and agility to strike the enemy anytime anywhere with a low

### Strategic and Tactical Nuclear Chair (NC) Delivery Array

	Tactical Delivery Systems	Strategic Delivery Systems
Covert Delivery Systems	Submarine Launched Ballistic Missiles (Trident)	Space Deployed Nuclear Delivery Systems ( Deployed Nuclear Assets space capabilities (DNA), Enemy Kill Vehicle (EKV))
Overt Delivery Systems	Air Deployed Nuclear Assets (F-35, C-130J, B-2 Stealth Bombers)	Land Based Strategic and Tactical Nuclear Missile Launchers and Silos (Minutemen I,II,III,IV)

margin of error ratio.

In the Nuclear Triad there were what I like to call strategic (Land based nuclear assets), and tactical (air and sea based nuclear assets) at our disposal. These assets when combined in the nuclear triad made for the bedrock of U.S. defense policy throughout the cold war, and the years immediately following. in the 1980's the United States began to research a project called the

Strategic Defense Initiative (SDI) or Star Wars for short. SDI consumed over a trillion dollars of the defense budget since that time, though it has been met with roaring success since the enemy kill vehicle test of the early 2000's. SDI in it of itself is a program that, once deployed, can allow for more freedom of movement in the missile and nuclear sphere, though it does nothing to facilitate our first strike capabilities. What's needed is an extra leg, if you will, to the nuclear triad, which would hence forward be referred to as the Deployed Assets or DA. The most offensively capable part of the DA would be the Deployed Nuclear Assets offensive capabilities of space, or DNA. This new capability, a tactical missile geo-synchronous with the earth, would provide unparalleled first strike capabilities, as well as the opening salvo's in a new and unique battle space. It would also spur the development of additional paradigms which the PAA or phase adaptive approach can be deployed in space an order to bring a new and novel EKV or enemy kill vehicle to the nature of the threat. This new development would surely alarm our enemies while giving additional comfort to our allies. It is therefore incumbent upon us as a nation and as the leaders of the free world to coordinate our energies into seeing this vision become a reality.

It is my hope and sincere intention that by leveraging this nascent battle space, and being the first to be there, we will be able to dissuade our enemies from attacking the United States with conventional or Nuclear weaponry in either the air, land, or sea battle spaces.

**The Threat Matrix: China**

Senior Chinese officials have identified protecting China's sovereignty and territorial integrity as a "core interest," and officials stress China's opposition to actions they perceive as challenging this core interest. Chinese provocation has recently expressed itself in the Chinese desire to protect its territorial sovereignty. The Idea of China protecting its territorial sovereignty however extends beyond what the United States, and indeed the world community would regard as national borders. China maintains that its maritime rights extend to virtually the entire South China Sea and often illustrates its claim using a "nine-dash line" that encompasses most of the area.<sup>1</sup> China has claimed much of the South China Sea as Sovereign Chinese territory even though there are rival claimants to these parcels of land. This claim has been demarcated by the Chinese in maps by a nine-dash line. This nine-dash line is meant to express their desire for these lands to be included in Chinese possessions. However China doesn't explicitly say that these lands will be defended at all cost. Rather they leave the maritime rights of these islands open to interpretation. The resultant then is that the United States finds itself challenged militarily whenever its naval and air assets approach 15 miles of these man made features. Such provocations are met with further escalation of tensions on both sides as the U.S. and its allies find the stance of the Chinese to be unprofessional, and extremely bellicose in nature.

At the same time (t)he PLA is developing and testing new intermediate- and medium-range conventional ballistic missiles, as well as long range, land-attack, and anti-ship cruise

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<sup>1</sup> Military and Security Developments Involving the People's Republic of China 2015, Annual Report to Congress, Page 12, Department of Defense(DOD), Website: [http://www.defense.gov/Portals/1/Documents/pubs/2015\\_China\\_Military\\_Power\\_Report.pdf](http://www.defense.gov/Portals/1/Documents/pubs/2015_China_Military_Power_Report.pdf), Accessed: 2/7/2016

missiles that extend China's operational reach, attempting to push adversary forces—including the United States—farther from potential regional conflicts.<sup>2</sup> By not being deliberate and sure-footed in their consultations with neighboring nations about what should and should not occur on these islands, China has left open an area of ambiguity that cannot at this time be reconciled with their insistence that these islands are in fact a part of China. Chinese ambiguity I would argue is only going to continue as the issues facing China become more complex, and difficult to resolve.

A final recent and very serious observation comes from Gregory Kulacki whom in his Union of Concerned Scientist report "China's Military Calls for Putting it's Nuclear Forces on Alert", calls for the United States to mitigate the danger that a recently emboldened China may pose to the United States and it's allies as it decides whether or not to put it's Nuclear Forces on a "Hair Trigger". Kulacki goes on to say "The U.S. and Soviet/Russian experience with warning systems shows that false alarms and unexpected situations occur due to human and technical errors, and are especially likely early in the deployment and operation of a warning system. Such errors increased the risk of a nuclear exchange on multiple occasions for the United States and Russia during and after the Cold War. China would certainly encounter similar incidents. Human and technical errors are especially dangerous during times of crisis."<sup>3</sup> All of these instances and the threat that North Korea poses as a belligerent country in pursuit of nuclear ballistic missile

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<sup>2</sup> Military and Security Developments Involving the People's Republic of China 2015, Annual Report to Congress, Page 5, Department of Defense(DOD), Website: [http://www.defense.gov/Portals/1/Documents/pubs/2015\\_China\\_Military\\_Power\\_Report.pdf](http://www.defense.gov/Portals/1/Documents/pubs/2015_China_Military_Power_Report.pdf), Accessed: 2/7/2016

<sup>3</sup> James Kulacki, China's Military Calls for Putting it's Nuclear Forces on Alert, Unioned of Concerned Scientist, p.7, Website: <http://www.ucsusa.org/sites/default/files/attach/2016/02/China-Hair-Trigger-full-report.pdf> Accessed: 2/13/16

technology means that the U.S. and its allies will have to be particularly vigilant when safeguarding our interest in North East Asia and the surrounding region.

All of these reasons and the added effect of North Korean Provocations begins to pose serious questions about the survival and existential threats that they do face on their periphery. Such foreboding must be buttressed by the knowledge that should something catastrophic occur to our allies, that they will have the full faith and force of the United States protecting them at any and all cost. This is the pretext for inserting DNA capabilities into the North East Asian equation. Not only to act as a vanguard for our allies, but also to act as a first strike capability that has the ability to bring ours, and our allies enemies to the negotiating table an order to exact maximum leverage over them in situations that, for the region, our often viewed in zero sum terms by the opposing forces.

#### The Threat Matrix: Russia

Russia has neo-imperial ambitions that include but are not limited to Russian dominance of the energy markets. In fact according to Robert Einhorn and Rose Gottemoeller “Russia is working actively to reinvigorate and expand its nuclear industry and its reliance on nuclear power in the decades to come. Russian technical and political benefits and opportunities under a 123

agreement”<sup>4</sup>, And “These reform efforts are in line with Russia’s broader energy strategy—to expand Russia’s global role as an energy provider, along with Russian technical and political benefits and opportunities under a 123 agreement.”<sup>5</sup> Though the 123 agreement was meant to expand commercial ties between the U.S. and Russia’s civilian nuclear sectors these plans have presumably been put on hold due to the shooting down of MH-17, and Russian intransigence in the Ukraine. An equally contentious area of conflict derives from the fact that Russia inherited a gas pipeline infrastructure, from the Soviet Union, that transports gas to Europe across territories that are now independent states, mainly Ukraine and Belarus. As Gazprom got locked into pricing conflicts with such transit states (such as Ukraine), it rapidly discovered that its own highly lucrative export to the European Union could be held hostage. Deliveries of gas to Ukraine could, for example, not be shut down without also shutting down deliveries to EU member states. The conclusion that the transit states must be sidelined was done by building bypass pipelines such as the Nord Stream, which already transports gas directly from Vyborg in Russia to Greifswald in Germany, and the South Stream, which is to transport gas from the Caspian Basin via the Black Sea to south-eastern Europe. Both Poland and the Baltic states responded vehemently to what they viewed as a project designed to shut down their energy

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<sup>4</sup> Rose Gottemoeller, The U.S.-Russia Civil Nuclear Agreement A Framework for Cooperation, Robert Einhorn, p.35, May 2008

123 Agreements are agreements made by the United States with other countries to establish formal ties for civil nuclear cooperation. These agreements have made with over 20 countries including Russia. This agreement was made with Russia in the context of the New START (Strategic Arms Limitation Treaty) talks which were successful in April 2010 during the first term of the Obama administration. In this context the 123 agreement with Russia was meant to supplement the Arms Limitation directives of the treaty. However the 123 agreement with Russia has been summarily halted with the more bellicose military posture of the Soviet Union, including, though not limited to, Russia’s invasion of Ukraine. And the subsequent shoot down of a jetliner transversing the area from Holland to Malaysia by Donetsk and Luhansk separatist.

<sup>5</sup> Rose Gottemoeller, Robert Einhorn, The U.S.-Russia Civil Nuclear Agreement A Framework for Cooperation, p.35, May 2008

supplies without disrupting the flow to Germany.<sup>6</sup> All of this is going on while according to the Clingendael International Energy Programme “In 2012 Russia exported 7.2 million barrels per day of *total liquids*. The vast majority of Russian exports (84 percent) went to Europe. Russia thus is dependent on the European market, although it is increasingly diverting crude oil exports to Asia, while also refining more crude at home so it can export more value added products.”<sup>7</sup>

So then when we see the combination of Russia invading Ukraine while simultaneously threatening the rest of Europe with artificial energy shortages these are part of “Russia’s neo-imperial project (that) no longer relies on Soviet-era instruments, such as ideological allegiance, military control, or the implanting of proxy governments. Instead, the primary goal is to exert predominant influence over the foreign and security policies of immediate neighbors so they will either remain neutral or support Russia’s international agenda.”<sup>8</sup>

With the downing of Malaysia Airlines flight MH17 by Russian equipped Ukrainian rebels using a Russian made SA-11 surface to air missile launcher. Russia has been coming tantalizingly close to becoming a pariah state without actually being designated so by the international community. That’s not to say that they have not done good things in the interim whether it be Iranian nuclear talks, Syria chemical weapons destruction, or even the timely supplying of Iraq with soviet made

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<sup>6</sup> POLITICS AND ECONOMICS IN PUTIN’S RUSSIA, ECONOMIC REFORM UNDER PUTIN 2.0: WILL PETRODOLLARS SUFFICE TO KEEP THE SHIP AFLOAT? Stefan Hedlund, p.99, Stephen J. Blank Editor December 2013

<sup>7</sup> Fact Sheet Russia-Europe: the liquid relationship often overlooked, pg.2, Clingendael International Energy Programme

<sup>8</sup> POLITICS AND ECONOMICS IN PUTIN’S RUSSIA, RUSSIA AS A POLE OF POWER: PUTIN’S REGIONAL INTEGRATION AGENDA, Janusz Bugajski, p.175, Stephen J. Blank Editor December 2013

Sukhoi fighter jets. But when those 298 civilians in Malaysian air MH17 fell from the sky in a blazing inferno, well the tape on the entire newscasts speaks for itself.

The tragedy is worse enough be it on purpose or not but for Russian television to insist that Ukraine was aiming for President Vladimir Putin's plane, but accidentally hit the Malaysian Air flight this to me is arrogance on the level of courting war. In 2008 Russia thought that it could turn war on and off with Georgia like a water faucet. But that war (which was began by the Russians) was not stopped by them but rather by the fast wheeling and dealing diplomacy of the Bush administration. So then now fast forward to immediately following the Sochi Olympics in 2014 and Russia intervenes in Ukrainian politics by sending in masked gun men to foment revolution amongst the mostly Russian speaking citizens of eastern Ukraine, and Crimea. Again Russia treats this war as though they can turn it on and off as they wish. I'm here to tell you today that Russia may be able to control their variables when it comes to starting a war, but nowhere by no one is it possible to control the variables that will end a war, at a place and time of their choosing.

Russia cannot and will not be allowed to shoot down commercial airliners as it wishes. These are extremely dangerous times and with Russia actively engaging in preventing the U.S. from ameliorating the conditions in countries in the Middle East to Europe this is something than cannot and shall not be accepted. I pray for those that were aboard MH17 as well as their family members and I also pray that may God have mercy upon Vladimir Putin's soul for equipping the

Ukrainian dissidents with technology that can blow a Boeing 777 filled with close to three-hundred people out of the sky.

Russia also seeks to counter United States weaponry and expertise by developing a new generation of nuclear weaponry. One source of contention is the Intermediate Nuclear Forces Treaty. First drafted and enacted during the George W. Bush administration this treaty has been systematically undermined and contravened by the Russian Federation under Vladimir Putin. The Russians have indicated that they are deploying intermediate conventional forces on the border with Ukraine. And they are developing intermediate nuclear forces for future deployment. All of this is in direct counterpoise to the letter and spirit of the treaty as it was drafted.

To increase Russian ardor it has also been reported that Vladimir Putin has begun the development of a first generation of nuclear warheads that will have the capability to fit on Torpedoes which can then be launched from submarines. This sort of bellicosity adds to the list of reasons that the U.S. must stand up for itself and its allies in the regions that Putin's Russia has influence.

“Insecurity linked to armed conflict remains one of the greatest obstacles to human development. It is both a cause and consequence of mass poverty.”<sup>9</sup>

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<sup>9</sup> United Nations Development Programme, *Human Development Report 2005: International Co-operation at a Crossroads*, 2005, New York: UNDP, pp. 151–154.

When the United States unceremoniously dethroned Qaddafi, a dictator of unimaginable brutality, a people were finally free to choose their own destiny. And the Russians lost one of their largest arms smugglers in the region. After all it was Qaddafi who, with the help of the Russians, imported massive amounts of Kalashnikov rifles and rocket propelled grenades among other panoply of war. These were given to Qaddafi at a steeply discounted price. Qaddafi in turn sold these weapons to rebels and the governments which were trying to quell their rebellions at enormous markups. We know this because of the serial numbers that accompanied the weapons (as well as the story of Viktor Bout). By the time the 2000's had come around war was endemic in large swaths of Africa (Sierra Leon, Liberia, Cote D'Ivoire, Central African Republic, etc.)<sup>10</sup>, and Qaddafi had created his own veritable cottage industry. This cycle of weaponry for diamonds and gold came to a screeching halt when in the summer of 2011 Qaddafi was killed in a brutal manner by the people that he oppressed for over 40 years. This weapons vacuum which has yet to be completely filled by any one entity has left the Russians with few options to make up the surge the likes of which was found in Qaddafi, until Syria arrived.

Syria acts as one of the most successful conduits of Russian weapons systems and small arms since the end of the Cold War. By most estimates Bashar al-Assad has purchased in excess of \$1 billion in weaponry from Russia since the wars beginning, as his economy lies in ruins. Numbers like this however are chump change when you consider the amount of possibly unfulfilled deliveries to countries such as Algeria which, as of 2009, had \$5.2 billion in unfulfilled orders from the Russians this includes some of their most advanced air defense systems as well as Jet fighters. If this is any indication of how sales are going in Africa alone,

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<sup>10</sup> The Usual Suspects, Global Witness, March 2003, pp. 3-4

business must be good indeed, though not good enough, since the Russians have since sent some of the same advanced air defense systems to the Syrians who are in the middle of a brutal civil war. The strategic interest in Tartus, a sea port, for the Russians can't be discounted; however the amount of prestige that they have expended on Al-Assad could come at a price even heavier than the Russians can handle down the road.

They can find new end markets outside the North Africa and the Middle East (MENA) region however sanctions and emerging super powers such as China make that a difficult proposition. Russia recently stated as its goal to become the world's largest arms supplier. And though statements such as that come as a welcome respite to African despots, guerilla insurgents, and petty tyrants, I'm sure that when that was read aloud in the West a collective rolling of the eyes was no doubt the first reaction in their respective capitals. Assessments aside, the current negotiations in the Security Council, for a use of force measure to be included in the currently debated resolution needs a proper amount of leverage an order to arm twist the Russians to agreeing to it. That's why I propose that the U.S. in concert with its allies find a way to impede Russian arms sales not just in Syria, but throughout the world. As I mentioned earlier Algeria has \$5.2 billion in pending orders with the Russians if they can somehow be persuaded to cancel, postpone, or possibly even renege on prior agreements and buy European weaponry, that would go a long way towards isolating Russia with minimal effort.

The conclusion is this: Russia must not be allowed to make a mockery of the international order, indeed international norms and common law. If we hope to prevent al-Assad's mass graves and prevent the sort of internecine conflict that we've seen in Sierra Leone

for instance a la Qaddafi we must be prepared to confront the Russians at all stages of statecraft and persuade the world to reject Putin's autocratic bent in favor of a more prescient and tangible American path. While at the same time it's also important to understand that cooperation is possible between the two powers but only when by working hand in hand and not pitting one against the other can we make the world a safer place for all of God's creations.

This diatribe is meant to persuade you the reader as to why we can't wait for Russia or anybody else to become so threatening, so bellicose, that the idea of challenging them for dominance in a particular sphere may lead to a nuclear exchange. That's why it's incumbent upon us to introduce a new and novel form of war fighting, the DNA capabilities, to the sphere of Russian influence before it becomes too intangible for them to equate in their overall strategic calculus.

### **The Threat Matrix: North Korea**

The Chinese leadership does not go out of its way to regard the North Koreans. This is possibly because the Chinese leadership does not respect the North Korean leadership. It is well known that Xi Jinping the leader of China does not respect Kim Jong-Un, the leader of North Korea. This lack of fidelity is the frame for which the relationship should be viewed. When Kim Jong-Un came to power I knew that at that very moment we were going to be dealing with a completely new ball of wax when it came to North East Asia. The approach I recommended was one of engagement and conciliation. And indeed basketball diplomacy has paid some dividends however the specter of a nuclear North Korea (DPRK) led by an unknown thirty something hangs over the region. Recently They has been the conducting, by the DPRK, a third nuclear test

(January 6, 2016: second under Kim Jong-Un), and the announcement that a second satellite launch by the regime has been planned for February 2016. The regime since Kim's father's death has been unpredictable at best, and erratic at worst. With the consolidation of power by Kim he has begun to bring the country's economy up to a higher standard than it was at even 4 years ago. This is due in large part by the DPRK government sending workers abroad to capitalize on foreign markets for the regime. The regime keeps most of the money that is sent back by these workers, while the workers receive an allotment of money that is substantially higher than from if they did the same type of work inside North Korea. This "human trade" amounts to modern day slavery by all accounts. Whereby the workers are sent abroad as a sort of bond servant and the government uses coercion to maintain a steady stream of income from these workers. The monies received from this are put towards showcase projects in the DPRK capital, Pyongyang, and the rest via graft finds its way to the personal bank accounts of North Korea's elite.

When Kim Jong-Un first took control of North Korea in the winter of 2011, there was much hope as to what his succession would bring for that part of the world. It was hoped that the Soviet era Gulags would close. That he would hold the leadership, the current leadership mind you, accountable for the atrocities of the past sixty plus years. However as his reign went on, and we began to see the purges, and ever increasing methodical oppression of the North Korean people. It was clear that this was not going to be the case. Kim didn't dismantle the communist totalitarian state that his grandfather created, and his father perpetuated. But instead increased it, joyfully so, all while tightening his grip further and further on the reigns of power in the country.

This strongman mentality that fails to match deeds with words is something that has plagued the DPRK since its very inception. So then as the people of the DPRK are forced to work in slave labor camps around the world, those unlucky enough to be unsuitable for such task are left to starve to death and die an early death in an ever more egalitarian system of governance. If this is the “Dear Leader’s” idea of prosperity, and comity between nations, forcing the North Korean populace to live off what meager existence they are able to scarp together, while continually increasing the size and scope of the nations showcase capital, the benefit of the few, to the detriment of all, then perhaps his worldview is more warped than had been originally thought.

North Korea’s words are one thing. But it’s deeds are quite another. So long as North Korea continues to threaten the world with nuclear weapons. So long as the North is content with threatening the Republic of Korea with all out war, and bullying its neighbors. That will never be the type of peace that we, as the most peace loving society to have ever existed, will accept.

If Kim Jong-Un thinks that this is the peace we desire, then perhaps he is mistaken. The peace we seek is one where the North Korean people are free to lift themselves out of the bonds of oppression, not extenuate those bonds. the peace we seek is a peace that allows for the United States, and the rest of the outside world to be able to converse freely with the North Korean people, and be able to show them a world outside of the structured, totalitarian, authoritarian environs of the DPRK. The peace that the United States seeks will usher forward a new era in the DPRK, an era where the populace is not afraid to speak its mind, an era where mass public executions come to an end, and an era where the North Korean elite are held accountable for past

atrocities, and crimes against humanity. This is the peace we as a peace loving people seek for the future of not only North Korea, but the world as well.

Kim Jong-Un recently announced on his own accord that he would prefer peace but is “ready for war”. However If the statements above are any indication as to what sort of peace he desires. Then his deeds don’t match his words. And perhaps if this is the type of peace he thinks we desire, he is sorely mistaken.

With the recent nuclear test by North Korean leader Kim Jong-Un it has now become apparent that the North only seeks provocation. The empty gestures and false promises promulgated by the North Korean leader in his New Year's Day address were quickly engulfed by a now confirmed nuclear weapons test late on the night of January 6th, 2016. These provocations will lead to nowhere for the North Korean regime, and the only way they can ever hope for peace and prosperity is by giving up their nuclear program and returning to the negotiation table.

Though there is relatively little that can be done to Kim Jong-Un himself from a diplomatic or economic standpoint, the North Korean’s have recently substantially increased their slave labor force abroad, and so perhaps this is an avenue that can be explored for economic pressure. Kim Jong-Un is currently attempting to make friends and influence people throughout the world after many decades of open hostility to the outside world by the North Korean regime. This would explain his worldwide charm offensive strategy. This is new insomuch as it was

policy only after he took power back in late 2011. This means that though he can't be influenced directly, his foreign policy can certainly be. By applying economic and diplomatic pressure on those countries that the DPRK has slave labor in, we can effectuate a positive outcome in the issue of slavery by the DPRK and their revenue streams. Also by threatening sanctions on those countries that cooperate with the North Koreans, and applying additional sanctions to North Korean, and Iranian scientist, we'll be able to mitigate the risk of war on the Korean peninsula. Also, as we go forward, we should seek to refer certain high ranking North Korean cadre at the United Nations Security Council for referral to the Hague to proceed with charges of crimes against humanity.

Kim began taking a hold of power before his father's demise which is how I knew that he was someone that had his father's respect (he made him a four star general), and the respect of those around him. However it wasn't long before tumult began to creep into the Korean government Vis-a-Vis Kim Jong-Un's uncle Jang Sung Taek. The coup plot was discovered after Jang's allies had a fire fight with forces loyal to Kim. Soon thereafter Jang was on trial for "counter-revolutionary" ideals or treason and summarily executed for said crimes. This began to worry not only the West but China, and North Korea's neighbors.

About eleven months before Jang was executed in December of 2013, the North and so then by proxy Kim Jun-Un conducted his first nuclear test. This was most likely what may have frightened Jang and quite frankly the North's closest ally China into wanting to marginalize him or strip him of power completely hence the coup attempt. However by Jang doing this he only strengthened the hold that Kim Jong-Un has on the regime and by not having Jang around there was another power vacuum(the first being the death of his father) that Kim could fill with his

own cadre. China has been hemming and hawing over the row concerning Jang's death due to his proximity to the Chinese leadership. This has strained relations between the two but I do not for see disengagement or even a beginning of discussions for the DPRK to return to six party talks. As of January 2015 the idea of reunification talks at the "highest levels" have been promulgated by both the DPRK; Kim Jong-Un in his New Year's address, and the Republic of Korea; a formal announcement by President Park. Also in January of 2015 according to press reports stated "second track" talks between the U.S. and North Korea have concluded with little to no progress to show for the effort. All of these new initiatives sound promising but as the "second track" talks show if there are no deeds to back up the words then any effort on anybody's side is bound to fall flat.

Recently it was observed, at his New Year's Day address, that Kim Jong-Un called for an end to the war between North Korea, and the United States-Republic of Korea alliance. Words are nice, and these are certainly welcome words, but it will take more than words to repair the wounds of the Korean War and the intervening years following up to this point. When Kim Jong-Un first took control of North Korea in the winter of 2011, there was much hope as to what his succession would bring for that part of the world. It was hoped that the Soviet era Gulags would close. That he would hold the leadership, the current leadership mind you, accountable for the atrocities of the past sixty plus years. However as his reign went on, and we began to see the purges, and ever increasing methodical oppression of the North Korean people. It was clear that this was not going to be the case.

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North Korea's words are one thing. But it's deeds are quite another. So long as North Korea continues to threaten the world with nuclear weapons. So long as the North is content with threatening the Republic of Korea with all out war, and bullying its neighbors. That will never be the type of peace that we, as the most peace loving society to have ever existed, will accept.

If Kim Jong-Un thinks that this is the peace we desire, then perhaps he is mistaken. The peace we seek is one where the North Korean people are free to lift themselves out of the bonds of oppression, not extenuate those bonds. the peace we seek is a peace that allows for the United States, and the rest of the outside world to be able to converse freely with the North Korean people, and be able to show them a world outside of the structured, totalitarian, authoritarian

environs of the DPRK. The peace that the United States seeks will usher forward a new era in the DPRK, an era where the populace is not afraid to speak its mind, an era where mass public executions come to an end, and an era where the North Korean elite are held accountable for past atrocities, and crimes against humanity. This is the peace we as a peace loving people seek for the future of not only North Korea, but the world as well.

Kim Jong-Un recently announced on his own accord that he would prefer peace but is “ready for war”. However If the statements above are any indication as to what sort of peace he desires. Then his deeds don’t match his words. And perhaps if this is the type of peace he thinks we desire, he is sorely mistaken.

With the recent nuclear test by North Korean leader Kim Jong-Un it has now become apparent that the North only seeks provocation. The empty gestures and false promises promulgated by the North Korean leader in his New Year's Day address were quickly engulfed by a now confirmed nuclear weapons test late on the night of January 6th, 2016. These provocations will lead to nowhere for the North Korean regime, and the only way they can ever hope for peace and prosperity is by giving up their nuclear program and returning to the negotiation table.

Though there is relatively little that can be done to Kim Jong-Un himself from a diplomatic or economic standpoint, the North Korean’s have recently substantially increased their slave labor force abroad, and so perhaps this is a avenue that can be explored for economic pressure. Kim Jong-Un is currently attempting to make friends and influence people throughout the world after many decades of open hostility to the outside world by the North Korean regime. This would

explain his worldwide charm offensive strategy. This is new insomuch as it was policy only after he took power back in late 2011. This means that though he can't be influenced directly, his foreign policy can certainly be. By applying economic and diplomatic pressure on those countries that the DPRK has slave labor in, we can effectuate a positive outcome in the issue of slavery by the DPRK and their revenue streams. Also by threatening sanctions on those countries that cooperate with the North Koreans, and applying additional sanctions to North Korean, and Iranian scientist, we'll be able to mitigate the risk of war on the Korean peninsula. Also, as we go forward, we should seek to refer certain high ranking North Korean cadre at the United Nations Security Council for referral to the Hague to proceed with charges of crimes against humanity.

### **The Threat Matrix: Iran**

The Iran episode as of the writing of this paper, in terms of the Possible Military Dimensions of the Iranian nuclear program, may be coming to a fitful resolution. For my part I have been live blogging the results of the meetings between the Iranians, and the P5 + 1. Below I talk about the possible outcomes of the Geneva meetings, and then talk about the Joint Comprehensive Plan of Action (JCPoA) Agreement, which was agreed to in Switzerland July 14th, 2015. As of the writing of this paper the United Nations has agreed to the JCPoA agreement, however the U.S. congress is still holding hearings on the particulars of the agreement. Below is a quick run through of Geneva, and then I take the time to point out some of the good marks I believe are present in the agreement. :

Now that the permanent members of the Security Council (U.S., China, U.K., Russia, France) plus Germany (P5+1), have gotten Iran to renounce all nuclear objectives in Vienna it seems that it is incumbent of the United States to state in detail to not only the U.S., but also the world the exact breadth and scope that the Iranians went to conceal and covertly develop weapons of mass destruction. By keeping the public at least partially informed of the negotiations there and the implications thereof the administration was able to exert the maximum amount of pressure on the Iranians and their (now defunct) undoubted quest for nuclear weapons. The Iranians have been dealt a crushing blow for the past decade by way of sanctions. To the point where their economy is so crippled that they are unable to refine their own oil, and when leaving Iran, Iranian assets such as airlines are unable to refuel due to the scope of sanctions. This is the pressure the Security Council as well as unilaterally, the U.S. and its partners had placed on Iran. The new Iranian President, the Western educated Hassan Rouhani (who is still directed by the Supreme Leader Khomeini) has been offered a window of opportunity in the easing of sanctions that will now permit the Iranians to rejoin the world community.

The terms are lenient and correspond with only one aspect of their internal politics; the ceasing of production and subsequent enrichment of not only uranium but plutonium at the various nuclear facilities scattered throughout the country. The Iranians by the sheer amount of pressure placed on them by the U.S. and our allies was be enough of a stick to the Iranians that they decided to peacefully dismantle their nuclear program, completely, and allow for nuclear inspectors from not only the International Atomic Energy Agency (IAEA), but also inspectors from the U.S. to verify dismantlement. Else they faced the possibility of tactical nuclear strikes at various facilities in Iran related to their nuclear program. For the Israelis the choice was clear.

The anti-Semitic regime in Iran was not to be able to get anywhere even close to acquiring nuclear weapons. Erstwhile in Washington the main objective of protecting its regional partners and preventing a region wide arms race were, and remain the foundations of American foreign policy over the last twenty plus years.

If we are to prepare a world for our children, and children's' children that is safe and free from the type of threats in not only Iran but North Korea as well, then the time is now to begin that long and arduous task ahead of us an order to protect the civility and comity which right now exist between nations.

Benjamin Netanyahu had expressed his disgust with the JCPoA, reportedly, and urged the U.S. to reject the deal outright. And though the Israeli sentiment hasn't changed, and the deal has been subsequently agreed to and implemented. Israeli was rewarded handsomely for its acquiescence with new advanced Joint Strike Fighters, and subsequent construction of one of the most advanced missile shields in the world.

The choice is Iran's and Iran's alone. They must understand that this is not the beginning of a process but rather an end to a very long and convoluted dispute. The talks in Vienna were meant to end the conversation over Iran's nuclear program, not prolong a process that in their minds may just be beginning. The past decade has revealed that stability is only attained when the U.S. speaks not only to its friends but to its enemies as well. In the case of Iran, this is especially true. The agreement with Iran, for the U.S., represent the ending culmination of a process that has taken at least six presidents to conclude. Again, the choice going forward is Iran's, and Iran's alone.

On the 17th of July 2015, an agreement was reached by the P5+1 powers with the Islamic Republic of Iran to curtail their nuclear program through the JCPOA agreement which was signed onto by both Nations, and the U.N. Security Council. The following are a couple of positive things which I think came out of the agreement and that are likely to prevent the manufacture of nuclear weapons by the Islamic State of Iran.

- **The reconfiguration of the IR-40 Heavy Water Production Plant (HWPP):** The reconfiguration of the IR-40 Heavy Water Production Plant (HWPP) or the Arak HWPP, is a very positive step in my estimation. By Iran being forced to for one totally scrap the main enrichment component of the plant by removing the enrichment components. Or destroying them with injections of epoxy resin, leaving it's only further use for Isotope research, this plant which will be the only Heavy water plant that Iran will have will allow for peaceful research with a non-weaponized component. When the reconfiguration of the plant is complete this will make it that much harder for the Iranians to backslide and will allow for the International community to have its trust built up about the Iranians intentions going forward.
- **Various parts of other plants are to be stored in Hall B of the Natanz Fuel Enrichment Plant under IAEA continuous monitoring.** This is also positive since the removal of weaponized components of the Plants and the continuous monitoring of these items will allow for verification and further safeguarding by the IAEA of anything which could be misconstrued for a weaponized function of the former Possible Military Dimensions (PMD) of the Iran nuclear program.

- **The Natanz Fuel Enrichment Plant:** Natanz will be the only plant that will have fuel enrichment capabilities for R&D purposes, and will be neutered to be de-weaponized with all weaponization materials stored in Hall B of the Natanz Fuel Enrichment Plant under IAEA continuous monitoring. This means not Fordow, not Parchin, or any other fuel enrichment plant (FEP) will have fuel enrichment capabilities for at least 15 years guaranteeing a severe limiting of the amount of nuclear related sites which will have the hallmarks of R&D for the purposes of nuclear fuel enrichment.
- **Most sanctions are equipped with a snapback mechanism for 15 years which doesn't require a U.N. vote.** The ability to have the sanctions come back into place is a powerful one since by having this available to them the United States can further leverage future negotiations concerning the PMD of the Iranian nuclear program. Also in the event that a situation arises that requires the Dispute Resolution Mechanism the U.S. should worse come to worse can rely on their own judgment an order to determine whether or not Iran is compliant with the JCPoA
- **A Robust and fair system for logging complaints and settling unresolved issues:** The Dispute Resolution Mechanism guarantees that the games that Sadaam Hussein played with the world before the Iraq War in 2003 cannot be played this time against the backdrop of possible nuclear war. By agreeing before hand as to what conflict resolution will look like the powers involved have guaranteed that any sort of chicanery by the Iranians will be short lived and will lead to nothing but the snap back of sanctions, or even the specter of war.

- **Iran will have the ability, once the implementation period has begun, and the requisite sanctions have been lifted, to be able to participate in all facets of the world economy including purchasing commercial western airplanes, and banking in Europe.** I think this is an important aspect of the agreement since it allows for Iran to participate in the western economy and they can then begin to become suffused with western ideas and customs in the Iranian government and amongst the Iranian people. This will mean that if Iran does indeed decide to backslide that they will be unable to extricate themselves from the world economy as quickly as they may have thought that they would be able to. Also this will prevent them from attempting to backslide in the first place since they will have panoply of reasons manifest in front of them not to even attempt.
- **The U.S. and E.U. countries will participate with Iran on a raft of nuclear related R&D. Also Iranians will now be able to study nuclear science in the west including the United States.** By intertwining the R&D of Iran with western countries on a whole host of subjects ranging from isotope, and cancer research, to fusion technologies. This is a positive step since as I said earlier this will allow for the Iranians to be comfortable with the idea of cooperating with the West and will intertwine them so to the point that they will not want to backslide on the agreement making the likelihood that less likely.
- **Iran will no longer, under threat of sanction, has the ability to acquire software used for nuclear weapons construction.** Under the JCPoA Iran cannot acquire ballistics modeling software an order to be used for the exclusive purpose of building a nuclear

bomb. The sanction speaks for itself – Iran can longer model explosions with certain software under the JCPoA for any reason whatsoever.

The Joint Comprehensive Plan of Action is not a perfect document in terms of concessions from the Iranians but it is a far broader and wide reaching document than some of the skeptics would care to admit. I believe that by pursuing this plan of action we can ultimately win the day which is why I felt, at the time, compelled to support this line of reasoning.

As for the DNA capabilities and their role in the Iranian Nuclear agreement, it should be noted that our allies in the Middle East were not assuaged by the relief the administration felt that the Iranians had agreed to cease work on the military dimensions of their Nuclear Program. Indeed the agreement was met with hackles from both the Israeli's and the Saudi Arabian governments who were displeased, to say the very least, that their sworn enemy, the Iranians, would be let off the hook for their past misdeeds. And also future possible military dimensions of a restarted Iranian nuclear program. It was only after the United States promised aid and sent diplomats to the region to reassure our allies was their a dampening of the prospects of war with Iran by Israel. Or the acquisition of nuclear bombs from Pakistan by Saudi Arabia. However, the very fact that our allies in the region do not find the JCPoA agreeable, and still find the current state of Iranian nuclear progress dangerous, should be enough to compel the United States to action. The Iranians, for their part, have begun testing long range and intermediate range missile technology, a development which has been met with swift condemnation by the United States and its partners and allies in the Middle East, and the resumption of the sanctions regime, at the United Nations Security Council. While this has all been going on the Russians have found themselves

intervening in Syria on the part of Assad successfully, and have been keen to foster a rapprochement with the Saudis as they look for new friends and allies in a space traditionally dominated by the United States. This is why it is incumbent upon us, in order to prevent the possibility of future conflict, to secure the safety of our allies in the Middle East, and Europe, by availing ourselves of the latest DNA capabilities in the hopes of further dissuading the Iranians from pursuing possible military dimensions of their nuclear program. And to provide further assurance to our partners in the region that the United States understands the complexity of the problem, and the stakes involved, and will take every step possible to secure our interest, and protect our allies, from the threat of a nuclear Iran.

In the mid-eighties the Reagan administration tasked the Defense Department with the challenge of developing and eventually deploying a missile shield to be used to protect the United States, and its allies. Thirty years later the SDI or Strategic Defense Initiative has been deployed by the current administration in order to counter emerging threats from Russia, Asia, and the Middle East. The concept of the missile shield is that there are multiple advanced early warning systems that are deployed in theaters throughout the world. These advanced warning systems track missile launches and once detected, an enemy kill vehicle (EKV) is launched by Theatre High Altitude Advance Deployment system or THAAD. This system has drawn praise from allies for its added protection capabilities. While potential foes have questioned its validity, and the threat it poses to their national security. This system, in my opinion, should become the crux of our nuclear national security defense strategy. And though it has not been completely deployed as of yet, there seems to me, to be a need, and a desire for additional safeguards, in both deployment, and early warning systems.

## **SDI Integration into DNA Capabilities in Space**

The idea that the DNA offensive capabilities can be used to provide first strike capabilities, as well as follow on strike options is a concept that was discussed earlier. However, the idea that DNA offensive capabilities can be adapted for defensive purposes is a new, and no doubt novel concept. The same vehicles that will be used to carry nuclear missiles for DNA offensive first strike capabilities, may also be able to be adapted to carry conventional warheads for defensive purposes.

By integrating the SDI early warning and tracking system which would be placed on land and sea, with the THAAD deployment system, and the DNA offensive capability conventional scheme, the United States would then have an effective, and credible additional deterrent feature. This additional deterrent feature could cover friends and allies in Russia's near abroad for instance, or provide protection for landlocked allies in South America, Africa, or Australia. Though these partners are not as likely threatened as some of our more critical allies in Europe, and North East Asia; the additional effect of providing protection for these allies from nuclear, or conventional weaponry, would elicit a strong response of national pride, and solidarity with, and for the United States. This would give added emotional bonds with the United States which would pay dividends for many other facets of United States national security policy in future engagement with these countries.

DNA capabilities are emergent for the United States and will provide further options while deploying SDI or THAAD to emerging regional threats. As the leader in Space technology and exploration it is incumbent upon the United States that as emerging powers like India, and China look towards space an order to amplify their military programs, and gain national prestige, we too should be reviewing our policies that relate to the new, and novel theatre that space provides while also making sure to exploit the potential of such an awesome, and powerful arena, well before our enemies are able to do so first. If we are to remain the most powerful and prosperous nation in the world, and if we are secure our place atop the superpowers, and emerging super powers of the twenty-first century, then it will require mastering the technologies that will allow us to navigate this new arena.

## **SDI, DNA, and our European Partners**

Throughout much of Western Europe, and especially in the United Kingdom, the debate rages as to how is the European Union, as well as European states individually supposed to prevent a nuclear provocation by an aggressive nation state. And though much of the focus has been on untraditional non-state actors, a thorough debate has been raging in these capitals for some time now as to how to build a credible state actor, nuclear deterrent. This extremely important question is one that, I believe, the United States should be allowed to answer. The idea that a state actor would take advantage of a credible nuclear deterrent in Europe is not new, though it has become novel since the end of the cold war. Russia for instance has flown strategic bombers close to the United Kingdom, and mainland Europe on several occasions over the past two years. An order to safeguard our alliances in Europe, and prevent our allies from seeking

their own nuclear deterrent to Russian, as well as others' aggression, we must incorporate European strategic interest into Strategic Defense Initiative, as well as Deployed Nuclear Assets offensive capabilities. Indeed this has already begun to happen as when in May 2016 the United States turned on its THAAD missile defense system in Romania, much to the chagrin of the Russians. This was done in order to shield eastern European allies from attack from Russian MRBM, or Intermediate Nuclear Forces, a treaty that the Russians recently violated thus all but withdrawing from the agreement. By taking into account European interest before the umbrella DNA offensive capabilities are installed, this will allow for a convenient, and widely regarded deterrent to any ballistic missile capabilities that ours, and Europe's foes may have, or seek to develop.

### **Deployed Nuclear Assets (DNA) and Radiological Recovery Teams (RRT):**

Deployed Nuclear Assets give a multitude of options to Principals in the Policy Steering Process, though the ultimate decision making in such matters rest with the President. However the deployment of these DNA's brings up a multitude of moral as well as logistical questions. And though I will not argue for or against the moral prerogatives of the government I do feel it's important to touch upon the logistical issues that are inherent in such a system.

When it comes to the DNA's and their usefulness, this question, in my mind, is without a doubt resolved. However, the logistical consequences of so called loose nukes should be resolved before we deploy such a system. One question that arises to me, is the idea that somehow the

DNA's could be lodged from their geo-synchronous rotation around the globe and fall into the hands of a nefarious actor. Over 80% of the world is covered in water, this makes the likelihood that the DNA's would fall into the hands of someone that we consider to be counter to our interest as unlikely. However remote the possibility is, it should still be planned for. I'am therefore proposing a deployed military team which i'm calling the Radiological Recovery Team or RRT. The RRT would be deployed in and around dangerous hotspots around the globe and they will provide for the recovery of loose nuclear materials. Luckily the deployment of carrier battle groups around the world allows for the RRT's to be simultaneously deployed with them as they transverse the various hotspots around the globe. It should also be noted that we will have to have teams ready to enter the sovereign territory of nefarious actors around the globe whom we do not have friendly relations with. This will require an infrastructure that we do not yet have built up throughout the world. The questions of whether or not we enter the sovereign territory of another country to recover our "broken" nuclear materials will have to be fleshed out before hand. If the answer, however is that we as a nation cannot bring ourselves to violate the territorial sovereignty of a nation that we are not on friendly terms with an order to recover these nuclear materials. Then perhaps much like the aftermath of the Osama bin Laden raid we should therefore refrain from enjoying the liberties of the ability to deploy the DNA without such assurances beforehand.

Another question that undoubtedly will arise is the idea that a rogue nation in an attempt to forestall attack, or preempt it, will attempt to shoot down the DNA capabilities with Enemy Kill Vehicles (EKV). If we suspect that the nation in question may attempt this, I feel that this is not a

sufficient reason to forestall the deployment of the DNA. For you see if the nation in question is threatening to shoot down our satellites simply because we did it first. This is not, in my opinion, a good enough reason to stop our research and development efforts. So then just because another nation is threatening us this to me should not preclude our efforts to expand our missile defense, and first strike capabilities to space. But rather should then be included with all of our efforts to expand in the final frontier, or even Earth for the matter.

### **Conclusion:**

The future for Deployed Nuclear Assets (DNA) into the space battlefield is promising. the inclusion of this first strike capability, along with the ability of the system to extend the reach, and scope of the THAAD missile defense system, makes for a compelling argument for its inclusion in the research and development budget of the United States. Though these new space assets may become controversial to certain actors in the world. There is no doubt to me that the comfort and reassurance that such a system will provide to our allies, will more than make up for controversy over its novelty. There is no doubt in my mind that this system, once deployed, coupled with the awesome deterrence of the Nuclear Triad, and the THAAD interceptor system, will provide the utmost of security for the American people. And will allow for their to be a richer, and more robust conversation, within the military, and intelligence community, about the future of our nuclear deterrence. With the additional Radiological Recovery Team protocols present here on earth, we will be able to secure our deterrence future, while hedging against the inherent danger of having nuclear assets geo synchronous to the earths rotation.

