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Eliminating Nuclear Development in Today's World

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Abstract
The purpose of this paper is to trace the historical nature of nuclear weapons development since the end of World War II. The argument asserts that the world has seen a drastic increase in the risk of a future nuclear incident due to the policies that were enacted during the Cold War and beyond. After the collapse of the Soviet Union the United States missed an opportunity to help usher in a new time of nuclear dismantling and as such the increased volatility in the world today lends to increased risk in nuclear incident. This paper will discuss the ramifications of new nuclear policies and how the old policy of deterrence is a natural logical conclusion to the current policies. It will conclude by stating that the United States should take a dramatic lead in abolishing all current and future stockpiles of nuclear weapons.

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Eliminating Nuclear Development in Today’s World

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The purpose of this paper is to trace the historical nature of nuclear weapons development since the end of World War II. The argument asserts that the world has seen a drastic increase in the risk of a future nuclear incident due to the policies that were enacted during the Cold War and beyond. After the collapse of the Soviet Union the United States missed an opportunity to help usher in a new time of nuclear dismantling and as such the increased volatility in the world today lends to increased risk in nuclear incident. This paper will discuss the ramifications of new nuclear policies and how the old policy of deterrence is a natural logical conclusion to the current policies. It will conclude by stating that the United States should take a dramatic lead in abolishing all current and future stockpiles of nuclear weapons.
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Eliminating Nuclear Development in Today’s World

Introduction

Nuclear deterrence emerged as a policy of the U.S. after the invention of the atomic bomb. Many people argue that it was successful in preventing nuclear war. Despite its success, this policy has led several states to develop nuclear weapons. In turn, the proliferation of nuclear weapons has led the United States of America to shift from a defensive policy of deterrence to an offensive policy of pre-emption. Given the current risk of this policy and the increased probability of extreme consequences, this paper will argue that the United States should seriously commit itself to abolishing all current and future stockpiles of nuclear weapons.

This paper will trace the historical significance of deterrence, how its success or failure has been measured as well as what it has led to. The first section, An Early History of Proliferation, will examine the history behind the creation of the bomb and its early use and policies. This section is followed by Cold War Proliferation and Beyond, which will examine early nuclear weapons use in Japan up to and through the Cuban Missile Crisis and the resulting policy of Mutually Assured Destruction or MAD. Then the next section, A Heightened State of Risk, will examine how much risk is inherent in the world of nuclear weapons today. It will discuss modern dilemmas with non-state terrorist actors as well as possible run-down nuclear facilities in states that no longer have the economic ability to update control measures. Afterwards, in the Effectiveness of Deterrence and the Moving Away from Deterrence and Towards Pre-Emption sections of this paper, I will discuss how the effectiveness of deterrence may be measured and what impact the policy has had on the thinking of policy makers today. I will also discuss the
ramifications of new nuclear policies and how the old policy of deterrence is a natural logical conclusion to the current policies. Finally, I will conclude by stating that the United States should take a dramatic lead in abolishing all current and future stockpiles of nuclear weapons. I will conclude that the only safe way to ensure that these weapons are never used is to ensure that these weapons are never built.

An Early History of Proliferation

Early Years

It was believed that as early as 1939 Nazi Germany was attempting to construct an atomic bomb. Hoping to counter this effort by reaching the goal first, the United States enlisted the Army Corps of Engineers for the Manhattan Project in 1942. Although the bomb was to act as a counterweight to German military power and aggression, the United States quickly decided to use this weapon in combat upon successful testing at the Trinity site on July 16th 1945.

Arguments for the bomb

Some thought that the use of the bomb in a combat situation was the only way that the world could see its devastation and thus come together in its understanding that it must be used and controlled responsibly. Harvey H. Bundy said, “that unless the bomb were used it would be impossible to persuade the world that the saving of civilization in the future would depend on a proper international control of atomic energy.” ¹ In other words, only

through aggressive use of the bomb will the world see that an aggressive use of the bomb could end the world as we know it and thus prompt the world to not use the bomb.

At the time American policy makers argued that dropping the bomb would save American lives. Military estimates ranged from 20,000 to 120,000 lives lost with a worst case long term scenario reaching to 1,000,000. Other lives saved would have included POW’s held in Japanese concentration camps. On August 1st, 1944 the Japanese issued a statement proclaiming the execution of their POW’s in the event of any invasion of the Japanese mainland.

Another argument for the bomb involved the Soviet advancement on Japan. There were some policy makers who believed that a Soviet invasion of Japan was imminent and unstoppable. If the Soviets were to invade Japan it would present a serious roadblock to the United States post-war aspirations for Japan. A Soviet invasion of the mainland would give them a stake in post-war Japan, which would also intensify the Russian sphere of influence in East Asia. By dropping the bomb the United States would be able to use their technological superiority as a counter-weight to the massive Red Army and be able to do so at a minimal cost in terms of mobilized troops.

Finally, many believed that the dropping of the bombs on Hiroshima and Nagasaki was justifiable because of the Japanese actions against the United States four years earlier. There have been innumerable accounts comparing the attack on Pearl Harbor to the attacks on Hiroshima and Nagasaki.

**Arguments against the bomb**

At the time of its use there was no way to fully appreciate the costs in terms of immediate life and long-term life as a result of the fall-out if the bombs were dropped. Although the
magnitude of the bomb was uncertain, it was known that this was a weapon that
surpassed all other weapons in terms of short and long term effects. Given this fact as
well as the total amount of civilization casualties that would result from such an attack,
many believe that these attacks were unjustified and cruel.

A second argument involves the legitimacy of the estimates of American
casualties in the event of a mainland invasion. One of the more notable critics was
General Dwight Eisenhower who upon speaking to Secretary of War Henry Stimson
“voiced to him my grave misgivings, first on the basis of my belief that Japan was
already defeated and that dropping the bomb was completely unnecessary, and secondly
because I thought that our country should avoid shocking world opinion by the use of a
weapon whose employment was, I thought, no longer mandatory as a measure to save
American lives.”\(^2\) General Douglas MacArthur, the highest ranking official in the Pacific
theater was not consulted before the bombings, but stated afterwards that there was no
military justification for them.\(^3\)

Finally, an argument against the bomb centers around the idea that it may have
caused an ensuing arms race the likes of which the world has never seen. In June of 1945
a group of scientists who had collaborated on the construction of the bomb met in a
committee in order to petition Henry Stimson, then Secretary of War, against the use of
such a weapon. In short they concluded,

It will be very difficult to persuade the world that a nation which was
capable of secretly preparing and suddenly releasing a weapon, as
indiscriminate as the rocket bomb and a thousand times more destructive,

\(^2\) Eisenhower, Dwight E. *The Whitehouse Years*, page 312-313.
\(^3\) Wikipedia, the Free Internet Encyclopedia available at,
is to be trusted in its proclaimed desire of having such weapons abolished by international agreement.⁴

Henry Stimson considered this argument and added that the United States should open up Atomic talks with the Soviets.

If the atomic bomb were merely another though more devastating military weapon to be assimilated into our pattern of international relations, it would be one thing. We could then follow the old custom of secrecy and nationalistic military superiority relying on international caution to prescribe the future use of the weapon... But I think the bomb instead constitutes merely a first step in a new control by man over the forces of nature too revolutionary and dangerous to fit into the old concepts.⁵

To be clear, Stimson was one of the people who signed the order to drop the bomb, so he needed to be in agreement with its droppings. However, after it was dropped it would appear that he desired to open up talks with the Soviets rather than keeping the ability to create it a secret. Instead, he would conclude, a freer sharing of this knowledge could create a greater appreciation for its power as well as heighten the world’s ability to use nuclear power for peaceful purposes. Clearly Stimson believed that it was time for a new era in international relations, one not dominated by military superiority and the keeping of secrets.

Harry Truman was presented with such an argument, but still concluded that the use of the bomb in a military context was the best option. Truman also decided that the secret of the bomb would remain an American one, stating that it “would be retained until the world ceased being lawless.”⁶ Therefore, Truman acted against the wishes of the committee.

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⁵ Ibid. Page 209.
⁶ Ibid. Page 239.
The Aftermath

The decision to drop the bomb on Hiroshima on August 6th 1945 changed the scope of international relations forever. Three days later, on August 9th 1945, America would drop another atomic bomb on Nagasaki. These bombs helped force a quick surrender from Japan, which was reportedly prepared to fight to the end against any mainland invasion. America was prepared for a pause, but after re-grouping a continuation of more bombs later in the year. Unknowingly or not, Japan faced virtual and total annihilation.

Intentional or not, America’s dropping of the bomb coincided with Russia’s entry into the Pacific theater. There are many who believe that had the Russians not entered the war, the bombs may not have been used so quickly. The Russian entry opened questions as to how Japan would be divided in the post-war era, a place that America hoped to keep them out of entirely. Thus, a quicker resolution than a mainland invasion presented a favorable strategic option against the Russians. Furthermore, if America were able to show its superior military might the bombs would act as a counterweight against the much larger Red Army.

The increased importance of these weapons on the international scale would come to define international relations in general and American/Soviet relations in particular over the following years.

Nuclear Monopoly

It is fairly commonplace that today most “historians agree that ending World War II dominated the president’s thinking in the summer of 1945.”\textsuperscript{7} After the bombs were dropped the United States possessed a nuclear monopoly over the world until 1949, when

the Soviets developed nuclear weapons of their own. Oddly enough, the United States maintained a fairly aggressive style of negotiating prior to the Soviet’s development. In doing so, the United States set the precedent for using nuclear weapons as a bargaining chip in international talks. “Washington underestimated Soviet nuclear potential as badly as it had overestimated the Third Reich’s...Neither Truman nor most of those around him expected a Soviet nuclear weapon. America’s security in the atomic era was supposed to be assured by a monopoly, the world’s by an American pax atomica.”

Unfortunately, these attitudes would help shape nuclear diplomacy for the rest of the century and beyond.

After the initial bombings of Japan, America faced a fierce backlash from the Soviet Union. “Soviet Premier Joseph Stalin...interpreted the atomic bombing as an anti-soviet action disruptive to the postwar balance of power.” As such, initial American atomic diplomacy after World War II focused on the three post-war powers.

The United States, United Kingdom, and Soviet Union agreed on January 24th, 1946 to form the UN Atomic Energy Commission (UNAEC), which would be regulated by the permanent members of the UN Security Council. However, the underlying concept was quickly derailed after the United States introduced a measure that would allow an International Atomic Development Authority to operate outside the council. The American initiative to establish such an outside authority came because the UNAEC was to have complete authority to punish any country that violated the principles of not creating nuclear weapons. Since the UNAEC was to be regulated by the UN Security

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8 Newhouse, John; War and Peace in the Nuclear Age, New York, Alfred A Knopf Inc. 1988. (Pages 10-11)
Council there would be veto power by the Soviets. As such, the United States felt that they would be unable to prevent Soviet aggression in the field because the Soviets would possess veto power over punishing themselves.

During this time, the United States used immense posturing in an attempt to dissuade the Soviets from producing nuclear capabilities of their own. For instance, a reception held during a London meeting of the foreign ministers of the United States, Soviet Union, and England, Secretary of State James F. Byrnes chided Soviet Foreign Minister Vyacheslav M. Molotov, “If you don’t cut all this stalling and let us get down to work, I am going to pull an atomic bomb out of my hip pocket and let you have it.” This crude sortie into atomic diplomacy led to what the historian Gregg Herkin has described as Molotov’s “reverse atomic psychology.” The durable old Bolshevik made several dismissive jokes of his own, the import of which was to let the United States know that Byrnes “could not use the threat of the bomb to gain political concessions from the Soviet Union.”

In short, the Americans established that it would be policy to resort to threats of potential violence against the Soviets in an attempt to gain political concessions, but the Soviets concurrently established that such threats would result in no concessions.

Also, during this time the United States broke off an agreement with Great Britain that would have maintained that either country must win approval from the other before the use of a nuclear device. Instead, both states agreed to a technology sharing program that would help the United Kingdom develop more peaceful methods of using nuclear power. The United States reasoned that it needed to dissolve the use of force agreement because no other state should have power over its nuclear arsenal, whether it be real power or suggestive power. As such, during a pivotal time in nuclear diplomacy the United States turned away from Great Britain and attempted to face off with the Soviets.

10 Ibid. Page 597.
Cold War Proliferation and Beyond

Nuclear Arms Race

After the United States discovered that the Soviet Union had developed the capacity to detonate an atomic bomb of its own, it began aggressive development of the hydrogen bomb. Completed in 1952, this thermonuclear weapon was more than one-thousand times more powerful than the weapons of mass destruction dropped on Japan to end World War II.

By 1952 America had “nearly quadrupled annual military spending, which had averaged about $15 billion since 1946.”\(^{11}\) Although a significant portion of that sum was allocated to the Korean War, it “also made possible an exponential enlargement of the American capacity to wage nuclear war.”\(^{12}\) Certainly, at this time both the Americans and the Soviets possessed enough weapons to inflict serious if not fatal damage to their opponents, but military expenditures would continue. Neither nation was deterred from building bigger weapons and larger arsenals.

Cuban Missile Crisis

In October of 1962 the United States faced off with the Soviet Union after nuclear missiles were placed within a short striking distance to the United States in Cuba. Over the next week and a half the United States and Soviet Union stood at the brink of all out nuclear war, the prospect of which would have altered life as it is known on the Earth permanently. This was a moment in history when the nuclear arms race stood to challenge humanity.

\(^{11}\) Ibid. Page 598.
\(^{12}\) Ibid. Page 598.
In retrospect, the brash movement by the Soviet Union was not entirely illogical when considering the context of the nuclear arms race. After all, the United States had missiles as close to the Soviet Union, located in Turkey, as the missiles in Cuba were to the United States. Regarded scholar Noam Chomsky has noted about the crisis, “The confrontation finally came down to two basic issues: (1) Would Kennedy pledge that the US would not invade Cuba? And (2) would he make a public announcement that the US would withdraw its Jupiter nuclear missiles from Turkey, on the border of Russia and aimed at its heartland?”

Ultimately Kennedy would refuse on both accounts. However, there would be a secret agreement to remove the missiles from Turkey even though they were already scheduled to be replaced by nuclear submarines. This extraordinarily dangerous time in human history again points to the fact that the nuclear missiles were not necessarily made to be used, but made to gain concessions through the threat of use. Again, however, this policy marked a failure in their use as nothing was achieved that was not already going to be achieved. One of the most significant items to be gained from this event was the formal implementation of Mutually Assured Destruction, or MAD. Whether simply referred to as deterrence or MAD, the same principle is in play.

**MAD**

“Humanity had never created a weapon it did not use, and so it seemed inconceivable that Hiroshima and Nagasaki would be the only times the world would ever see nuclear weapons fired in anger.” It was therefore difficult to accord any type of legitimacy to the idea when, after the Cuban Missile Crisis, Secretary of Defense, Robert McNamara

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penned the policy MAD. Since its initial inception some have argued that it has helped secure peace and “did nothing less than kill great-power war for all time.” Others have certainly been less optimistic in their appraisal of the policy. What is generally agreed upon by all sides, however, is that “nuclear weapons aren’t for the using but for the having.”

From the moment that the United States first dropped the bomb on Japan the policy of deterrence or MAD was in play. Any direct attack on the country would seem insane because of the inevitable second strike capability that the United States had in store for the aggressor.

Many have argued that the Cuban Missile Crisis would have ended differently had American nuclear capabilities not been clearly superior to Soviet capabilities. Regardless, the aftermath of the Cuban Missile Crisis saw an upsurge in the arms race as the Soviets competed to be as powerful as the United States.

By the early 1970’s both states were generally considered to be relatively equal in their nuclear capabilities. However, it was shortly after this time that both states generally accepted the notion that international nuclear war was un-winnable. As such, many of the treaty negotiations of the time consisted of attempts to reduce the future growth of the arms race, but not necessarily the destruction of current stockpiles. In many ways, it was an acknowledgement of wanting to keep the status quo, or an acknowledgement of a subscription to deterrence theory by both sides.

“In its most theoretical form, deterrence is an equation involving two parties, where one party weighs the gain it may make by pursuing a course of action against the

15 Ibid. Page 40
16 Ibid. Page 41.
price it may pay by the retaliation of the other party.”17 Between the United States and the Soviet Union deterrence meant constantly having to outdo the other in terms of technological superiority in the nuclear field. Frankly, all other aspects of relations would be secondary in comparison to this one necessity.

Nuclear deterrence between the United States and Soviet Union was not just the build up of weapons in order to simply wound an opponent, but to deliver such a blow to the other as to make any military action against either state to be a completely irrational act. As was evident during the Cuban Missile Crisis, deterrence does not actually include the use of force, but is the act of directly or indirectly implying that force will be used.

“In the world of nuclear deterrence theory, beliefs are everything. What the leaders of a country perceive and believe is far more important than the reality. Nuclear deterrence is a seemingly simple proposition: Country A tells country B that if B does X, A will attack it with nuclear weapons. The theory is that country B will be deterred from doing X by fear of nuclear attack by country A.”18

However, that is where the conundrum lies; one’s opponent must believe that you are willing, ready, and capable of committing your arsenal at a moment’s notice. It is ironic that a policy that is defensive in nature has as one of its core principles such a massively offensive act. Therefore, nuclear deterrence contains two primary factors that allow it to properly function: ability and credibility.

Nuclear deterrence does not work if the state does not have a capable arsenal to attack and deflect possible attack nor does it work if the state seems sane enough to not

use its weapons. This theory is best explained by the prominent expert on international relations, Joseph Nye, who states, “Effective deterrence requires both the capability to do damage and the credibility that the weapons will be used.” It cannot be overstated that this means that you must create an arsenal with no intention of using it, but with it appearing clear that you do intend on using it. Nye also states that the crime must fit the punishment: “[during the Cold War] an American threat to bomb Moscow in retaliation for a nuclear attack was probably credible. But suppose the United States had threatened to bomb Moscow in 1980 if the Soviets did not withdraw their troops from Afghanistan? The United States certainly had the capability, but the threat would not have been credible because the stakes were too low and the Soviets could have easily threatened in return to bomb Washington.” Making egregious demands to such activities would seem to diminish your credibility or make you appear to be an irrational actor.

After the Cuban Missile Crisis, it became clear to both the Soviet Union and the United States that further steps needed to be taken in order to prevent any future use of nuclear weapons. One of the largest fruits of this effort was the Nuclear Non-Proliferation Treaty.

**Nuclear Non-Proliferation Treaty**

The primary international construct that attempts to prevent continued nuclear proliferation is the Nuclear Non-Proliferation Treaty (NPT). Agreed upon in 1968 and enacted in 1970, the original text had 43 parties with the number increasing to nearly 190 today. Although its primary emphasis was to prevent states from obtaining nuclear

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20 Ibid.
weapons it also contained provisions for nuclear states to dismantle their current weapons. To a large extent the benefit of the latter has not been seen, but the treaty has been mostly successful in preventing the spread of nuclear weapons. The NPT helped to establish the International Atomic Energy Agency, which is the semi-independent body that governs the World’s atomic energy production and thus is able to regulate proper production and define production that violates of the treaty. Also primary among its benefits is the international legal framework to prosecute violators of the treaty, which helps give IAEA its power and authority.

Supporters of the treaty, such as the United States, note that at the time of its inception there were only 5 declared nuclear states and that many feared that proliferation would increase to over 30 declared states over the next twenty years. They note that without the treaty other nations, such as Japan, might have been tempted to produce nuclear weapons in order to deter any threat from other states. However, critics will note that this number was nothing more than an estimate and that arguments of this nature are inherently counterfactual amounting to nothing more than mere speculation. They will also note that the United States has not fulfilled its end of the obligation in that it has not eliminated its existing arsenal. Moreover while the NPT creates a legal framework to prosecute non-nuclear states for producing nuclear weapons material it does nothing of substance to prevent proliferation from current states outside of the self regulatory principle written into Article VI.  

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Article VI obligates all parties to pursue good-faith negotiations on effective measures relating to ending the nuclear arms race at an early date, to nuclear disarmament, and to achieving a treaty on general and complete disarmament under strict and effective international control. However, although the IAEA can monitor and conclude improper use of nuclear material by a non-nuclear weapons state, there is nothing equivalent for a nuclear state. According to the NPT there is no real measurable consensus as to what reasonable development may or may not be from a current nuclear state. This has allowed many to argue that the NPT has done little more than maintain the status quo as far as world-wide nuclear proliferation is concerned.

Critics will also point to the fact that it was unable to dissuade new nuclear states such as India and Pakistan from becoming nuclear states. Moreover, North Korea was a party to the treaty when it began developing its nuclear weapons program. Subsequently, it withdrew and announced that it had been successful in developing nuclear weapons. Today, people worry that Iran is following close behind North Korea and represents a substantial risk to the international community.

Critics and proponents alike agree that due to its substantial number of parties it is very difficult to amend any section or add on new issues in the treaty. As a result, the treaty lacks bite and is unable to adjust to a rapidly changing world. Therefore, while the treaty was successful in maintaining the status quo in a primarily bi-polar world it is unsuccessful at doing so in an increasingly multi-polar world where international power is more and more defined by military might. The evidence of this is that at the Cold War’s end there were only five declared nuclear states (The United States, Russia, Great
Britain, France, and China) whereas now there are eight (India, Pakistan, and North Korea) with the threat of there being nine (Iran).  

As such, there can be little debate that while the NPT may or may not have been successful in preventing proliferation during the Cold War. However, since the end of the Cold War it can just as easily be argued that it has been a failure. The treaty was designed to stop the proliferation of nuclear weapons so long as the world remained bipolar. Since the world has become significantly more complex in the modern age, one can conclude that the NPT needs a more modern upgrade. The problem, however, is that although the treaty is updated yearly, due to the huge number of parties signed on, it is difficult for anything meaningful to be accomplished.

A Heightened State of Risk

In 1947 the Atomic "Doomsday Clock" was created by the Bulletin of Atomic Scientists. The clock was meant to represent how close the world was to nuclear midnight, which would represent a disaster. In 1947 the clock debuted at 7 minutes to midnight. Since that time, the clock has been adjusted numerous times, with its greatest distance being 17 minutes from midnight, shortly after the fall of the Soviet Union. Unfortunately, the end of the Cold War has not ushered in a new era of nuclear understanding and today the clock sits at an ominous 5 minutes to midnight.

The world is moving closer to nuclear midnight despite a dramatic decrease in the total stockpile of nuclear. In 1986, at the height of all

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23 It should be noted here that it has long been believed by the International Community that Israel as been in possession of a covert nuclear weapons arsenal. However, Israel has never actually declared itself a nuclear state.
proliferation, the world-wide stockpile totaled 65,057; by 2002, that number had dropped to 20,150\textsuperscript{24}. However, both numbers, 65,057 and 20,150, represent enough destructive capability to, if not eliminate all human life on the planet, at least drastically alter the world as we know it. Therefore, while stockpile numbers are important, in order to accurately measure the risk involved in a possible nuclear strike, it is important to factor in variables other than the total number of nuclear warheads in the world.

One variable is the number of nuclear-weapons states. Another variable is the number of nuclear states party and not party to the NPT. At its inception, the NPT included 5 confirmed nuclear powers (USA, USSR, UK, France, and China). It was widely believed that Israel was also a nuclear power at this time, controlling as many as two nuclear

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\textsuperscript{24} Ibid.

\textsuperscript{25} Bowers, Mark; \textit{Nuclear Stockpiles}, chart created August 20\textsuperscript{th} 2005.
warheads in 1967. Since that time the world has seen an increase in nuclear states, which was at first a direct result of the collapse of the Soviet Union. After the collapse Belarus, Kazakhstan, and Ukraine joined the original five as declared nuclear states, but since that time they have dismantled their entire arsenals. During the 1990’s India and Pakistan became declared nuclear states, but remained outside the NPT. Shortly after declaring its intentions to withdraw from the NPT, North Korea also joined the list of nuclear weapons states.

When considered together, these variables represent an increased danger. As previously stated, when dealing with numbers this large, the difference between 65,057 and 20,150 is negligible and irrelevant as both numbers represent a threat to end humanity as we know it. The increased danger is inherent in the increased number of potential sources where a nuclear strike can come from. In terms of sheer numbers the world has seen an increase from six potential sources to nine potential sources, which represents a 50% increase and no less than a 50% greater threat. Considering the possible chain reactions that might occur with one strike and the ensuing increased level of destruction with each strike, the threat of disaster increases exponentially.

Recent developments, such as September 11th 2001, have also given light to the increased possibility of nuclear terrorism. The probability that a nuclear power plant will come under terrorist attack has increased and according to the Nuclear Control Institute, “guards at nearly half of the nuclear plants tested in NRC [Nuclear Regulatory Commission]-supervised security exercises have failed to repel mock terrorist attacks or prevent simulated destruction of redundant safety systems that in real attacks could cause
severe core damage, meltdown, and catastrophic radioactive releases.” 26 All of these nuclear plants were up to the NRC’s post-September 11th safety standards. These included, “increased patrols, augmented security forces and capabilities, additional security posts, installation of additional physical barriers, vehicle checks at greater stand-off distances, enhanced coordination with law enforcement and military authorities, and more restrictive site access controls.” 27

None of the new NRC standards address any possible aerial attack, such as the September 11th attacks. According to the NRC website it is their belief that the best way to combat aerial terrorist attacks is to strengthen safety regulations within commercial airports and thus they work closely with the Federal Aviation Administration. However, there is no concrete data that would indicate whether a possible terrorist attack on a nuclear facility from the air could be averted.

Another existing terrorist possibility is the threat of a “dirty bomb”. A dirty bomb is a conventional-type bomb that contains radioactive material. Aside from the dangers that a conventional weapon possess, the destructive potential of a dirty bomb is that it also releases radioactive material. Dirty bombs are not nuclear weapons, but the material to make them can be obtained from nuclear facilities. The greatest risk of a dirty bomb is the possibility of unleashing it in an urban setting similar to the July 7th 2005 London Underground bombing. 28

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There is also the growing possibility of a terrorist organization obtaining fissionable material and using it to build a nuclear weapon of its own. Topping the list of problems is how easy it is to obtain fissionable weapons grade material. Currently, the IAEA tracks highly enriched uranium and plutonium through international shipments rather than from the point of origin, or the nuclear reactors where these materials are created and used. Therefore, it is extremely difficult for the IAEA to know with any degree of accuracy whether or not fissionable material goes missing.

While the construction of a bomb remains a threat, perhaps the greatest non-state possibility of a nuclear strike is that of a terrorist organization obtaining an already assembled nuclear warhead and then using it in an attack. After the collapse of the Soviet Union as many as 100 nuclear warheads went missing. It is widely believed that Al Qaeda has made trips into Chechnya in order to discuss the option of buying a nuclear warhead from whoever is in control of them. Aside from Al Qaeda, there is the possibility of Chechyan rebels obtaining and then using a nuclear warhead against Russia which could cause a chain reaction that would have seriously detrimental consequences for that region and beyond. These possibilities never would have existed if extreme world-wide proliferation had been prevented.

**Increased Risk of Nuclear Accident**

The world is at a greater risk for a nuclear accident than it has ever been. In Russia, the level of maintenance necessary to maintaining safe controls over nuclear arsenals is completely insufficient. Noted scholar Noam Chomsky writes, "[The] threat derives from the thousands of nuclear warheads that each side maintains, with the US increasing

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its nuclear capabilities, which will drive Russia to heightened alert status and probable implementation of “a ‘launch-on-warning’ approach to warfare requiring rapid reaction” for launching some 3,000 warheads, sharply increasing the danger of nuclear destruction by accident.”

In other words, the same policies that helped undermine the Soviet economy throughout the Cold War are going to continue to undermine that economy and also significantly increase the risk of a nuclear accident with the existing and rapidly outdating nuclear arsenal within its borders.

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The Effectiveness of Deterrence

Many argue that the effectiveness of deterrence can only be measured by whether or not a nuclear incident has occurred during its time. Many others argue to the contrary, with one such argument coming from Lee Butler, a retired general and former Commander in Chief of the U.S. Strategic Command at Offutt Air Base in Nebraska. Butler states, “Deterrence failed completely as a guide in setting rational limits on the size and composition of military forces. To the contrary, its appetite was voracious, its capacity to justify new weapons and larger stocks unrestrained. Deterrence carried the seed, born of an irresolvable internal contradiction, that spurred an insatiable arms race.” 31 In other words, yes there is no way to deny that during the use of the polices of deterrence that there was no nuclear war, incident, catastrophe, etc. However, it is extremely difficult to make a direct correlation between the lack of incident and the build of weapons and the policy of deterrence. What is undeniable is that the policy of deterrence led to a massive build up of weapons, which only led to more building up of weapons.

Furthermore, the nuclear arms race helped redefine what it meant to be a major world power. “[N]uclear weapons did a whole lot more than hold the superpower rivalry in check, they basically ended war among great powers, the definition of which, over time, merged with that of “nuclear power”. 32 Barnett concludes that deterrence has thus been effective in ending war and therefore has been an effective creator of peace. However, he fails to recognize that deterrence also created an added incentive for non first-world states to own nuclear weapons in order to be considered a first-world power. States such as North Korea and Iran are clear examples of states that have a strong desire

to own such weapons in order to be considered a major international power. Questions remain, including whether the same deterrent constructs are present in the international relations between first and third world states when both possessing nuclear weapons. The risks taken by “lower” states might be significantly higher than the risks undertaken by the United States and Soviet Union during the Cold War. Therefore, it seems, deterrence has put the world at greater risk of a nuclear incident.

Currently, there remains no nuclear incident to speak of, but does that mean that the world is at less of a risk of a nuclear incident? It is a fact that the world contains more nuclear proliferating states than it ever has in the past and it is a fact that the world’s major power, the United States, has limited contact with Iran and has had extreme difficulty successfully negotiating with North Korea. It is easy to conclude that the growth of weapons build up that was at the core of deterrent philosophy has greatly contributed to the long run desire of many states to develop nuclear weapons. As such, it is also easy to conclude that deterrence policy was at best a band aid solution to the nuclear dilemma posed in the early 1950’s and at worse the cause of a significantly heightened state of world-wide risk.

**Turning Away From Deterrence, Moving Towards Preemption**

Although it has been said repeatedly by various administrations in countless forms throughout the years, the current administration has said as recently as August 27th 2005 “We remain fully committed to defending the security and well-being of our friend and ally Israel.” 33 This provides another incongruity to the logic surrounding pre-emptive war. One of the primary reasons cited for the existence of an Axis of Evil, and both Iraq

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Wars was the possession of nuclear weapons of mass destruction. By not being a party to the Non-Proliferation Treaty Israel has operated outside its bounds since 1968. Today, the nation is in possession of no less than 200 nuclear warheads with some estimates ranging to as many as 400. Surprisingly enough, Israel has managed to remain an undeclared nuclear state, which simply means that officially Israel has no nuclear weapons. However, it is a widely accepted fact that Israel has had nuclear weapons for nearly forty years.

Referencing Chapter 7 Article 51 of the United Nations Charter, the United States maintains that Israel has a right to defend itself in order to maintain its existence.\(^{34}\) Chapter 7 Article 51 states “Nothing in the present Charter shall impair the inherent right of the individual or collective self-defence if an armed attack occurs against a Member of the United Nations…”, which means that if a state, organization, or any “individual or collective” that remains a member of the United Nations finds itself under attack, it possesses the inherent right to protect its right to exist by exercising military force. It is interesting that the United States recognizes that crucial element of International Law, but concurrently fails to recognize Israel’s implicit rejection of non-proliferation efforts and remains the biggest felon ever in terms of unregulated proliferation since the institution of the Non-Proliferation Treaty in 1968. Furthermore, it seems to give some insight into how the United States itself views the institution of nuclear weapons insofar as it continues to allow Israel to possess nuclear weapons in the most volatile region in the entire world. Israel represents perhaps the greatest threat to the use of nuclear weapons and the United States turns a blind eye to this state while it admonishes North Korea,

Iran, and Iraq, labeling them an Axis of Evil. Clearly, the United States continues to view nuclear weapons as a viable source of deterrence, believing that the existence of a nuclear arsenal is enough to scare off enemies including the United States itself since it has become clear that it will use no direct military force against a nation that possesses these weapons.

In pushing for pre-emptive war, President Bush has invoked the international principle of sovereign protection. That is, that a state has the right to defend itself from any kind of threat. Paul Wolfowitz made it even more clear when in December 2002 he stated that imminent threats were not always imminent. He said,

When were the attacks of September 11th imminent? Certainly they were imminent on September 10th, although we didn’t know it. In fact, the September 11th terrorists had established themselves in the United States long before that date – months or even a couple of years before. Anyone who believes that we can wait until we have certain knowledge that attacks are imminent, has failed to connect the dots that led to September 11th. 35

Clearly, this kind of thinking underlies the basic principle of pre-emptive warfare; we must strike before they do because if we wait for them to strike we will be too late. However, this same logic forgets to acknowledge the wide range of variables and shifts in responsibilities that come from such attacks. For instance, it is now widely accepted that the US led invasion of Iraq that began in January 2003 was justified on what was largely false intelligence information. By attacking pre-emptively the United States isolated itself from the international community that it sought support from and lost a great deal of credibility for future strikes. The nature of a pre-emptive strike negates any possible smoking

gun because the state being attacked had no chance to strike. Pre-emptive war is by nature an aggressive and not a defensive strategy.

**U.S Nuclear Primacy**

In the March/April 2006 issue of Foreign Affairs a hotly contest article titled “the Rise of Nuclear Primacy” was published. The authors Lieber and Press contest that the United States has achieved Nuclear Primacy because it has effectively eliminated Russia’s deterrence or second-strike arsenal. According to their article Russia has “39 percent fewer long-range bombers, 58 percent fewer ICBM’s, and 80 percent fewer SSBNs than the Soviet union during its last days.”

Certainly some of this can be attributable to the change in the geopolitical relationship of Russia and everyone else. With Russia not being the World Power that the Soviet Union was there is not the need or ability to keep the same level of military force. Another reason could be the increased relations between the USA and Russia that has resulted in the de-proliferation of both states to a certain extent. However, Lieber and Press assert U.S. Nuclear Primacy has occurred due to the USA’s desire to have Nuclear Primacy. One piece of evidence that they use is George Bush’s own words when setting the US Foreign Policy agenda. In doing so he stated that the United States intends to achieve military superiority in all realms in order to effectively prevent any future terrorist attacks and to pre-empt any states that may be fostering terrorism. It would seem easy to make the

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logical jump from traditional military forces to nuclear military forces in this context as well.

The other piece of evidence that is used in this article is the overall effectiveness of any potential US first strike against Russia or China. Using declassified information and plans that are presumably less effective than the professional military plans perfected over the last several decades, Lieber and Gross were able to estimate a total decimation of the Russian or Chinese force before any attack was even detected. As such, the USA’s nuclear superiority is such that there are no real legitimate threats to its contestation. Therefore, the only conclusion that can be drawn is that this superiority was intended.

Of course, the main issue is how this affects worldwide perceptions of the USA. If the USA is unwilling to disarm then why should other states not pursue a buildup? It is clear that a change needs to occur.

**Proliferation and Policy Today**

**The START Treaties**

The implementation of the START treaties has been successful in helping the de-proliferation of nuclear weapons between the USA and Russia. The original treaty was entered into force in 1991 shortly after the collapse of the Soviet Union. In fact, entry into force was delayed due to the collapse and creation of new nations such as Belarus, Kazakhstan, and Ukraine. Since the inception of the treaty the last three states have completely disarmed.
START has been successful because it has taken the pressure of the United States and Russia by creating legitimate benchmarks that both can and are able to meet. Since both nations realize that the other is disarming and that it is in the national security and economic interests to do so both nations have had little problem complying. However, it should also be noted that although progress has been made there is still a significant amount of nuclear weapons stockpiled on both sides. As such, while there has been progress as a result of START, it is certainly not the end all be all that will prevent a nuclear catastrophe.

**More States Means More Problems**

Since 2003 there has been a disturbing increase in proliferation activities around the world. North Korea has developed nuclear capabilities, Iran has moved considerably closer to doing the same, and non-state actors such as Al-Qaeda have attempted to obtain bomb material of their own. Perhaps even more disturbing is the fact that the United States and Russia have ceased to dissolve their nuclear arsenals and have instead revved up efforts to create a “better” and more modern nuclear arsenal.

Former Secretary of Defense Graham Allison has noted that the current administration shifted its policy from deterrence to pre-emption. He states, “Deterrence, which discouraged other states from launching a nuclear attack on the United States through the threat of overwhelming retaliation, was useless against nonstate terrorists who did not fear death. Nuclear terrorism required strategies different from the ones that had been designed to counter nuclear states.” 37 Allison is right, unfortunately the chosen policy was bold and wrong. Through Allison we can also conclude that the old policies

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of deterrence can no longer be applied to today’s world and that its successor, the policy of preemption, is extremely dangerous.

Today the United States and the United Nations attempt to freeze out nuclear nations by locking their funds and placing sanctions on “rogue” states. These policies are successful in isolating these nations, but they are also successful in making these states feel as though they are backed into a corner and this gives them an added incentive to continue to proliferate.

Conclusion

Proposing a New Dawn

Even the biggest supporter of deterrence theory would agree that the world has seen an increase in the number of states who are attempting to and who desire to develop nuclear weapons. International frameworks, such as the Nuclear Non-Proliferation Treaty, were implemented to dissuade potential nuclear states from becoming actual nuclear states. However, the treaty only carries weight for those states who are party to it. Non-party states such as Pakistan and India have been able to establish nuclear programs of their own. Also, the penalties for certain states party to but in clear violation of the treaty were not severe enough to dissuade these states from continued nuclear weapons development. In fact, the only positive thing that can be said about nuclear deterrence is that as long as the policy existed no nuclear incident occurred, although the relationship between the two events is unclear.

Today, the world is at a significantly higher level of risk for a nuclear incident than it was twenty years ago. In 1986, five states (USA, USSR, China, Great Britain, and France) were in possession of nuclear weapons. Since that time North Korea, Pakistan,
and India have joined the nuclear club. For nearly forty years, Israel has had the worst kept nuclear secret in the world and they continue to develop nuclear weapons today. Other non-state actors, including Al-Qaeda, have attempted and continue in their attempts to acquire nuclear weapons.

In other words, the world has a significantly higher number of nuclear players than were at the table in the mid-1980’s, when the United States and the Soviet Union exerted hegemony over the rest of the world to virtually ensure no nuclear incident. Today’s world is significantly different in that the United States is the world’s only superpower and its military is stretched thin enough over the world that it is barely able to exert hegemony over its occupied territories, let alone the world as a whole. As the United States turns its eyes towards Iran, a country that has repeatedly violated the Nuclear Non-Proliferation treaty, its foreign policy becomes ever more aggressive and the possibility of a nuclear incident only grows more certain unless drastic changes come about.

In order to ensure greater domestic and international security the United States must cease operating under the principles of nuclear deterrence and its successor policy pre-emption. It must cease all pre-emptive military action as this activity is certain to lead to increased development of nuclear weapons by numerous states, which in turn leads to an increase in the variables and consequently chances of a nuclear incident. The United States must enlist the cooperation of the entire international community in international stockpile inventories and technology sharing initiatives. Doing so pools and thus reduces the risk to each member state. Since nuclear politics focuses on what might happen, smaller nuclear states such as South Korea will have no reason to continue their
nuclear posturing as their stockpiles and capabilities will be well known. Also, the ability of states to continue peaceful enrichment, as Iran claims are its intentions, will be greatly enhanced by the capabilities of more technologically sophisticated nuclear states.

Finally, a policy based on cooperation is a significant improvement on a policy based on fear and destruction, which in turn could have a significant improvement on relations between the United States and all other nations.

**An Irrational Act of Faith?**

Nuclear deterrence has been described as an “irrational act of faith”.\(^{38}\) Henry Kissinger once said,

The nuclear age turned strategy into deterrence, and deterrence into an esoteric intellectual exercise. Since deterrence can only be tested negatively, by events that do not take place, and since it is never possible to demonstrate why something has not occurred, it became especially difficult to assess whether the existing policy was the best possible policy or a just barely effective one. Perhaps deterrence was even unnecessary because it was it was impossible to prove whether the adversary ever intended to attack in the first place.\(^{39}\)

Kissinger’s and Bidwai & Vanaik’s statements represent clearly opposing sides of the nuclear deterrence debate. Yet, it is clear that even the most stringent supporters of deterrence had and have their doubts of its effectiveness. It is also clear that once a state starts down the path of creating nuclear weapons, whether for the possibility of deterrence or for actual defense or attack purposes, that the nuclear weapons will dominate all future actions and relations with other states.

What is most clear is that nuclear weapons, even those that are not used, breed more nuclear weapons. In some cases, states, such as Japan, may desire nuclear weapons

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simply because states they find disagreeable, such as China and North Korea, have them. It is logical to assume that other states and non-states will forever attempt to build a nuclear weapon deterrent or second strike capability, in order to combat those states that are already in possession of the weapons. Therefore, in defining a new security strategy about nuclear weapons one must think about their absence rather than the Cold War mentality of build-up.

Graham Allison has stated that the new security order must be built around three no’s, “no loose nukes, no new nascent nukes, and no new nuclear weapons states.”

Allison’s message is clear, if there is to be a true security strategy in regards to nuclear weapons then there needs to be a strict account of how many and where the current nuclear stockpiles are, there needs to be no new nuclear stockpiles, and there needs to be no new nuclear weapons states. This is a great place to start, but in order to truly change the dynamics of nuclear deterrence, posturing, gambling, etc. than the world needs to also eliminate its current stockpile in full. In this case the only motivation to create new bombs would be to be the only state to be in possession of them and to be able to brandish them in the same manner that the United States was able to do in the mid 1940’s.

Since the risk of world-wide destruction or catastrophe is something that the world already shares under the principles of nuclear deterrence, this does not up the risk at all. In fact, the common risk would be lower because the current risk involves the threat of imminent attack, mistake, terrorist activity, etc., whereas new risk would be in the development of the weapons, which while immediate is not as immediate as the threat

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40 Ibid. (Page 141)
of attack. As such, the risk of the world remains pooled, but it would become a collaborative risk instead of a mutually threatening risk.

The United States can seize on this moment in history to take an unprecedented step forward and begin the de-activation of its nuclear arsenal. This step can help America bridge the gap between it and so many states around the world. By beginning to destroy its arsenal the U.S. can also substantially decrease the overall risk of nuclear warfare felt by the world. Contrary to how the policies of nuclear weapons were conceived in the late 1940's and early 1950's, this does not only constitute taking the gun away from America, but rather taking the gun away from the world.

The United States needs to take the lead reins in finishing a Fissile Material Cut Off Treaty. This type of treaty would make it illegal for any country, currently a nuclear state or not, to produce or have in their possession fissile material that can be used to create nuclear weapons. "A Fissile Material Cut-off Treaty [FMCT] would strengthen nuclear non-proliferation norms by adding a binding international commitment to existing constraints on nuclear weapons-usable fissile material."\(^{41}\) The idea of this treaty is not new, but actually accepting it and putting it in force in the international community would mark a new beginning in the atomic era. In the best case scenario it could potentially help usher in greater interdependence among nations and help create a more peaceful environment. At the very least, it forces states that refuse to eliminate their nuclear weapons to relate legitimate reasons as to why, in particular in the face of international non-proliferation efforts. However, in a non-nuclear world the logic to create nuclear weapons grows thin.

Critics might argue that this new dawn is in and of itself an "irrational act of faith." However, I would point to the illogic that has been deterrence since its beginning; the creation of weapons that are never to be used in order to maintain safety. As Kissinger said, that is an irrational act of faith, but that the positive end of this proposal is that it helps to eliminate the risk involved in the equation. In other words, instead of the stakes continually getting higher the will continue to get lower until theoretically it is eliminated.

Another argument against this "irrational proposal" is that it is a foreign policy based on openness and cooperation rather than fear and deception. As countries continue to collaborate on this issue they will continue to grow closer so that any major break from this policy by an outside nation would very likely result in a collaborative retaliation by all interested parties. In other words, the outside pressure will help keep potential rouge nations in check.

Since the United States has played a major role in the development of nuclear weapons since their inception into the world arena it would be pertinent that they also take the first major steps towards eliminating their use internationally. Forming a separate Nuclear Security Council at the United Nations would be a great first step to help regulate the fissile material. This council could potentially contain all the current members of the permanent Security Council as well as all other current nuclear states, including Israel, Iran, and North Korea. Other potential members include Japan, Germany, and Brazil.

There is no better time than the present to begin these non-proliferation efforts. The more time that is wasted, the greater the chance of nuclear midnight, which means
any other policy taken, must be considered irresponsible. The time is ripe for change, it
is now up to the United States to take the lead.
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