

**CONTINUITY AND CHANGE IN THE US
NUCLEAR STRATEGY DURING THE BUSH
ADMINISTRATION, 2001-2004**

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DECLARATION

I declare that the dissertation entitled "CONTINUITY AND CHANGE IN THE US NUCLEAR STRATEGY DURING THE BUSH ADMINISTRATION, 2001-2004" submitted by me for the award of the degree of MASTER OF PHILOSOPHY of Jawaharlal Nehru University is my own work. The dissertation has not been submitted for any other degree of this or any other University.

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CERTIFICATE

We recommend that the dissertation be placed before the examiners for evaluation.

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Dedicated
to
my Parents with Love and Thanks

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LIST OF ABBREVIATIONS

ABM	Anti-ballistic missile
ACI	Advance Concepts Initiative
ALCM	Air -launched cruise missile
BMD	Ballistic Missile Defense
BMDO	Ballistic Missile Defense Organization
BUR	Bottom-up Review
C3	Command Control Communication
C4SIR	Command, Control, Communication, Computers, Intelligence, Surveillance and Reconnaissance
CB	Chemical and Biological
CFE	Conventional Armed Forces in Europe
CTBT	Comprehensive Nuclear Test Ban Treaty
CONPLAN	Concept Plan
CRS	Congress Research Service
DCI	Defense Counter proliferation Initiative
DoE	Department of Energy
DoD	Department of Defense
DPG	Defense Planning Guidance
EPW	Earth -penetrator Weapons

GBI	Ground-Based Interceptors
HDBT	Hard and Deeply Buried Targets
ICBM	Intercontinental Ballistic Missile
INF	Intermediate Range Nuclear Forces Treaty
ISR	Intelligence, Surveillance and Reconnaissance
JCS	Joint Chief of Staff
JSCP	Joint Strategic Objectives Plan
LEP	Life Extension Program
MAD	Mutual Assured Destruction
MEADS	Medium Extended Air Defense System
MIRV	Multiple Independently targetable re-entry vehicle
MRBM	Medium Range Ballistic Missile
MX	Missile-experimental
NBC	Nuclear, Biological, Chemical
NMD	National Missile Defense
NNSA	National Nuclear Security Administration
NPR	Nuclear Posture Review
NPT	Non- Proliferation Treaty
NSC	National Security Council
NSPD	National Security Presidential Directive
NSS	National Security Strategy
NUWEP	Nuclear Weapon Employment Policy
OPLAN	Operations Plan

PAROS	Prevention of Arms Race in Outer Space
PDD	Presidential Decision Directive
PNET	Peaceful Nuclear Explosion Treaty
PSI	Proliferation Security Initiative
QDR	Quadrennial Defense Review
RNEP	Robust Nuclear Earth Penetrator
RRW	Reliable Replacement warhead
SAC	Strategic Air Command
SDI	Strategic Defense Initiative
SIOP	Single Integrated Operations Plan
SLBM	Sea Launched Ballistic Missiles
START	Strategic Arms Reduction Treaty
SORT	Strategic Offensive Reductions Treaty
SSBN	Ballistic Missile Submarine
SSP	Stockpile Stewardship Program
STRATCOM	Strategic Command
THAAD	Theater High Altitude Defense
TMD	Theater Missile Defense
TTBT	Threshold Test Ban Treaty
WMD	Weapons of Mass Destruction

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CHAPTER ONE

INTRODUCTION

The aim of this study is to make a critical assessment of US nuclear strategy during the first George W. Bush administration (2001-2004) and analyse the continuities and changes therein. This era reflects the pinnacle of American exceptionalism, glorifying the use of force and complete disregard of international law. The nuclear weapons policies framed during these years focused on WMD terrorism and counterproliferation. These policies had origins in the earlier post-Cold War administrations. There were some important changes during the George W. Bush administration. There was shift in threat assessment from “*threat based*” to “*capability based*” after 9/11. DoD came out with a clear list of target countries.

The purpose of this study is to critically analyse the overall trends of U.S. nuclear strategy in the Post-Cold War era and throw light especially on George W. Bush Nuclear strategy.

The study seeks to answer the following core questions:

1. Has there been any fundamental change in the US nuclear doctrine during this period or was it a continuation of previous government’s strategy?
2. Was US seeking nuclear primacy during Bush administration or US nuclear strategy has always been driven by realism, viz. quest of nuclear primacy?
3. What are the overall trends of US nuclear strategy in the Post-Cold War?

Background

The beginning of 1990s reflected euphoria of a nuclear free world with the end of East-West conflict. The US-Soviet cooperation through initiatives like the CTR (Cooperative Threat Reduction) and nuclear disarmament treaties like START (Strategic Arms Reduction Treaty) beacons a new era of world peace. The role of nuclear weapons in

US national strategy seemed to be decreasing. President Clinton's nuclear strategy reflected multilateralism with initial success like CTBT (Comprehensive Test Ban Treaty) and extension of NPT (Non Proliferation Treaty) during the first term.

However, the second term of Clinton Presidency of 1990s began to reverse this process with the resistance of nuclear bureaucracy in accepting these treaties. Multilateralism got a setback with the rejection of CTBT, failure of FMCT (Fissile Material Cut-off Treaty) and failure of efforts towards attaining transparency of the nuclear weapons complex.

The arrival of Bush administration in 2001 ended all hopes of nuclear disarmament. Multilateralism was outrightly rejected with the emphasis over maximum freedom of action. George W. Bush administration entered office with advisors opposed to treaty-based arms control. While the nexus between WMD and non state entities in the wake of September 11 attacks heightened the risks of nuclear terrorism, Bush administration's 2002 National Security Strategy advocated the preventive wars and preemption to counter WMD proliferation. The administration published its Nuclear Posture Review in 2002 calling for the development of new, more usable nuclear warheads. United States while maintaining much of its Cold War nuclear arsenal and posture, pursued development of new nuclear capabilities and holding open the possibility of resuming nuclear testing. In fact, the Bush administration called for a new role of nuclear weapons suitable for the emerging security environment. Also, the US abandoned its policy of abstaining from use of nuclear weapons on non nuclear weapon states. The RRW (Reliable Replacement Warhead) program started in 2004 towards producing new warheads.¹

Did George W. Bush introduce fundamental changes to US nuclear strategy? Is US moving towards a maximalist or minimalist posture? Whether gradually the role of nuclear weapons is increasing or decreasing in US nuclear strategy? There are conflicting notions. Some scholars support the present nuclear strategy as the only option for US to

¹ It officially has been described as effort towards creating warheads that would be safer, more reliable and easier to maintain than the nine types populating the current stockpile of 10,000 nuclear weapons.

tackle WMD terrorism and proliferation while others contest this notion that development of new age weapons is the solution to counter nuclear terrorism and proliferation. They believe that the new age weapons are needed only to maintain US superiority.

The **Hypotheses** of this research are:

1. US nuclear strategy underwent fundamental transformation under first George W Bush administration
2. Role of nuclear weapons has shifted from weapons of last resort to weapons of first choice. Nuclear Weapons have become more credible as war fighting instruments and thus more likely to be used in conventional crisis.

Review of Literature

After the end of cold war era, a number of scholars contributed on the role of nuclear weapons and US-Soviet rivalry. Jorn Gjelstad and Olav Njolstad (1996) in *Nuclear Rivalry and International Order* elaborated on the role of nuclear weapons and great power peace between 1945-1991. They concluded that nuclear weapons lacked military and political utility. But their political role will continue to exist despite of direct utility because they will be factors in insecurity. Another major area discussed by the writers is the proliferation of nuclear weapons and impact on global stability.

With the disintegration of Soviet Union, the world moved towards unipolarity which influenced the successive literature. The unipolar exercise of American power to keep stability and superiority of American interest was discussed by Charles Krauthammer (1990/1991) in *The Unipolar Moment*. The new debate that emerged in the strategic circle was, what should be US security strategy in respect to conventional and nuclear weapons now when the Soviet threat is over?

Ivan Eland (2001) in *Putting "Defence" Back into US Defence Policy: Rethinking US policy in the Post-Cold War World* elaborated on the military force structure needed for

the US in post-Cold War era. He emphasized relying on military restraint overseas, and safeguarding vital national interests including the proliferation of nuclear, chemical and biological weapons. Since 1990s, this debate has provided impetus to scholarly work providing valuable insight on key nuclear weapon issues.

The George W. Bush administration was influenced by neoconservative policy influenced by doctrine of American superiority and unilateralism. As such, writers focused on the transformation of US nuclear strategy and demise of strategic arms control. Tom Sauer (2006) in *Nuclear Inertia: US Nuclear Policy after the Cold War* explains that after the Cold War was over and superpower rivalry ended, US didn't move from maximum to minimum deterrence posture. The author questioned the development of the new nuclear weapons to counter WMD proliferation. He rejected the Bush administration's argument that new nuclear weapons could deter threat of biological and chemical weapons. Neither deterrence works in the case of rogue states that do not always weigh their actions rationally. The reason for maximum deterrence policy he attributed not to external objects like China and Russia but rather internal factors, the reluctance of the political class to push through radical changes to bring about minimum deterrence posture. Only marginal reductions were brought in the nuclear forces of US. The central argument that runs through the book is that US continued with a maximum deterrence posture even after cold war though circumstances were convenient for a minimum deterrence posture

Conflicting opinion emerged regarding whether America's aggressive nuclear posture is justified, whether it actually needs new nuclear weapons or they are for maintaining nuclear primacy. *Nuclear Transformation, The New US Nuclear Doctrine* edited by James J. Wirtz and Jeffrey A. Larsen (2005) is an effort towards capturing the transformation in US nuclear weapon policy with the new US nuclear doctrine post 9/11. Busch discusses the change in the command and control structure called by the 2001 Nuclear Posture Review through more centralized C3 structure. On October 2002, US implemented the 2002 Unified Command Plan which created the new United States Northern Command. The author observes that a compelling plan must be devised to integrate US strategic nuclear forces with conventional forces. Further, Pilat observed

that the NPR's new strategic triad is 'evolutionary rather than revolutionary development in US defense policy'. In the new triad, deterrence is no longer the same as in the Cold war but the new triad is designed as to meet full range of possible requirements created by the emerging threats. According to Smith while the old strategic triad was a single purpose, single-threat deterrent force, the NPR'S new strategic triad is designed to 'create a wide array of both discreet and complementary strategic effects against a range of threats and targets'. Larsen concludes that NPR has a tremendous impact on the NPT regime. Also, Knopf believes that several elements of NPR contradict the US commitments under the NPT like research and development of low yield mini nukes. It is against the principles of nuclear disarmament calling for the replacement of existing old warheads. NPR advocates continuous reliance on nuclear weapons for many decades to come. Besides, how real are the reductions envisioned by the NPR is questionable as the Moscow treaty does not mandate reductions on force size after it expires in 2012. The NPR calls for creating an open ended 'responsive force' meaning that some percentage of warheads taken off during operational deployment might be available for redeployment on short notice.

Valuable information on Bush nuclear weapon policy is provided by George Bunn and Christopher F. Chyba (2006) (eds.), in *U. S. Nuclear Weapons Policy: Confronting Today's Threats*. It is a series of essays that assesses the changes in US security policy during the Bush administration. Through the help of relevant case studies this book made a significant contribution. The central argument that runs through the book is that 9/11 has brought drastic transformation in US nuclear weapon policy by changing the nature of adversaries, from Soviet Union to non state actors and 'rogue states'. It throws light on US nuclear posture, what role nuclear weapons is going to play in post 9/11 world. David Holloway's analysis tracing the change in the policy of United States from deterrence, to preventive war and preemption is an immense source of information to those interested in examining the legality of the preemption doctrine. Examining the prevalence of deterrence and the nuclear rivalry between the two superpowers during the cold war, he brings out how the Bush strategy made a drastic transformation while, 'moving preemption to the fore of its thinking in place of deterrence' through the 2002

national security strategy. The book is a storehouse of information on the new nonproliferation initiatives by US. Bunn evaluates the nonproliferation regime while debating the new counterproliferation initiatives undertaken by the Bush administration. Further Chyba, Braun and Bunn elaborate on the proliferation of nuclear weapon to terrorists and the 'axis of evil states' and thereby new challenges to the nonproliferation regime like proliferation rings, nuclear theft and latent proliferation. Panofsky and Wilkening while discussing the issue of developing appropriate defenses against nuclear weapons for United States debate the utility of the BMD at whopping cost which they describe as 'counterproductive'. Speed and May reject the utility of the new nuclear weapons and reject almost all the justifications given by the Bush administration in favour of the new weapons. The new nuclear weapons of US would drive more countries to acquire nuclear weapons in future.

The shift towards an aggressive nuclear posture in the new nuclear doctrine has also been discussed by many other writers. Hans M Kristensen (2005) in *Role of US Nuclear Weapons: New Doctrine Falls Short of Bush Pledge* points out that though the Bush administration called for reducing the role of nuclear weapons in the Nuclear Posture Review, the Nuclear Doctrine of 2001 'reaffirms an aggressive nuclear posture of modernized nuclear weapons maintained on high alert'. The new doctrine has included many key changes with an expanded chapter on nuclear operations and addition of discussion on theatre nuclear operations. Also, the new doctrine has lowered the crisis level needed to use nuclear weapons with the possibility of nuclear preemption. Again, Kristensen (2007) in *US Nuclear Weapons in Europe: A Review of Post-Cold War Policy, Force levels and War Planning* argues that the Global Strike Mission adopted by Bush administration is tailored to suit the preemption doctrine of Bush administration and the new triad requirements. It called for nuclear weapons with lower yields, greater penetration and improved accuracy. Michael Levi and E O. Hanlon (2005) in *The Future of Arms Control* discussed four types of nuclear weapons proposed as tailor made to suit the present needs. They are the Low Yield weapons, the Earth Penetrating weapons also called the bunker busters to detect WMD hidden deep underground, the Enhanced

Radiation weapons also called the neutron bomb that kill enemy with radiation and the Agent Defeat Weapons to penetrate facilities stockpiling chemical or biological weapons.

Ramesh Thakur (2002) in *11 September 2001, Nuclear Weapons and Doctrines and World Order*, while discussing the impact of 9/11 on US foreign policy discussed a number of shifts in US nuclear weapon policy brought by the Bush administration. September 11 has brought a clear shift in US nuclear strategy that can be seen in the new offensive deterrence posture like usability of nuclear weapons and special purpose weapons. Also, it has broadened the use of nuclear weapons to other biological and chemical weapons too while earlier it was limited to nuclear weapons, thus broadening the mission. Also, there is shift in the nuclear proliferation regime regarding the classification of actors of concern to 'axis of evil' and the inclusion of the nonstate actors.

Amy F Wolf in CRS Report for Congress (2006) titled *US Nuclear Weapons: Changes in Policy and Force Structure* presents an overview of the Bush nuclear weapons policy and the differences and continuities in it compared to the earlier administration. Bush administration's threat assessment focuses on countering the capability of potential enemy i.e., "how we will fight" than "who will fight".

Dr. Robert Nelson, however in his article *New and Proposed Nuclear Weapons: Complex 2030: DOE's Misguided Plan To Rebuild The US Nuclear Weapons Complex* (2006) argues about the futility of any initiative like the new Complex 2030 which would lead to upgradation of entire nuclear arsenals while all the same leading to production of new warheads which are not needed. The writer says that this initiative would lead to the return to cold war days to the whole cycle of nuclear weapon design, development and production leading to nuclear testing at the same time. However, US existing arsenal of 10000 nuclear warheads is highly reliable and would remain so. Further RRW program will lead to replacement of old weapons which are already tested by those which are not tested. This would also trigger testing by other countries. "Under Complex 2030 US nuclear weapons reduction would wait until 2030".

However, some writers don't see any fundamental change in US nuclear weapon policy which they believe has been always used to dominate the world. Joseph Gerson (2007) in *Empire and the Bomb: How the US uses Nuclear Weapons to Dominate the World* argues that George Bush regime and 9/11 attacks did not bring any particular impact on US nuclear weapon policy which has been framed by all administrations to maintain US superiority. US has used its nuclear weapons to extend the unipolarity so that the elites keep enjoying the privileges of twenty-first century empire. He cites several case studies including the invasion of Iraq after cold war to control the Middle Eastern Oil. George W Bush policy on US nuclear weapons resembled the zeal of early Reagan years, colonization of time as well as planet. The Project for a New American Century in 1990s was also designed to shape the new century favourable to American principles and interests. This called for massive buildup of high tech weapons and greater reliance on nuclear weapons and military power than diplomacy. 'Washington's use and threatened use of first strike nuclear attacks to expand, consolidate and maintaining its empire has been the principle force driving nuclear weapons proliferation. US has not followed Article 6 obligations for the elimination of nuclear weapons. The writer goes on to discuss the flawed Moscow treaty as 'US strategic weapons would remain in storage and serve as an augmentation capability should US strategic nuclear force requirements rise above Moscow treaty.' Besides, increased authority was also given to the commanders to propose targets for nuclear attacks. The writer also discusses Bush contempt of the nonproliferation regime. US continued to paralyze the NPT review conference in 2005. He also criticizes the quality and legality of PSI (Proliferation Security Initiative) and the double standard of the Bush regime in offering India (not a signatory of NPT) with nuclear technologies through the nuclear deal.

Kier A. Lieber and Daryl G Press (2006), in *Rise of US Nuclear Primacy* explores the debate whether US is actually seeking nuclear primacy. They argue that though the end of MAD is nearing end it is most relevant to be discussed today as US is for the first time in 50 years on the verge of attaining nuclear primacy with the modernization of nuclear arsenal like upgrading the fuse on the W-76 nuclear warhead. They also refute the claim that the administration's claim of developing new warheads, since US has thousands of

warheads capable of attacking bunkers and cavers. Rather, the new warhead seems to be designed with the purpose of preempting attack against China and Russia. So, while the age of MAD is ending, the era of nuclear primacy has begun.

In Peace Research Institute Frankfurt Report (2004) titled, "*US Nuclear Policy after the Cold War*", by Harald Muller and Annette Schaper dwell on the structural causes beneath the dominance of unilateralism in Bush administration nuclear weapon policy. They argue that Bush administration entered the office with a team that was unilateral and more uncompromising towards American military superiority than any government before. International law became the subject of American power politics. This also led to differences with allies, Germany and France which destroyed 50 year alliance. This trend was visible before September 11 attacks wherein after brief period of "pseudo multilateralism". US reverted to unilateralism under the "banner of war against terrorism". Neoconservative foreign policy strategies of unilateralism, which started at nineties, had a major influence on Bush nuclear weapon policy. National Security Strategy published in 2002 was an expression of this. September 11 simply made a clear profiling of a policy laid down much before. The right wing of the Republicans officials represented by number of prominent officials had laid down the policy of regime change and containment long ago. According to the writers, the NPR of January 2001 resembles significant continuities and differences with that of previous government. For instance, SORT rejected the destruction of warheads and disarmament of tactical weapons.

George Perkovich (2003) in *Bush's Nuclear Revolution: A Regime Change in Nonproliferation* summarizes US security strategy during Bush administration as oriented towards overwhelming dominance, with large and modernized nuclear arsenal, preemptive use of force and regime change and disregard of international cooperation in nonproliferation.

Rationale and Scope

The review of literature points towards existing gap in understanding the trend of US nuclear weapon strategy. There is need to bring about a comprehensive study of the US nuclear weapon strategy in the Post-Cold War era in terms of the policy making process. Also, more work needs to be done on the interplay between Bush nuclear strategy and the role played by the decision making process. Besides, a lot of debate has emerged regarding the implications of American aggressive nuclear posture and the role of 9/11 in transforming US nuclear strategy. Whether these are changes unique to the circumstances prevalent during the Bush administration, or just another aspect of US hegemonic nuclear strategy, needs to be studied. Also, the research also needs to reflect on whether the new policies bring fundamental changes in US deterrence policy. Last but not the least, the research aims to bring about broad contours of US nuclear strategy.

Methodology

The methodology that can be followed while working on U.S. nuclear strategy during George W. Bush administration will be inductive. While examining the continuities and changes in the nuclear strategy of US, the study will explore the new role of nuclear weapons in United States security policy. The research will analyze the realist orientations in US nuclear strategy through exploring the policy prescriptions and manifestation of thoughts and actions of major players in Bush administration. A brief assessment of US approach towards arms control and nonproliferation will be made. The focus of the research study will be to bring forth the trends in which US nuclear strategy is moving. The research will examine various primary reports, and published secondary sources like books, journals, and internet sources.

Chapterization

The first chapter, *Introduction*, will present a brief background and rationale and scope of the study. This will also explore the need for such a study through pointing to gaps in existing literature. It will present the, key arguments, key research questions, hypothesis, literature survey and chapterization of dissertation

The second chapter, *Analyzing US Nuclear Strategy: Realist Perspectives*, will discuss the core tenets of Realism and its different strands including, Neorealism, Defensive vs. Offensive Realism and their predictions about US Nuclear Strategy. This chapter will also elaborate on the American drive for dominance in the light of realist theoretical framework.

The third chapter, *US Nuclear Strategy in the Post-Cold War Era (1991-2001)*, will contain a history of the US Nuclear weapon policy in post-Cold War era prior to first Bush administration. It will discuss the various facets of the nuclear strategy during the Senior Bush administration and the Clinton administration.

The fourth chapter, *Nuclear Strategy under First George W Bush Administration (2001-2004)*, will discuss the nuclear revolution during the period 2001-2004 including the role of 9/11 in the evolution of US nuclear strategy. This chapter will critically analyse the policies of George W. Bush administration. The focus of this chapter is to find out whether the Bush administration had brought fundamental changes to US nuclear strategy or they were a continuation of earlier Post-Cold War administrations. It will also study in detail whether US' nuclear primacy is a new phenomenon under George W. Bush or simply a reflection of realist orientation in US security strategy.

The fifth chapter, *Conclusions*, will identify continuities and changes and assess the future of US nuclear strategy.

The result of this study shows that the US nuclear strategy has moved towards an offensive realist nuclear strategy to maintain US preponderance. Bush administration's nuclear weapon policy as a continuity to the Post-Cold War administration reflects US

offensive behaviour to maintain American hegemony. There has not been any fundamental transformation of US nuclear strategy, but are manifestations of US desire to maintain its hegemonic status in world politics today and in the future.

The salient features of George W. Bush administration in terms of the nuclear doctrine, tailored deterrence, responsive force structure, capability based flexible war planning etc. are borrowed from the earlier Post-Cold War administrations with minor changes unique to the administration. The dominance of Neocons in the administration and later the September 11 attacks in 2001, only gave a reason for the administration to go for an offensive nuclear posture. Role of nuclear weapons in the post-Cold War had widened to a wide range of policy options to prepare for unexpected contingencies. This would make nuclear weapons more usable. This phenomenon was already present in the Post-Cold War era but the administration came out openly in support of this with the integration of nuclear and conventional forces in the new triad. Another policy option which contributed to nuclear weapons becoming more credible and usable is emphasis over nuclear preemption and unilateral initiatives without attaining international consensus from United Nations or other international organizations.

In a nutshell, the nuclear policy of the George W. Bush administration in its first term (2001-2004) seems to be targeted towards US military transformation as to maintain US primacy in international politics.

CHAPTER TWO

ANALYZING US NUCLEAR STRATEGY: REALIST PERSPECTIVES

Nuclear Strategy refers to the military strategy governing a state possessing nuclear weapons. It explains how a state would use its nuclear weapons.

Nuclear Strategy includes all details and policies relating to deployment, employment and production of nuclear weapons and circumstances under which they would be used. It is a sub-branch of military strategy.

The fundamentals of nuclear strategy were laid down by Bernard Brodie (1946) in his book, *The Absolute Weapon: Atomic Power and World Order*. He argued that an important aspect of nuclear strategy is how nuclear weapons can be used to serve political ends. Unlike conventional strategy, nuclear strategy is framed primarily to deter the adversary or prevent the use of nuclear weapons and not to win the war as victory is impossible. (Howard 1981)

Ever since the bombing of Hiroshima and Nagasaki, US has deployed nuclear weapons as the centerpiece of its strategy for achieving and maintaining global hegemony. During the inter-war years, all major powers like Japan, Germany, Britain, and Soviet Union started nuclear weapon programs and there was mutual fear about who would be the first to make it. It was US that owing to superior technological prowess and organizational support succeeded in developing the nuclear weapons and used it as a tool to maintain overwhelming dominance.

US global hegemonic ambitions have been declared time and again by the US policymakers. The Defense Planning Guidance for fiscal years 1994-1999, defined US grand strategy, as to maintain hegemony by preventing new rivals in Europe and East Asia. Clinton administration declared that US was the world's preeminent power and the only superpower on earth. The 1997 Quadrennial Defense Review, prepared by the Pentagon, stated the importance of sustaining US hegemony and to prevent rise of other

powers. Similarly Bush 2002 NSS (National Security Strategy) and 2001 QDR(Quadrennial Defense Review) stated commitment to maintain US hegemony (Layne 2006: 25).

American drive to maintain hegemony and dominance can best be explained by realist theorists that explain the behaviour of great powers in an anarchic world and struggle for power, to be the global hegemon. 'The doctrine of deterrence seems to start off as a strictly realist proposition: any nation facing a foe in possession of a terrible weapon must acquire it for itself' (Schell 2007:61).

Realism: Meaning

Realism is a general approach to international politics. It is the dominant theory of international politics. 'It provides the most powerful explanation for the state of war which is the regular condition of life in the international system'. (Dunne and Schmidt 200:161) There are many strands of realism which share some core principles regarding the nature of international politics. Realism describes international system as a place where states are constantly looking for opportunities to take advantage of each other. There is lack of trust and possibility of war always in the background.

The origins of Realism lie in the idealist writers of the inter-war (1919-1939) period when writers began to focus on the cause of the First World War. Modern realists scholars came to falsify the idealist explanation of causes of war while ignoring the role of power. 'The Realists claimed that they were dealing with the world as it actually functioned.' (Viotti and Kauppi 1993:61) They criticized the idealists for assuming that actors in international system are rational beings, and there is commonality of interests between them. New generation of realists writers like E.H.Carr, Hans J. Morgenthau, George Kennan, Reinhold Niebuhr and Fredrick Schuman emphasized the 'ubiquity of power and the competitive nature of politics among nations.'

Realism was able to account for the rise of America as a global hegemon. Realism provided the basic guidelines for the states to maximize their interests. 'Realism was able to teach American leaders to focus on interests rather than ideology, to seek peace

through strength, and to recognize that Great Powers can coexist even if they have antithetical values and beliefs.’ (Dunne and Schmidt 2005:162) Two acclaimed academics who held high positions in American foreign policy establishment, Henry A. Kissinger and Zbigniew Brzezinski were realists. (Viotti and Kauppi 1993:61)

Realism, as a theory of international politics is based on the following core assumptions:

1. *States are the principal actors in world politics.* Thus, realists explain the behaviour of states without paying attention to individuals or transnational corporations. (Jones, Miller ix: 1995) Realists focus on great powers. Changes of structure and systems occur with change in the number of great powers. Realists tend to focus on state as the main actor with sovereignty as the distinguishing trait. States are supreme within their territorial limits. Realism starts from the assumption that domestically there is no security problem. It is on the outside within international community that there is anarchy. Nature of the state is viewed in zero sum terms. The main function of state is to organize power domestically and to acquire power externally. Structural realists have shifted the focus from power to capabilities. Similarly realists do not consider the presence of transnational actors, international organizations etc. The realist argument known as the hegemonic stability theory maintains that international domestic order is dependent on strong states
2. *States are viewed as unitary actors.* ‘For purposes of analysis, realists view the state as a metaphorical hard shell’ (Viotti and Kauppi 1993:8). A country is viewed as one integrated unit. It is believed to have one policy at a time on a particular issue. Political differences within the state are resolved to the extent that the country faces the outside world as one entity.
3. Realists assume that *states are rational actors.* This means before taking any decision, states evaluate all means and take the one which gives maximum utility.’ A rational foreign policy decision making would include a statement of objectives, consideration of all feasible alternatives in terms of existential capabilities available to the state, the relative likelihood of attaining those

objectives by the various alternatives under consideration, and the benefits or costs associated with each alternative'(Viotti and Kauppi 1993:6).

4. Realists assume that there is *hierarchy of international issues and the national security issue tops the list*. It is the political and military issues which are most prioritized. Military and political issues are referred as high politics and economic and social issues are considered as low politics (Viotti and Kauppi 1993:6).
5. Power is the goal of all states seeking survival in the international system.

Realism is not monolithic. There are several schools of thought within the realist approach. (Jones and Miller x: 1995)

Modern realism that developed from the Second World War arose from the writings of Classical Realists which include Thucydides (c.460-406BC), Niccolo Machiavelli (1469-1527), Thomas Hobbes (1588-1679) and Jean Jacques Rousseau (1712-78). These writers reflected on the guidelines on which the state leaders should follow, as to ensure maximum interest of state. This is grouped under the doctrine of *raison d'etat*, or reason of state which is the fundamental principle to conduct foreign affairs.

Classical Realism

According to Classical Realists, international politics is driven by endless lust for power and the will to dominate.

Classical Realism, assumes that a country's interests are determined by its power and that expansion of its interests abroad is based on its ability and rising power. Among the Classical Realists, the earliest is Thucydide's representation of power politics as a law of human nature. The root of power politics lies in human nature. The behaviour of state as a self seeking egotist is merely a reflection of the characteristics of people of that state. A distinguishing characteristic of Classical Realism is primordial characteristics of power and ethics, predating the sovereignty based notions in the seventeenth century.

Thucydides

Thucydides was a historian of Peloponnesian war, a conflict between two great powers in the ancient Greek world, Athens and Sparta. Thucydide's description of the Peloponnesian war raises important insights about the anarchical nature of international politics and its impact on behaviour of state actors. Sparta's national interest like that of other states was survival and the growth of Athenian power threatened this survival. Similarly, Athens felt equally compelled to pursue power to preserve its empire. Pericles, the Athenian leader claimed to be acting on most fundamental of human motivations, ambition, fear and self interest. Melian dialogue is one episode of war which represents illustration of key realist principles.

In the same way, **Machiavelli** in "*The Prince*" depicts the plight of Florence due to the expansionist policies of external great powers. His political realism recognizes that principles are subordinate to policies. The ultimate skill of the state leaders is to accept and adapt to the changing power political configuration in world politics. All obligations and treaties with states should be disregarded if the security of the community is at threat (Dunn and Schmidt 2005:166). State leaders should subordinate personal interests and dedicate their lives to its preservation and pursuit of power. A decision maker needs to have moral flexibility as to maximize the power of the state and pursue national interest. They do what is necessary to ensure its survival and prosperity.

Thomas Hobbes

Hobbes discusses a state of nature where life is constantly endangered. Life is constantly threatened so people join to form state. Herein they transfer their right and means to the state, to defend them. State forces them to behave by threatening to use force if law is not obeyed.

Hans Morgenthau

Classical Realism dominated international relations from late 1940s till 1970s. (Mearsheimer 1978:19) According to Morgenthau, states are led by human beings who have a will to acquire power. This leads to a competition for supremacy among the states. The best way to manage conflict and war is through the understanding of balance of power. The 'drive to live, to propagate, and to dominate are common to all men' (Dunne and Schmidt 2005:169).

He laid down six foundation pillars for national leaders in framing foreign policy.

SIX PRINCIPLES OF POLITICAL REALISM

1. Political realism believes that politics, like society in general, is governed by objective laws that have their roots in human nature. In order to improve society it is first necessary to understand the laws by which society lives. The operation of these laws being impervious to our preferences, men will challenge them only at the risk of failure.
2. The main signpost that helps political realism to find its way through the landscape of international politics is the concept of interest defined in terms of power.
3. Interests are defined as power applies to all states at all times. The idea of interest is the essence of politics and is unaffected by the circumstances of time and place.
4. There is a natural tension between politics and morality. Morality cannot be permitted to obstruct the successful pursuit of interest.
5. Political realism refuses to identify the moral aspirations of a particular nation with the moral laws that govern the universe.
6. The difference, then, between political realism and other schools of thought is real, and it is profound (Morgenthau 1978:4-15).

Kautilya

Kautilya is one of the greatest political realists. His work, *Arthashastra* with its discourse on war and diplomacy proposed realist principles for the king to conquer the world. At the same time it proposed domestic policies for the monarch for the general welfare. Kautilya emphasized on the role of power to conquer the world. Use of power to gain wealth was not considered unjust. He acknowledged the state of war in the international system and discussed in detail the rules of statecraft a monarch should follow for power aggrandizement. His Mandala theory of foreign policy discussed ways in which nations should manage their foreign relations. Every nation should act as to maximize their self interest and power. He advocated use of all means including deception for attaining power (Boesche 1981).

Classical Realists attribute the endless cycle of war and conflict in the aggressive human nature and believe that 'anarchy could be mitigated by wise leadership and the pursuit of national interest in which that are compatible with international order' (Dunne and Schmidt 2005:169).

Later came the **Structure Realists**. Structure realists concur that international politics is struggle for power but not because of human nature but of the anarchical system of international structure. Structural Realists minimize the national attributes as determinant of state's foreign policy behaviour.

Classical Realists and Structural Realists: Difference and Similarity

Structural Realists while share the Classical Realists emphasis on power, they aim to build a deductive, social-scientific theory of international politics. Structural Realists claim that states seek to preserve their security. (Jones and Miller x: 1995) Classical Realists like Morgenthau depicted a rational statesman as the one accumulating more and more power, with power as an end in itself. On the other hand, Structural Realists contend that the ultimate concern for states is not power but security. (Waltz 1988:616)

Structural Realism is divided into two camps, those who argue that states are **security minimalists** (Defensive Realism) and those who argue that states are **power maximalists** (Offensive Realism). Among other things they also disagree about whether seeking hegemony is a wise grand strategy for great powers.

Defensive realism contended that it is not human nature but the anarchical system which drives states to maximize their security. The most stable distribution of power in the international system is bipolarity. Offensive Realism differs with Defensive realism on the notion that how much power a state wants. States are not satisfied with a given amount of power to attain security but they seek hegemony for their survival.

Defensive Realism

According to Defensive Realism, the structure of the international system regulates the behaviour of great powers and their foreign policy behaviour. The structure of the international system shapes their foreign policies. International system does not necessarily generate conflict and aggression. States that understand international system will realize that 'security is plentiful and defensive strategies are the best routes to security' (Jones and Miller xi: 1995). Great powers should avoid expansionist and security seeking grand strategies. Also, presence of structural modifiers like the offense-defense balance of great power capabilities modulate the security dilemma. As such great powers are secure from other's attack and hence can afford to forego acquiring offensive military capabilities. As such the notion that great powers expand is wrong. Power maximization is not a rational strategy for great powers because over the period of time it leads to strategic overstretch. The domestic economic base most importantly is weakened which in turn endangers great power's security. Besides due to the presence of balance of power system an expanding hegemon is checked by other powers. Defensive realists explain that the power maximizing behaviour of great powers is self defeating. However some great powers bid for hegemony because they are greedy states and they want more than security. (Layne 2006:17)

In Waltz's theory of international politics, system is emphasized in *Man, State and War*. He drew inspiration from Rousseau's parable. Unlike Morgenthau, Rousseau believed that human nature is selfish, aggressive and violent, it is because society made us that way. The root of conflict and war, therefore, according to Waltz, is in international system. Where Morgenthau sees conflict and war rooted in human nature, Waltz sees it as the effect of the international system. By changing the nature of international system, international relations can be changed.

Waltz presents three images to substantiate his point. The First image holds that human nature is the cause of war. The first image holds that since human nature is corrupt, power hungry, it is the cause of war. So war cannot be eliminated.

The second image puts the onus of conflict and war in state, domestic society. So bad State would cause war and good states seek peace.

The third image locates the causes of war in the international system. Anarchy is the governing characteristic of the international system. States engage in cost benefit analysis to pursue their interest in the absence of a central authority. They will use force if their interest is threatened.

Waltz's theory of Defensive Realism came with *Theory of International Politics* in 1970. The essence of his argument is that nations seek security rather than influence and that their expansion is triggered by external threats. They hold that international system provides incentives for expansion only under certain conditions.

Security dilemma is prevalent so the means by which a state increases its security decreases the security of others. Thus, states are always worried about other state's intentions. States follow expansionist policies as their leaders believe that aggression is the only way to make their state secure. So, Defensive Realism is more moderate regarding expansionist policies of states. Under most circumstances, stronger state in the international system should follow military, diplomatic, and foreign economic policies that communicate restraint. (Jervis 1978) Defensive Realists such as Waltz and Joseph



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Grieco argue that states have security as their principal interest and therefore seek requisite amount of power to ensure their own survival. States are principally defensive actors and will not seek to gain greater amount of power if that means jeopardizing their own security. (Dunne and Schmidt 2005:174)

Unlike offensive realism, Waltz does not argue that the anarchical international system leads to act offensively to gain power but only drives them to act defensively and maintain balance of power. In terms of survival, defensive realists hold that the existence of status quo powers lessens the competition for power.

Offensive realists argue that the competition is always keen because revisionist states and aspiring hegemons are always willing to take risk with the aim of improving their position in international system.(Dunne and Schmidt 2005:174)

Kenneth Waltz in *Theory of International Politics (1970)* defined the structure of international system in terms of three elements, organizing principle, differentiation of units and distribution of capabilities.

Organizing Principle: Waltz identifies two different organizing principles: anarchy i.e., lack of decentralized authority in the international politics while hierarchy governs the domestic order.

Functional Differentiation: Units of domestic politics have different functions. At international level units are functionally similar.

Distribution of Capabilities: Waltz stated that it is the difference in capabilities of states which explains international outcomes. Key international outcome like war and peace, alliance politics and balance of power are defined by this distribution of capabilities. It is the number of great powers in the system that impinges on international outcome. So during the cold war there were two great powers in the world, so the world was bipolar.

Waltz on Nuclear Weapons

Nuclear weapons dissuade states from going to war much more surely than conventional weapons do. (Waltz 1988: 625) He pointed to the prevalence of peace between Soviet Union and United States owing to the prevalence of nuclear weapons between these two countries. Nuclear weapons thus have eliminated war from international politics between great powers. 'A Unit level change has dramatically reduced a structural effect' (Waltz 1988: 627).

Deterrence strategies are purified by nuclear weapons as it renders warfighting and defending irrelevant. The destructive power of nuclear weapons makes 'invulnerability of a small number of warheads easy to achieve and delivery of fairly large number of warheads impossible to thwart' (Waltz 1990:732). Nuclear weapons bring stability and peace as such. They have drastically reduced the possibility of war. He went on to say regarding the peace prevalent since the advent of nuclear weapons that "never since the treaty of Westphalia in 1648, which marks the beginning of modern history have great powers enjoyed a longer period of peace than we have known since the Second World War" (Waltz 1990:744).

Balance of threat theory, on the other hand, argues that rather than states balancing against power, states balance against the threat of other states to their security. The proponents of this theory claim that states with greater power in the system may not be a threat to others since that may not be the strongest state in the system. Stephen M. Walt proposed that threat could be a function of several factors among which includes a state's aggressor power (that is determined by population, economic and military capabilities and technological prowess) geography, geographical proximity to others, possession of offensive military capabilities to others and aggressive intentions (Layne 2006:137).

Moreover, the balance of threat theorists believe that because of geographical location, US hegemonic power is not a threat to others. US while is isolated by ocean, the other regional powers lie in close proximity to each other and hence worry more about each others than US. If any major power rises in Eurasia as a hegemon, it would threaten the

regional powers and result in the formation of regional power balances directed against it. In 'Alliance Formation and the Balance of World Power' Stephen Walt has studied the causes of alliances and analyzed many hypotheses viz., states ally against external threat (balancing) , states ally with external threat (bandwagoning), states ally with other states that offer foreign aid, and states ally with states that successfully manipulate and penetrate their domestic politics'. He concluded that external threats are the most powerful causes of alliances. Secondly, states tend to balance against external states rather than bandwagoning (Jones and Miller xvii: 1995).

Yet another factor could be that US hegemony doesn't threaten the sovereignty of second-tier major powers. Among the various factors cited are that US is most importantly seen a protector of the international system's status quo. Also, US empire or influence does not rest on direct control as to threaten others rather on indirect control. Neither does US expand unlike the hegemons of yester years for wealth or territory. All the second tier powers that could think of hard balancing against US, possess second strike nuclear deterrent that makes them independent (Layne 2006:138).

Following on the same argument another set of thinkers believe that other major powers like China, Germany, Japan, France, Britain etc. have sufficient latent capabilities to balance US power if they feel threatened. However states have no motivation to do so as they don't feel threatened by US. US strategy is primarily to check the rogue states and terrorist groups.

According to **Stephen Van Evara**, great powers are not constrained to be hegemony seekers, because the structure of power is benign in international politics and therefore provides more disincentives than incentives for aggression. While examining the offense-defense balance, he explained that realist explanation on power and capabilities cannot explain pattern of war and peace. Rather offense- defense theory is the most powerful explanation for incidence of war in the international system. Offense-defense balance can be broadly defined in terms of military technology and doctrine, geography, national social structure and diplomatic arrangement is the principal cause of great number of war inducing factors (Evara 1999: 5-43).

Offense Defense Theory

This theory offers explanation for conflict and crisis in international system in terms of the shifts in Offense- Defense balance. According to offense- defense theory proponents factors which increase the likelihood of success of offensive operations make conflict and war more likely for e.g., innovation in military technology. Similarly factors that tend to facilitate offensive operations or reduce the cost of such operations, relative to defensive increase the chances of war and crisis in international system. When offense is dominant it produces conflict prone behaviour even among statusquo states. However when defense is dominant states feel secure. A shift towards offense dominance results in preventive strikes and preventive wars. This also reduces chances of conflict resolution and negotiation. Due to the lack of an overpowering authority in the international system states are unsure of the intentions of their rivals and concentrate more on their capabilities.

Offense Defense balance is determined by innovation in military technology. So the technology which makes easier to advance offensive capability like penetration of opposing defenses or reduces cost of such operations favour offense. On the other hand, technology which concentrates on firepower and fortification supports defense. Jervis explained that assessment of relative capability of great powers in international system, is not enough to explain security dilemma which is rather affected by relative superiority of offensive capabilities. Knowledge of offense defense capability is prerequisite to predict the probability of war and crisis. (Gortzak, Haftel and Sweeney 2005:70)

Charles Glaser in 'Realists as Optimists: Cooperation as Self Help', argues that realist theories can lead to predictions of international peace and cooperation. This is most likely when the offense-defense balance of military technology favors the defense. This creates 'mild security dilemma leading to security seeking behaviour by other states without threatening that of others. War is not a necessary condition of international anarchy and other realist assumptions.' Besides states may not behave peacefully even if international conditions support peace but he attributes this to domestic conditions, not the structure of international politics.(Jones and Miller xix: 1995)

Thomas Christensen and Jack Snyder describe how in different ways 'Chainganging' and 'Buckpassing' can increase the chances of war. 'Chain-ganging' is used to describe overbalancing by countries while Buckpassing describes underbalancing by countries. He draws example from the First World War where two rigid alliance systems, Triple alliance and Triple Entente confronted each other in a conflict. Starting between European powers it eventually led to US entry too. 'The danger with Chainganging is that a small localized war can spread to become a large, costly conflict.' Similarly, World war II is a classic case of buckpassing where Great Britain, France, the Soviet Union and the United States engaged in buckpassing unwilling to unite against Nazi Germany. (Chainganging and Buckpassing) The problem is in the perception about the balance between the offence and defence in war. Perception of dominance of offence in war can lead to chainganging while perception of dominance of defense in war can lead to buckpassing (Christensen and Snyder 1990:137-68).

The distribution of power in the international system can be unipolar, multipolar and bipolar. Equal diffusion of power is more conducive for peace and stability of international system than the concentration of power. This explains the balance of power between the two superpowers, Soviet Union and United States during the Cold War.

Great powers have to remain sensitive to the capabilities of other states that may use force to advance their own interests. This leads to struggle for survival among state and security seeking behaviour. (Dunne and Schmidt 2005:170) The distribution of capabilities in the international system is thus crucial in determining state action.

The international system is mostly (although not exclusively) responsible for how states conduct themselves in the international arena. By this, I mean that the relative distribution of capabilities among states, as well as power trends, shape the broad parameters of states' external behavior. Realism is an environment-based body of theories. As Jennifer Sterling-Folker notes, "The impact of structure on state behavior is more akin to an environment that surrounds states and acts as an extrinsic physical condition affecting and influencing the growth and development of states." (Taliaferro, 1999)

Offensive Realists differ with Defensive Realists over how much power a state wants. They argue that due to scarcity of security, great powers expand and aspire to become a hegemon. International system fosters conflict and aggression. Security is scarce making international competition intense and war prone. As such rational states are compelled to behave offensively in their search for security. Their aim is to maximize their power. Unlike the defensive realists who claim that expansionist behaviour is the result of security dilemma, Offensive Realists believe they logically arise from insecurity condition (Layne 2006:17). For Defensive Realism hegemonic grand strategies are self defeating, but for Offensive Realism they only ensure survival.

Mearsheimer propounded the theory of **Offensive Realism** in *The Tragedy of Great Powers* (2001) explaining the mutual behaviour of great powers in the international system. Mearsheimer argued that great powers gain security through expansion and power maximization.

While Defensive Realism contends that a great power should seek only the minimum amount of power to ensure their survival, Offensive Realism argues that great powers can't settle for just enough power. It is impossible to make out how much power states need to ensure their security. The only way power maximization can be stopped and security is ensured is through attaining hegemony. States seek hegemony to gain security for two reasons:

A hegemony's overwhelming power dissuades others from challenging it and secondly, hegemony is the best response to uncertainty of others intentions and about distribution of power in the international system. Mearsheimer also argued that it is impossible to achieve global hegemony (Layne 19:2006).

Great power strategy is primarily power seeking and expansionist at the expense of rivals wherever they find an opportunity. 'The overriding goal of each state is to maximize its share of world power which means gaining power at the expense of other states' (Mearsheimer 2001: 2) So, it is the relative capabilities of states that largely influence the intentions of states. He concludes that the ultimate aim of states in the international

system is to be the hegemon which ensures their survival in the system. Weaker states will hesitate to pick fights with powerful states as they are likely to suffer military defeat. The struggle between states to alter the balance of power in their favour i.e., revisionist intentions is what prevents the presence of status quo powers in the international system. As such there is a perpetual great power competition in the world resulting to offensive behaviour of great powers. . Explaining why great powers behave in this manner he states that it is the structure of the international system which leads to the offensive behaviour of state. He enumerates 5 core assumptions of his theory which explains states' offensive behaviour and their hegemony seeking behaviour (Mearsheimer 2001: 3).

1. The absence of central authority
2. States always have some offensive military capability to inflict damage on one other. States are identified by the weaponry they possess.
3. States are not certain about other states intentions. Any state can use its offensive military capability. Besides any state can be benign one day and hostile another day. Intentions change quickly.
4. Survival is the primary goal of great powers. States seek to protect their territorial integrity and autonomy of their domestic political order.
5. Great Powers tend to be rational actors that are aware of their external environment and think strategically about how to survive in it.

However, that does not mean that great powers cannot always act on their offensive intentions because behaviour is influenced not only by what states want, but also by their capacity to realize these desires. Also, a great power with greater power advantage over its rival will behave more aggressively, because it has the capability and the intention to do so. On the other hand, great powers faced with powerful rivals will act in a less offensive manner and focus on balancing to the threat possessed by the powerful opponent.

Yet great powers do miscalculations due to lack of perfect information. This is because states often misrepresent their power as to avoid being attacked by the enemy. Also, great powers are not sure of how their forces will behave in the

battlefield and that of the opponent. Also, the resolve of the enemy is not clear that acts as an obstacle.

Offensive realism is opposed to the claim of defensive realists that systemic factors constraints aggression and offensive behaviour. 'Indeed the historical records provides little evidence for the claim that offense rarely succeeds'(Mearsheimer 2001: 38).

Also, Mearsheimer gave the concept of regional hegemon for states which dominate particular geographical areas and global hegemon for those which dominate the world. A state to achieve the position of global hegemon needs to have clear cut nuclear superiority.

Overall the basic idea proposed by Mearsheimer was that it is the structure of international system which causes great powers them to behave aggressively and seek hegemony (Mearsheimer 2001: 54).

Describing the importance of relative military capability to be a great power, Mearsheimer stated the importance of nuclear deterrent. 'In the nuclear age, great powers must have a nuclear deterrent that can survive a first strike against it, as well as formidable conventional forces.' He goes on to say that in the event that a state gained nuclear superiority over its rivals, its overwhelming power will make it the only great power in the international system. Nuclear hegemon will simply outweigh the relevance of conventional deterrent.

After attaining regional hegemony, US acts as an offshore balancer in Europe and Asia so that no peer competition emerges there. America's strategy is buck-passing. So if a new great power appears in Europe or Asia, it lets the regional powers balance the hegemon. It interferes only if the rising power could not be contained by the regional powers.

Fareed Zakaria and Randall Schweller claim that defensive realism cannot explain state expansion because it argues that there are never international incentives for such behaviour.

Randall Schweller contends that balancing couldn't occur in an international system comprised of security seeking states unless states were sure of one other's motives. He challenged existence of security dilemma and faults Waltz for relying on uncertainty instead of structure to explain international conflict and balancing (Taliaferro 2000-2001:144). He emphasized more on state level differences, especially the distinction between revisionist and status-quo powers. He challenges neorealist theory that it cannot account for international politics since it doesn't recognize that states have different goals. While dividing states in to status quo and revisionist powers, he asserts that, Status quo powers are usually content with what they have and tend to balance against threat and to seek security. Revisionist powers on the other hand want to add to their wealth, power, or prestige, so they tend to initiate wars of conquest or to jump on the bandwagon of more powerful states.

Zakaria criticized defensive realism for denying the concept of security dilemma. Zakaria argued that Defensive Realism cannot explain world politics as it believes states can easily attain security through moderate foreign policies. Defensive realism denies the existence of real security dilemma and relies on the existence of unit level variables to explain great power expansion. (Taliaferro 2000-2001:152) In 'Realism and Domestic Politics', Zakaria argues that defensive realism is a weak theory 'because states respond to shifts in relative power, not threats. He asserts that state seek security is a flawed concept and cannot explain international politics. Realist should 'assume that states seek to maximize their influence in international politics' (Jones and Miller xx: 1995)

He explains the cause of expansion of American nation long after it grew powerful. He makes distinctions between powerful nation and powerful state. Powerful state run by decision makers take strategic decisions, make wars or expand territories. Statesmen can take this decision only when there is relative increase in state power not national

power. This means centralization of decision making process and strengthening of federal powers.

Gilpin: Cycles of Hegemony and War

Hegemonic theories of rivalry and war argue that international politics has been shaped by rise and fall of successive hegemonic states that have dominated their respective international orders. War is particularly likely during periods of hegemonic transition. (Jones and Miller xii: 1995)

Gilpin uses Realist assumptions in *War and Change in World Politics*, to interpret the last 2400 years of western history. States are the principal actors of world politics. He describes that states make cost benefit calculations in taking the desired course of action that includes changing the international system when required. Also consideration of power relative to the structure of the international system guides the states. He depicts world history as Cycles of Hegemony wherein 'conclusion of one hegemonic war is beginning of another cycle of growth, expansion and eventual decline' (Jones and Miller 201: 1995). Thereby there is redistribution of power with new hierarchy of prestige and emergence of new hegemon in the international system. In explaining hegemonic decline, Gilpin comes with the "Law of Uneven Growth". He describes as empire grows 'the economic surplus has to increase faster than the cost of war.' However, eventually diminishing returns sets in. Also Hegemonic states invest less and consume more. Finally, hegemonic states decline because of the process of diffusion of technology.

Defensive Realism presents a more optimistic picture of international politics while describing that states strive for security not power and hence international system provides incentives for aggression and hostility only under limited conditions. Offensive Realism, on the other hand, predicts aggression and expansionist behaviour of states. It is anarchy which drives states to weaken potential adversaries in order to acquire power.

Conclusion

‘The US's expansion of its political interests abroad can be explained by three kinds of realism. The first, classical realism, assumes that a country's interests are determined by its power and that expansion of its interests abroad is based on its ability and rising power. Defensive realism, on the other hand, argues that nations seek security rather than influence and that their expansion is triggered by external threats. State-centered realism, in contrast, posits that expansion of political interests depends on the perception of state power’ (Beisner 1998).

Bush Junior entered the office with a team that was dominated by the neocons. Leading figures in his team like Dick Cheney, Donald Rumsfeld, Lewis Libby, Paul Wolfowitz, were all part of the 1990s neoconservative “Project for a New American Century” which protested that American foreign and defense policy is adrift and Washington must “resolve to shape a new century favourable to American principle and interest and to make the case and rally support for American global leadership”(Gerson 2007:242). They called for high tech weapons with greater reliance on nuclear weapons and military power. This promoted US global leadership and preeminence. They strongly supported regime change to cater to US interests of global leadership. Between 2001-2002 PNAC members published a number of articles for supporting US invasion of Iraq and removing Saddam Hussein from power. In September 2000, the PNAC published ‘Rebuilding America’s Defenses: Strategies, Forces, and Resources for a New Century’ reaffirmed American global leadership and outlined strategy to preserve Pax Americana through offensive military posture and foreign policy tools.

It reiterated the following goals:

- Modernize current US forces selectively
- Develop and deploy global missile defences to project American power
- Control the space and cyberspace
- Transform US forces to exploit the revolution in military affairs
- Increase US defense spending

With the coming to power to America's two most influential positions of Vice President, Dick Cheney and President, George W. Bush in the 2000 elections, PNAC's influence grew on American politics.

United States to maintain its primacy, has tried to keep intact the international order it created in the aftermath of World War. US has expanded nuclear targeting options and developed more usable weapons. At the same time, US prevented others from acquiring nuclear weapons through diplomatic means as well as by military threats, including threat of nuclear preemption. US has used nuclear weapons as an offensive power capability to maintain its hegemony as explained by offensive realists.

CHAPTER THREE

US NUCLEAR STRATEGY IN THE POST-COLD WAR ERA

With the end of Cold War, US found itself in a new situation as the East-West rivalry ended. This made an impact on US deterrence policy which was solely driven towards deterring Soviet Union. It also created a chance for the American democracy to redefine its relationship with nuclear weapons and the role of nuclear weapons in the US security strategy.

Changes had begun in 1980s only. While during Reagan administration (1981-89), the concept of nuclear warfighting and countervailing strategies were reinvigorated, it couldn't be incorporated in nuclear policy making. The anti-nuclear protests by peace activists in 80s had an impact on nuclear arms control at the same time. In 1983, Snowcraft Commission introduced a concept called 'build down'. This recommended modernization of warheads only on the grounds that more warheads were removed than what entered service. (Sauer 2001:75) The first breakthrough in the nuclear arms control policy was achieved with the Intermediate Nuclear Forces treaty signed on December 8, 1987. This put a ban on intermediate nuclear forces of US and Soviet Union. (U.S. Department of State 1987)

Quantitative race had stopped before the end of Cold War. In the post-Cold War era, the strategic environment also changed as the world moved towards a unipolar structure. The Russian threat got over and the US moved towards strategic cooperation with Russia over a broad range of issues like economic, military and political cooperation.

As such, the post-Cold War US administrations took steps to adjust to the new realities. In the nuclear strategy, change was slow unlike the changes in political climate. It took time for the Senior Bush administration to change nuclear planning that was geared towards deterring Soviet Union. Nevertheless, US never compromised on its nuclear strategy to preserve nuclear superiority.

'Early plans for nuclear force modernization were abandoned as 'was deployment of new short range weapons in Europe. (Muller and Schaper 2004:1). Though, the Bush government with the support of Margaret Thatcher sought to bring about the 'second deployment of new arms', the replacement of Lance short range missiles with a more powerful system and the equipping of fighter planes designed for nuclear attack with nuclear armed long range weapons; differences within the NATO framework particularly opposition of Germany led to postponement of the modernization plan. (Muller and Schaper 2004:6)

In June 1990, at the Washington Summit, President Bush and President Yeltsin signed new protocols to the Threshold Test Ban Treaty (TTBT) and the Peaceful Nuclear Explosion Treaty (PNET). This protocol provided for reciprocal verification rights on both the parties which included monitoring of nuclear tests through on site inspections, seismic measurements and also hydrodynamic measurements (Harahan1993:10). President Bush also expanded the onsite inspection agency's charter as to include operational planning for four other arms control agreements under negotiation viz., CFE(Conventional Forces in Europe), Chemical weapons, Strategic Arms Reductions and Nuclear Testing.

Bush administration however continued to reject CTBT. At the amendment conference to the Partial Test Ban Treaty in January 1991, all countries except US and Great Britain supported the treaty. The US government even tried to stall efforts towards disarmament. American participation in the talks was postponed indefinitely (Muller and Schaper 2004:14).

The US drive for global hegemony was supported by 'tailored deterrence'. As the bipolar rivalry ended in the post-Cold War period, US shifted the focus of its deterrence policy

from one adversary, to a number of adversaries. The concept of tailored deterrence² thrived but the only difference was that US nuclear weapons could be used against a number of states possessing biological and chemical weapons even if not nuclear weapons (Woolf 2007:1).

The Department of Defense conducted number of surveys after the disintegration of Soviet Union to bring changes in the US nuclear targeting strategy and weapons employment policy. While this revised and reduced the target list of the SIOP (Single Integrated Operation Plan), nevertheless the fundamental tenets of nuclear strategy remained intact (Woolf 2007:12).

President's Directive in mid July 1990 also defined the roles and missions for the departments and agencies responsible for nuclear testing treaties. As per that, the Department of Energy was responsible to carry out statutory obligations in planning, scheduling and conducting US underground nuclear tests at the Nevada test site. The Onsite agency was held responsible to manage and support the onsite monitoring of the nuclear tests under the TTBT. In early July 1990, President Bush submitted the treaties and the new protocol for Senate approval which the latter verified in late September (Kimball 2006:1).

The disintegration of Soviet Union heralded an era of US-Soviet cooperation. A major initiative was the Presidential Nuclear Initiatives between 1991 and January 1992 wherein successful arms control was carried out. President Bush along with his Russian counterpart took number of steps to reduce the danger of nuclear war. Herein, US and Russia took unilateral pledges to reduce the danger of nuclear war. Among this was also limitation of tactical nuclear weapons such as nuclear artillery shells. This came in the wake of break up of the Soviet Union in 1991. There was a pledge in the Bush administration that ending foreign deployments of entire category of nuclear weapons

² Tailored deterrence implies assessment of adversary's society and values to identify a range of targets that might be threatened, and adjusting US war plans and force structure to enhance the credibility of US threats to destroy these targets.

would also encourage Russia to consolidate their own weapons. The United States and Russia took significant steps to deactivate nuclear weapons that were to be eliminated

President Bush in his address to the nation on September 27, 1991 announced that US would eliminate its entire worldwide inventory of ground launched short range, theater nuclear weapons (Kimball 2006:1).

- Also, US will bring home and destroy all nuclear artillery shells and short range ballistic missile warheads while maintaining an effective air delivered nuclear capability in Europe.
- US will withdraw all tactical nuclear weapons from its surface ships and attack submarines, as well as those nuclear weapons associated with our land based naval aircraft.
- Also in conformity with the START agreement, dealerting of the strategic bombers were announced
- Dealerting of intercontinental ballistic missiles scheduled for deactivation under START
- Terminating the development of mobile Peacekeeper ICBMs
- Streamlining of the Command and Control procedures to effectively manage strategic nuclear forces. (Vitas and Williams 1996 :16)

However following the changes in Soviet Union after the disintegration, it was realized that further reductions in targets would have to be made. The newly independent republics had nuclear force structure that needed to be removed 'to adjust for the changes in the nature of targets located in the newly independent republics. In January 1992, President Bush proposed another set of unilateral

initiatives as a part of PNI II in his State of Union address. Herein, the President cancelled several of the nuclear weapon programs while calling for the Commonwealth of Independent States to reciprocate. He also proposed a plan for the elimination for all ICBMs and MIRVed ICBMs (Eli Corin 2004:1).

In response, President Mikhail Gorbachev announced a slew of initiatives to limit and reduce US tactical nuclear weapons by

- Eliminating a third of its sea based tactical nuclear weapons and half of its ground to air nuclear missile warheads.
- Half its airborne tactical nuclear weapons stockpile. Pending reciprocal US action, the other half of this stockpile be taken out of service and placed in central storage depots. (Eli Corin 2004:1)

Also, there was signing of START I reductions in July 1991 and in May 1992 Lisbon Protocol.³ In January 1993, the United States and Russia signed START II (Eli Corin 2004:1). In 1992, US Congress declared a nine month test moratorium.⁴ This also heralded US policy on CTBT.

³ It committed Belarus, Kazakhstan, and Ukraine to eliminate the strategic nuclear weapons left within the territories after the breakup of Soviet Union.

⁴US after conducting more than one thousand blast responded to the moratorium declared by Russia earlier in 1992.

**Reductions in U.S. Strategic Nuclear Arsenal Force Levels
FY 1990 Through 2007**

	FY 1990	FY 1999	START I (December 5, 2001)	START II (December 31, 2007)
ICBMs	1,000	550	550	500
Attributed Warheads on ICBMs	2,450	2,000	Not over 2,000	500
SLBMs	568 ^a	432 ^b	Not over 432	336
Attributed Warheads on SLBMs	4,864 ^a	3,456 ^b	Not over 3,456	Not over 1,750
Ballistic Missile Submarines	31 ^a	18 ^b	Not over 18	14
Attributed Warheads on Ballistic Missiles	7,314 ^a	5,456 ^b	Not over 4,900	Not over 2,250
Heavy Bombers	324	115 ^c	97 ^c	97 ^c

a Excludes five decommissioned submarines (and their associated missiles and warheads) that were still START accountable.

b Excludes two Benjamin Franklin-class (Poseidon missile) (SSBNs) converted to Special Operations Forces that are still START accountable.

c Excludes 93 B-1s that are devoted entirely to conventional missions. B-1s are still accountable as a nuclear bomber under START I, but would not be accountable under START II.

Table 1.

Source: <http://www.fas.org/nuke/guide/usa/forces.htm>

In 1992, a bill was passed by both houses of the U.S. Congress mandating a unilateral U.S. testing moratorium to respond to the Soviet testing halt. This bill was signed into law by President George H. Bush on October 2, 1992. Neither Russia (the nuclear inheritor-state of the Soviet Union) nor the U.S. has, as of early 2003, conducted any nuclear tests since the beginnings of these moratoria.

Another milestone in nuclear proliferation was the **Cooperative Threat Reduction Program** started in 1992 by George H. W. Bush administration and Senators Richard Lugar and Sam Nunn to address the WMD threat. It came with the purpose of securing and dismantling weapons of mass destruction and their associated infrastructure in former Soviet Union states. (White House 2007)

Though these reductions started with ambitious goals, this didn't drive US to step down from its offensive nuclear posture. US and Russian forces remained at Cold War levels. Nuclear weapons continued to remain an important element of military plans of both US and Soviet Union (Kimball 1999). In fact real gains were not made, as to reduce the role of nuclear weapons in US military strategy.

The new war plans that came only increased the role and scope of nuclear weapons focusing on third world states.

New War Plan

In June 1990, while the Soviet countries were removed from the SIOP, Secretary of Defense Richard Cheney pointed to WMD as a rationale to maintain US nuclear weapons before the Senate Appropriations Committee. (British American Security Information Council 1998:10) In 1991, a joint-military net assessment stated that 'nuclear weapons could assume a broader role globally in response to the proliferation of nuclear capability among third world nations' (Kristensen 2006:158). It referred to the threats emanating from the third world as the new justification for maintaining US nuclear weapons.

In 1991, the first Gulf war took place to avert Iraq's conquest of Kuwait which also revealed Saddam Hussein's nuclear weapons program (Schell 2007:93). This also preceded the framing of the term "rogue states" in the US nuclear weapon policy. In 1991 came the nuclear weapon employment policy for use of nuclear weapon against proliferators. As US forces were deployed to avert Iraqi invasion of Kuwait, Defense Secretary Dick Cheney issued the Nuclear Weapons Employment Policy (NUWEP) formally authorizing the military to undertake nuclear operations against nations capable of developing WMD and threatening US interests.

There were changes in the war plan with the new SIOP, implemented in October 1991. In 1992, Pentagon implemented the SIOP to the START I reductions providing for additional flexibility with few warheads. Far reaching reductions could not be carried out due to the persistence of civil and nuclear bureaucracy

The structure of SIOP and its aim to destroy Russian bases remained the same. The 'Defence Planning Guidance' in 1992 covered all the targets relevant to the Russian Command. So even if foreign policy provided for changes in nuclear strategy, drastic changes could not be brought. 'By the end of Bush administration, foreign policy and nuclear strategy were running asynchronously' (Muller and Schaper 2004:8).

In February 1992, Secretary Cheney had established a **Defence Policy Board Task Force** to examine the future of US nuclear forces headed by Fred Hoffman that completed its report in 1992. However, the observations were never implemented after Clinton administration came to office.

In February 1992, Secretary Cheney reported to Congress that the possibility of third world acquiring nuclear weapons has led the Department of Defense to make adjustments to nuclear and strategic defence forces and to the policies that guide them. (Arkin and Norris 1993:6).

The 1992 National Military Strategy released in January also addressed the global role of nuclear weapons which included:

Detailed target planning to enhance responsiveness and to provide options
Specific target selection and the alert status of the force (Arkin and Norris 1993:6).

The first Bush administration considered employing nuclear weapons as deterrence, preemption, warfare and retaliation against states possessing weapons of mass destruction' (Muller and Schaper 2004: 1).

There was no drastic transformation in nuclear policy despite of the arms control measures, arms reduction, disarmament initiatives. In fact the quantitative reduction in the nuclear arsenal was balanced by the qualitative increase.

The Gulf War and the disclosure of alleged Iraq's clandestine nuclear weapon program only accelerated changes in US nuclear doctrine. President Bush's unilateral disarmament initiatives had removed US strategic bombers and Minuteman II intercontinental ballistic missiles from alert. This along with the withdrawal of tactical weapons from Europe led to new changes in to SIOP93. This led to Annex C of the Joint Strategic Capabilities Plan from 1992 including the nuclear war plans and the targeting and the damage criteria for the use of nuclear weapons. However the plan also provided for retargeting of US nuclear weapons beyond Russia and China to other countries with WMD (British American Security Information Council 1998:11).

Before the SIOP was implemented President Bush and Yeltsin agreed for new cuts in US nuclear arsenal. With the signing of the deal at the Washington Summit Agreement in June 1992 a new NUWEP92 came with another JSCP Annex C resulting in to SIOP 1994 (British American Security Information Council 1998).

There were also efforts towards developing a flexible, adaptive operational planning capability that will be responsible to the potential threats. When President Clinton came to office, the US military establishment was in a state of chaos with radical reductions in personnel and weapons, reorganization of the army and air force especially. In 1992, the

Strategic Command was transformed into Joint Command headed by General Lee Butler (Arkin and Norris 1993:7).

This was the period when there was considerable pressure for reducing the nuclear arsenal. In December 1996, sixty retired generals and admirals from a number of countries including the former Soviet Union and the United States called for long term nuclear planning leading to total elimination of nuclear weapons (Arkin and Norris 1993:7).

US Nuclear Strategy during Clinton Administration

During **Clinton administration**, the role of nuclear weapons as a preemptive warfare against the rogue states increasingly grew, encouraging new warheads designs by the weapon laboratories and further building on US drive for nuclear superiority.

Due to the increasingly unstable Russia, there remained chances of an accidental nuclear attack. Hence, triad of bombers, intercontinental ballistic missiles and submarine launch missiles, apart from a reserve of warheads for reloading of bombers and strategic arsenals were maintained for emergency.

The Nuclear Posture Review (NPR) commissioned in 1993, rejected arms control beyond START II while broadening the ambit of use of nuclear weapons against small nuclear weapons states, with nuclear weapon programs and those with biological and chemical weapons programs (Muller and Schaper 2004:22). Therefore, during the NPT review conference in 1995, US avoided the often repeated assurance that nuclear weapons would not be used against non-nuclear weapon states.

In February 1993, STRATCOM commander General Butler declared that US target is not just Soviet Union but any hostile country that has or is seeking weapons of mass destruction. Later in April 1993, Butler also reported that his command had established a new global oriented joint intelligence Center that would monitor forces and analyze

targets to assess the growing threat represented by the global proliferation of weapons of mass destruction. To operationalise the plan, STRATCOM began to work with regional unified commands as for employment of nuclear weapons in theater conflicts (Doctrine for Joint Theater Nuclear Operations, February 1996).

The NPR 1993 was planned to focus on the deterrent capabilities of US defence rather than warfighting capabilities but facing opposition from the military hardliners couldn't bring any real transformation in the post-Cold War deterrence. The review was led by a five person steering group. It was co chaired by Ashton Carter, the Assistant Secretary of Defense for Nuclear Security and Counterproliferation, and Major General John Admire, the Vice Director for Strategic Plans and Policy at Joint Staff. The review was organized around six topics examined by military and civilian experts from the DOD, joint staff, the Services and various agencies. The topics included the role of nuclear weapons in US security strategy, US nuclear force structure, US nuclear force operations, nuclear safety and security, the relationship between US nuclear posture and counterproliferation policy and the relation between US nuclear posture and threat reduction policy with the former Soviet Union.

President Clinton's Defence Secretary Aspin made ambitious attempts at bringing change in US nuclear strategy, 'plus the size, composition, and alert status of nuclear forces'(Muller and Schaper, 2004:21). However, these attempts at innovation failed. Carter's deputy, nuclear strategist Frank Miller worked best to keep the changes in the nuclear strategy minimal, considering an unstable Russia. As such there was opposition to radical changes even by the Joint Chiefs and the commander in Chief of the strategic command. Thus when the NPR came, it maintained the status quo.

The final conclusion of the NPR was released on September 22, 1994. It recommended the following force structure:

Bombers: 20 B-2s, 66(later changed to 76) B-52s, and non nuclear role for B-1s

SSBNs: 14 SSBNs all with D-5 missiles at two bases

ICBM: 500 Minuteman missiles in three wings

Non-strategic: Same dual-capable aircraft in US and Europe; Tomhawk on SSNs
(Nuclear Brief 2005:1)

The NPR 1993-1994 is relevant as it forms the basis of US nuclear policy and has impacted long term on the framing of the strategy. The hedge policy to keep 10,000 warheads for future rebuilding of force had its origin in this NPR. Issues concerning strategic reality were also ignored by the NPR. The message in the NPR was that US would pursue arms control policies but keep the large nuclear force against enemy. So it couldn't change the cold war legacy. The NPR of Defense Department of 1994 stated that US while retaining the missions for nuclear weapons should continue to maintain the capability to upload its nuclear forces as to double START II limits to avert a hostile Russia in future. (Feiveson 99:48) US and Russian nuclear weapons were detargeted in May 1994 but that is easily reversible (Sauer 2001:92).

New War Plan during Clinton Administration

This contributed to expansion of the scope of US nuclear weapons to the third world threat. SIOP-93 was the first nuclear war plan to encompass this.

As such US targeting system also began to be organized as to reach countries in the south. Hence, the STRATCOM recommended the creation of a global capability. The strategic planning study group recommended a 'living SIOP'. Similarly, chemical and biological sites were also included in the nuclear target list. Also, there was a reserve nuclear force of about thousand warheads for the targets.

The numbers of targets were reduced after cold war. All targets in Central Europe were removed. Chief of the Strategic Air Command Lee Butler reduced the number to 2500. However the target list grew substantially from 2500 to 3000 after 1995. Besides most of the targets covered under the SIOP are covered under Russia, 300-400 targets are in

China and around 100-200 in third world countries like Iran, North Korea, Syria and Libya. (Sauer 2001:93)

Between 1991-1996, STRATCOM released force structure studies which built the basis of the US nuclear planning. These studies show the influence of STRATCOM on deterrence and arms control in the post-Cold War. These studies had considerable impact on the shaping of START II, the 1994 NPR and the 1997 Helsinki agreement.

They are:

The **Phoenix Study** released in 1991 by SAC which was disbanded as its functions were overtaken by the STRATCOM in June 1992. It attempted to establish rules of thumb for analyzing issues of nuclear planning which included details like who should be targeted, what weapons should be used, how many weapons etc. It had roots in the cold war. The findings of the Phoenix study influenced STRATCOM decisions in their briefing to Defense Secretary Richard B. Cheney and Chairman Joint Chiefs of Staff Colin Powell including the following main points:

- Flexibility in war planning
- New nuclear certification schedule for B-2
- Transition B-1 to conventional role
- Modification to B-52Hs by removing internal ALCM capability from 47 B-52 Hs scheduled to receive heavy conventional upgrade by the fall of 1996
- Assignment of Air Reserve Component to nuclear bomber functions
- Modernization and life extension of Minuteman III ICBMs
- Maintain Peacekeeper ICBM until 2001
- Transfer some W 87 warheads from retired Peacekeepers to Minuteman III ICBM
- Maintain two ocean SSBN force with full target coverage in both oceans, large operating areas, and maximum reconstitution capability
- Less than 18 SSBNs is undesirable
- Protect MIRV on SLBMs since START prohibits uploading

Clinton administration signed the START II in January 1993 and accepted STRATCOM's preferred force structure. For further reductions, STRATCOM conducted Sun City study of alternative force structures. The main goal of the study was to analyse the effectiveness of each force structure, its planning flexibility and affordability from warfighter's view. It also examined US-Russian strategic stability. The force structure recommended was:

Flexibility and capability of triad are paramount, especially in light of the thinning target base

- The size of the force must be sufficiently capable against a range of threats
- The mix of bombers, ICBMs, and SSBNs must retain flexibility and capability
- The force must be affordable

Sun City not only validated the targeting principle of the 1991 Phoenix Study and became basis of 1994 NPR and implementation of START II. The Sun City extended Study (1994) was carried out during the NPR deliberations in early 1994. The important feature of this study was the focus on China by analyzing a number of China scenarios (Kristensen 2001:1-19).

Prior to the 1990s, proliferation was not a major issue for US nuclear deterrence. As STRATCOM was created in 1992, US abandoned the global war plan with the Soviet Union while completely revisiting the US nuclear weapon policy with expanded targets against rogue states.

In 1993, the Joint Chief of Staff released the first version of the Joint Nuclear Doctrine 3-12, thus encompassing WMD in to US nuclear doctrine. The role of adaptive planning' was emphasized to develop global capability to deal with countries south of equator. This would include crisis planning and non strategic nuclear forces. This consolidated the US drive for global dominance at the same time.

There developed rapid retargeting for limited nuclear operations against rogue states. STRATCOM set up a group of ten experts in December 1992 to develop a flexible

globally focused war planning process known as the Strategic War Planning System. This led to development of living SIOP. By late 1998, modernized war capability was attained (Joint Pub 3-12.1 1993).

The **Doctrine for Joint Nuclear Operations of April 1993** established a strong relation between WMD and US nuclear deterrence, published on April 29, 1993. It broadened the scope of nuclear deterrence against rogue states. The Doctrine for joint nuclear operations called for low yield nuclear weapons. (British American Security Information Council, 1998:14) The Doctrine for Joint Nuclear Operations (Joint Pub 3-12.1 1993) also emphasized over the threat of WMD proliferation in a regional security situation. This led to both horizontal and vertical expansion of US nuclear targeting which was against the US pledge in NPT to reduce the role of nuclear weapons and pursue nuclear disarmament (British American Security Information Council 1998:14).

General Butler explained in 1993 the basis for the living SIOP was the 'adaptive planning', a flexible process that used generic targets rather than identifying specific scenarios and specific enemies and then crafting variety of responses to address these threats. To actualize this plan, a 'stable nucleus' was introduced which included a core set of targets and special attacks that persist over long time (Arkin and Kristensen 1999:2). By December 1994, the STRATCOM worked to replace the SIOP 95 by this system.

Thus the STRATCOM dismissed any idea of true reduction to be brought by the NPR1994. The NPR paid more attention to China and US confrontation over Taiwan.

In 1993, **Silver Books** (strategic installation list of vulnerability effects and results) project had come with plans for military strikes against WMD facilities against rogue states like Iran, Iraq, Libya, and North Korea. A total of six facilities were analyzed, including conventional, unconventional and nuclear weapons suitable for attack. But regional commands did not approve of STRATCOM's plan to take control and so the Silver Brooks Project came to an end. However, despite of the end of this project did not mean end of the targeting of the third world.

The emphasis over regional conflicts and proliferation of WMD, in US defence policy was also reaffirmed by the September 1993 Bottom-Up Review (BUR) (Truesdell 1997).

The Doctrine for joint nuclear operations was replaced with an updated **Doctrine for Joint Nuclear Operations in December 1995**. This was a much more comprehensive document in describing the role of nuclear deterrence and force posture in detail. It followed the NPR 1994. The important role played by this document was that it reaffirmed the role of nuclear weapons to deter WMD proliferation. The Doctrine for joint nuclear operations of February 1996 more clearly stated the link between nuclear deterrence and regional conflicts. It focused more on theater nuclear operations.

It was an initiative to align 'nuclear deterrence with the requirements for regional conflicts'. It followed on 'the heels of effort in 1993-1995 within STRATCOM to more clearly define how nuclear deterrence would work against regional aggressors armed with WMD'. It came out with list of targets that might be targeted in a regional conflict which included: WMD and their delivery systems, as well as associated command and control and logistical support unit

- Ground Combat Units and their associated command and control and support
- Air Defense facilities and support installations
- Naval installations, combat vessels, and associated support facilities and control capabilities
- Nonstate actors (facilities and operation centers) that possess WMD underground facilities (Doctrine for Joint Theater Nuclear Operations 1996).

Clinton administration also argued that US nuclear deterrence is important in case of any resurgence of Russian threat. Similarly, nuclear deterrence would not be limited to deterring aggressor with nuclear weapons but also chemical and biological weapons. The US Strategic Command (STRATCOM) expanded SIOP to include a number of targets. Clinton administration emphasized over flexibility to deter wide number of adversaries. Not only this, the 1999 National Security Strategy emphasized the role of robust triad of strategic forces to deter potential aggressors with nuclear weapons. It maintained the US

policy of using nuclear weapons against adversaries in crisis if the adversary does not have good NPT record and, secondly if a nation attacked US forces with nuclear weapons.

In October 1999, Pentagon implemented the SIOP-00, which was the latest in the periodic nuclear war plan updates. This plan reflects the major reforms undertaken in the nuclear planning system and development in the computer reprocessing system which allows for more accurate and flexible deterrence suitable for a wide scenario. The SIOP was the result of war plan that had begun years ago. For instance it was in November 1992 that the commander of US strategic command Gen. Lee Butler directed the formation of an internal STRATCOM strategic planning study group with the goal of responsive and flexible planning. The modernization of the STRATCOM included the creation of a 'living SIOP', more flexible system.

Clinton administration has also brought a significant change in US strategic doctrine with the Presidential decision directive 60 in 1997. 'PDD modified the results of the Nuclear Posture Review to the extent that it gave up the policy of 'victory in a drawn out nuclear war' established under Clinton and reduced the number of warheads necessary for American security to 2000-2500; the triad structure was, however, maintained and the potentially pre-emptive use of nuclear weapons against "proliferators" further confirmed and specified (Woolf 2007:12).

One important characteristic was that it abandoned the guidelines issued by the Reagan administration in 1981 that US must be prepared to fight and win a protracted nuclear war. Rather, the role of nuclear weapons in the Post-Cold War era is deterrence.

However, there was no policy change regarding US position on no first use of nuclear weapons. Also, US continued to prepare for varying attack options against military targets and civilian targets in Russia (Woolf 2007:12). There was no fundamental change in the US nuclear doctrine and strategic plans (Feiveson 1999:48). The PDD-60 issued in November 1997 maintained the status quo with the cold war triad of nuclear forces. Also,

hair trigger launch on warning posture was retained. This also brought US insistence over right to nuclear first use and right to use nuclear weapons against non nuclear states.

A Russian proposal for deeper cuts in the number of strategic warheads was rejected and rather their plan to go ahead with US Trident missile force and the B-52 bombers. The Presidential Directive confirmed the emphasis on sub- critical testing and advanced computer modeling procedures. (Strategy Nuclear Warfare Strategy and War Plans) It also called for nuclear attack against the use of biological and chemical weapons as part of counterproliferation policy of United States. 'It reaffirmed the US policies of threatened first use and threatened massive retaliation, and recommitted the US to nuclear weapons as the "cornerstone" of its national security for the foreseeable future' (Western State Legal Foundation 2001).

Also, Clinton's expansion in NATO to bring stability in Europe and bring arms reductions only led the foundation for a new cold war. It set a precedent for an Anti Ballistic system in Poland and ABM radar site in Czech Republic by his successor George W. Bush.

Missile Defence

Clinton administration declared Theater missile defence program as its priority, rather than national missile defense plan (Perry 1996). The Clinton administration developed two systems for possible deployment which included- the Theater High-Altitude Advanced Defense System and the Navy's Theater-Wide Defense system.(National Academy of Sciences 1997:45). This includes endoatmospheric lower tier systems to protect small areas against short range missiles like the PAC-3 systems (Feiveson 1999:75).

Other systems include the Navy Area defense system and the MEADS, a highly mobile system. All these systems intended to protect small areas.

To garner support of the Russian government and maintain the tempo of the cooperative programmes between the two governments, the Clinton administration tried to persuade the Russian government. It argued that THAAD and the Theatre wide defense system could be deployed under a liberal interpretation of ABM treaty. In fact, the two governments agreed that a THAAD System would not violate the ABM treaty. However the Russian government's demand was that any agreement that takes place should resolve the broader demarcation issues. The Helsinki summit also led to announcement by both the sides that they have reached an agreement on all demarcation issues (National Academy of Sciences 1997:45).

Around 43 to 44 billion per year were per year diverted to missile defense in R& D funding, violating the ABM treaty. The Republican control of the House led to the introduction of "contract with America" which supported US national missile defense system. The Clinton administration introduced a 3+3 program for national missile defense.⁵ Supporters of the star war program like the House speaker Newt Gingrich(R-GA) and Sen. Thad Cochran (R-MS) were instrumental in Clinton administration's 3+3 policy⁶ (Hartung and Ciarrocca 2000:2).

In 1998, another boost was given to Clinton administration when a panel chaired by Donald Rumsfeld stated the need to deploy national missile defense to fight the threat posed by the rogue states. Other factors which provided impetus to the NMD program were the missile tests by Iran and North Korea in 1998. Chinese nuclear espionage also became an issue of concern on the Capitol Hill. Consequently, these issues provided a thrust to a number of initiatives on NMD. In 1999, Clinton administration doubled the NMD fund to \$10.5 billion. Declaring the US government policy to deploy a missile defense program, he signed the bill in to a law on July 23, 1999. The administration was also determined to amend the ABM treaty that became a bone of contention in its talk

⁵ Under this the national missile defense plan would move from a technology readiness program to a deployment readiness program.

⁶ 3+3 policy implied three years of intensive research to be followed by the decision to deploy a system in the next three years.

with Russia on third round of Strategic Arms Reduction Treaty (START) talks (Hartung and Ciarrocca 2000:2).

US-Soviet Cooperation in Nuclear Threat Reduction

During Clinton administration, Russia's financial instability and the concern about nuclear arsenals became an issue of concern to the Clinton administration. There was political chaos due to breakup of Soviet Union. As such the security system comprised by guards, gates, fences, sensors weakened. Clinton administration took a number of initiatives declaring a national emergency to address the 'unusual and extraordinary threat to the national security, foreign policy, and economy of the United States by the proliferation of nuclear, biological and chemical weapons and the means of delivering such weapons'. He also issued Executive Order 12938, organizational changes at Pentagon and Central Intelligence Agency. This placed emphasis on collection of information and assessing nonproliferation issues (Caravelli 2008:16).

Cooperative Threat Reduction Program

The Cooperative Threat reduction programme started by the Bush administration to secure the nuclear weapons complex of the collapsed Soviet Union was further expanded by the Clinton administration. The CTR programme aimed to achieve following goals:

- To improve the safety of warheads through storage away from conflict zones;
- To register and inventorise these warheads carefully;
- To improve their safety in the event of an accident;
- To disarm and dismantle these warheads safely;
- To help in the social support and reemployment of weapons scientists to prevent these from moving to third countries;
- to expand military contact between the USA and the successor states;
- to convert production facilities to commercial use; and
- to remove radiation damage from the environment, especially in the Arctic.

Clinton's CTR program moved slowly in the beginning. For instance, by 1995, only \$ 150 million of the \$ 1.2 billion dollars were spent (Muller and Schaper 2004: 31). Many in the decision making circles were unwilling to support the program that was started by the previous administration. Besides the bureaucracies of Russia and the CIS states were not compatible with US either. On the US side, there was problem of speedy allocation of resources. On the other hand, Russian rules of restricting access to secret information regarding the nuclear weapons complex was a roadblock. Besides, there was an internal battle within the DoD regarding the distribution of funds for the various programs which included the CTR programme.

The Congress elections of 1994 further led to change to political priorities regarding foreign aid. The reason was America first policy, delay in the growth of liberalization of the economy, emergence of nationalistic groups in Russia and rehabilitation of the Communist party along with rumours of development of biological weapons by Russia (Muller and Schaper 2004:31). However, progress was made despite of these roadblocks with the Clinton administration extending the CTR and introducing new projects.

The DoE undertook the control of projects under the MP&CA (material protection, control and accountancy) in the sensitive nuclear facilities. There was direct cooperation between the laboratories of the DoE like the Las Alamos, Livermore and Sandia and Russian research organizations. Besides, other governments also participated.

A particular success story was the International Technology Centre in Moscow that worked towards gainfully employing former Soviet Union weapon scientists to prevent the proliferation of knowledge. Between 1992-2000 it was funded by half a billion of US dollars of which 38.5% came from USA, 31.3% came from Japan and rest from other industrial countries (Muller and Schaper 2004:32). Disarmament initiatives with Russia were limited to bilateral cooperation except the disarmament of plutonium in which Clinton sought internationality as the plutonium disposal was very expensive. Based on a National Academy of Sciences study, the USA and Russia entered into a treaty in 2000 on disposal of plutonium involving third party. However, it provided for bilateral verification only.

The Clinton administration worked with the Russian government towards transparency in the warhead and material through the 'Safeguard Transparency, and Irreversibility Initiative' in 1994. This aimed at sharing of detailed information on stocks of warheads and nuclear materials, physical protection and safety. The talks failed. However they worked towards the cooperation between the two laboratories which ultimately led to START III treaty in 1997.

In 1994, President Clinton and Yeltsin further took another important step when pledging to stop strategic missile at each other's country. On 14 January, 1994 the Clinton administration and Yeltsin agreed at steps to ensure transparency and irreversibility of reducing nuclear weapons through MINATOM⁷. The administration brought reduction in US strategic arsenals by around 6000 warheads deployed on strategic delivery vehicles according to the provision of 1991 START. Yet, US continued to maintain an offensive nuclear posture with a range of capabilities and flexibility in nuclear planning.

Clinton administration also worked towards international transparency by starting talks with the IAEA. This was called the Trilateral Initiative. The Clinton administration continued this policy of openness as the DoE set up consultation committees regarding guidelines on the confidentiality of information. The result was the declassification of technical information on nuclear warheads. Another important contribution is the publication of data on the American production and use of plutonium from 1944-1994 which led the foundation stone for future international transparency measures regarding weapon grade material (Muller and Schaper 2004:35).

However, these attempts slowed towards the end of Clinton's term. One incident which contributed was the 'Cox Report' by the Congress revealing Chinese espionage of nuclear weapons in Las Alamos laboratory.(Diamond 1999) This led to criticism of the government measures and pressure to restrict flow of information and less international cooperation.

⁷ MINATOM is Russian Ministry of Atomic Energy

The US government's response to this failing security situation was a mixture of enlightened policy and often clumsy implementation' (Caravelli 2008:19). 'During the Clinton years threat programs were established with bipartisan support and generously funded' There were successful programs in Russia where the DoD threat reduction program was dismantling many threatening weapons. In Kazakhstan, Operation Sapphire worked to remove a considerable amount of HEU (Caravelli 2008:26).

At the Helsinki summit in 1997, President Yeltsin and Clinton reached an understanding on START III that it will be established by December 31, 2007 with a ceiling of 2000-2500 strategic nuclear warheads for each party.⁸ While they agreed their commitment to ABM Treaty, Russia agreed to the US suggestion that theatre missile defense was necessary.

President Clinton and President Putin agreed to begin talks reductions to 2000-2500 warheads once the Russian Duma ratifies the START II treaty. By 1998, when there was still delay in the ratification of START II by Duma, there was pressure on the Clinton administration to bring unilateral reductions by either eliminating some category of strategic weapons or reducing the loaded warheads from approximately 7000 at the end of 1998. This was motivated by budgetary constraints as well security compulsions. (US Military History Companion)

The underlying principle behind these reductions was that of balancing. So the START I and START II agreements are examples of reciprocal agreements. So while the Senate ratified the START II in 1996, there was an explicit agreement that US would maintain parity with Russian nuclear force. Similarly, the National Defense Authorization Act for fiscal year 1998 stated that START I levels have to be maintained as long as the START II had not been ratified by Russia. This is the hedge policy introduced by the 1994 NPR. (Sauer 2001:81)

⁸ START III if implemented would have been a better treaty with measures relating to transparency and destruction of nondeployed inventories of strategic nuclear warheads.

Nuclear Restraint Regime

President Clinton's made a number of initiative towards attaining a CTBT and FMCT but failed to make any real gains. Ultimately both the treaties were rejected by US who could have restrained US overwhelming dominance.

Clinton administration had supported **CTBT** since the election campaign. For Clinton administration, CTBT represented the core of nonproliferation initiatives. Clinton extended the test moratorium in spite of the fact that China tested in October 1993.

Clinton administration's efforts towards a comprehensive treaty were motivated by the protest of different organizations like Greenpeace and The Physicians for Total Responsibility. 46 newspapers around the world also supported CTBT. The result was that Clinton administration abandoned the plans for a threshold treaty ban and started supporting a comprehensive treaty. The result was push for CTBT negotiations within the Geneva Conference on Disarmament as well within bilateral talks (Muller and Schaper 2004:25).

Besides, political price had to be paid by the Clinton administration which included the SSP program of the DOE. Also, to appease the opponents in the domestic front they made concessions in the form of further dismantling of the test site for which 1.5 billion dollars in October 1995 was set aside.

President Clinton initiated international CTBT negotiations in 1994. During the CTBT talks at the conference on disarmament, US delegation stressed over the importance of CTBT as a way of nonproliferation rather than disarmament. It also worked to garner support for the indefinite extension of CTBT in 1995.⁹ On September 13 October 1999, the Senate voted on the ratification of the treaty whereby it refused to give consent to the treaty.

⁹ The US and other powers decided to set up principles relating to nuclear disarmament as to garner support for NPT.

The failure of Clinton administration to garner support can be attributed to internal political disputes. The Chairman of the Foreign Committee, Jesse Helms, a conservative Republican and opponent of CTBT played an important role in the rejection of the treaty. He has made conditional the ratification of CTBT to the submission of two other treaties, the ABM treaty and Kyoto protocol. However, the failure couldn't be attributed just to Republican trick but also the delay made by the Bush or Clinton administration in garnering support for the CTBT.

Also, CTBT negotiations were connected to treaty banning fissile materials at CD through the **Fissile Material Cutoff Treaty (FMCT)**. Fissile Material Control Treaty was also proposed in the objectives and principles of the NPT. While the CTBT sought to bring end to qualitative arms race, the function of FMCT was to reduce quantitative arms race by limiting quantity of fissile material.

A significant contribution made by the Clinton administration was towards controlling fissile materials. At the UN General Assembly meeting on 27 September 1993, Clinton proposed fissile material cut off treaty. He made the proposal of banning the production of highly enriched uranium and plutonium for nuclear warheads or plutonium outside international regime. Not only that, he promised to put excess US plutonium under the control of IAEA (Sauer 2001:75).

One major problem was the vast quantity of nuclear or fissile materials in Russia. A number of smuggling cases during this period added to the fear and influenced the development of effective security countermeasures. Clinton administration signed an agreement with Russia to halt the production of weapons grade plutonium in June 1994.

The Clinton administration decided unilaterally to withdraw 200 tons of fissile materials which included 38 tons of weapons grade plutonium from its nuclear stockpile in March 1995. Also, Clinton-Yeltsin summit resulted in joint pledge never to build nuclear weapons from excess uranium or plutonium from dismantled weapons newly produced fissile material or civilian material (Sauer 2001:76).

The US in the CD negotiation supported banning the future production of fissile materials while many others also wanted to include already available materials. During the conferences held to discuss the ratification of the FMCT, US delegation showed their willingness to integrate all the three outsiders of the NPT regime, India, Pakistan and Israel. Besides, on the position of verification, the government supported a minimalist regime. US also rejected building verification regime around IAEA security measures. Also, the Clinton administration opposed the demand of India to bind the latter's consent of CTBT to start of talks on world free of nuclear weapons. While Indian and Pakistani nuclear tests reinvigorated talks of CTBT there was no progress. China considering the US willingness to go ahead with missile defence plans called for linking ratification of FMCT with PAROS (Prevention of Arms Race in Outer Space). The Clinton administration rejected. Besides Clinton's term in the office was coming to an end so the administration was losing interest in cutoff.

However, if the actual gains in terms of reducing the role of nuclear weapons and moving towards nuclear disarmament is analyzed, there was hardly any fundamental change in US policy. Also, the treaty required that all the 44 countries possessing nuclear reactors must ratify before the CTBT comes in to effect (Sauer 2001:76).

The Stockpile Stewardship Program was the compromise made by President Clinton 'for their acceptance of the CTBT'.(Western State Legal Foundation 2001:4) 'The Clinton administration and allies portrayed the CTBT as a means to preserve decisive US technological advantage in nuclear weapons and to prevent non-nuclear weapons states from acquiring nuclear weapons.'. Madeline Albright one month after the CTBT was rejected by the Senate said that US doesn't need to test new nuclear weapons, rather it would be the new proliferators who need to test to develop new nuclear designs.(Western State Legal Foundation 2001: 4)

The Stockpile Stewardship and Management Program came to maintain the safety and reliability of US nuclear weapons. However, it led to various nuclear research and

development programs at cold war levels (Strategy Nuclear Warfare Strategy and War Plans). It also led to new computational and simulation programs (Sauer 2001:77). As the Clinton administration declared moratorium on nuclear weapons in 1992, experiments were conducted to develop and certify new nuclear weapons.

Stockpile Stewardship and Management Program provided for modifications and upgrades which included superior capabilities to meet 'changed military requirements' for every type of nuclear arsenal. The B-61 is significant as it was the first post-testing modification. B61-11 was an earth penetrator developed after the Gulf war with a variable yield from 300 tons to over 300 kilotons of TNT. However, it faced constant opposition from the Congress. It was disclosed in the Bulletin of Atomic Scientists in 1992 that DOE was making mini-nukes. Congress banned research and development of nuclear weapons (Kristensen 1998: 20).

As such the B-61 project was not submitted to Nuclear Weapons Council approval at that time but later after the Congressional election in November 1994 changed the committee membership. The B-61 project was approved by the NWC on February 6, 1995. The B-61 officially entered operational service with the 509th Wing at Whiteman Air Force Base in Missouri in November 1997. (Nuclear Brief April 2005) Ironically this was the time when the NPR review completed by the Clinton administration was portrayed as reducing the role of nuclear weapons. In 1996, the Department of Defense identified B-61 as the weapon of choice for targeting Libya's alleged chemical weapons plant at Tarhunah. (Kristensen 1998: 20).

Apart from that, the weapon labs started developing warheads designs for Trident Submarine launched ballistic missiles. They also started upgradation of 100 kiloton W-76 Trident warhead. One important focus of the SSP program was the 'National Ignition Facility' designed to create nuclear fusion. The purpose was also to train nuclear weapons designers to study the effect of radiation, heat and blast on weapons components, sensors, communication satellites and underground structures.

Conclusion

The Counterproliferation policy of Clinton with new perception of threat, made long term impact on US nuclear strategy. The totalitarian character of the 'rogue states' provided strong justification to not only maintain nuclear weapons but to develop new ones. Arms control and disarmament initiatives were carried out with CTR being the most successful initiative. In the NPT Review conference in 1995, Clinton government's diplomacy was geared towards protection of the multilateral nonproliferation regime. 'During the negotiations the US showed herself to be even more obliging than other nuclear weapon states when it came to elaborating and specifying the 'principles and objectives' of 1995'(Muller and Schaper 2004:39). However, despite of the initial success US continued on its realist drive to maintain nuclear superiority.

This is because, US nuclear strategy during the first two administrations in the Post-Cold War era couldn't bring any drastic transformation in US nuclear weapons policy and force structure. It not only retained the post-Cold War legacy but developed new rationale for nuclear deterrence to preserve US dominance in nuclear strategy.

- Nuclear weapons acquired wide range of retaliation options, emphasizing on flexibility and adaptive war planning, ranging from hostile states (constituted by Russia and China) to few potential proliferators to an uncertain future. New SIOP came providing additional flexibility in war plans with less number of warheads. Preemptive warfare got a boost with the new rationale for nuclear deterrence.
- New Warhead designs began to be planned like the B-61 project during the Clinton administration. It redirected US nuclear strategy towards an offensive nuclear posture. The foundation for missile defense was also led down during the Clinton administration.
- Any change that could have challenged US nuclear primacy in future was rejected. For instance, Comprehensive Test Ban Treaty was rejected that kept

option open for future testing and development of nuclear weapons. Similarly, far reaching reductions in nuclear force structure was prevented.

As Kimball (1999) observed,

The second Clinton administration and the Republican-led Congress have failed to solidify the gains made in the early 1990s, to meet America's NPT obligations, and to seize the opportunity to delegitimize nuclear weapons as a tool of foreign and military policy. START II still has not been implemented, and START III negotiations have been stalled for years.

CHAPTER FOUR
NUCLEAR STRATEGY UNDER FIRST GEORGE W BUSH ADMINISTRATION
(2001-2004)

The Bush administration's modifications to US nuclear Strategy constituted the latest manifestation of a long standing trend towards maintaining and expanding America's nuclear superiority by the accelerated development of counterforce capabilities. (Mc Donough 2006:9).

Pentagon's war planners have structured US strategic nuclear arsenals to not only avert nuclear war but win nuclear war. But George W. Bush 'attempted to bring a number of significant revisions to American nuclear strategy' (Mc Donough 2006). George W. Bush declared its goal of establishing US military primacy and global dominance. Condoleeza Rice (2000) outlined Bush security strategy as:

Foreign policy in a Republican administration should refocus the country on key priorities: building a military ready to ensure American power, coping with rogue regimes, and managing Beijing and Moscow. Above all, the next president must be comfortable with America's special role as the world's leader. The role of American military has been envisioned as to deter war and project power. US as a great power need to maintain balance of power and deter challenges emerging from any rising power. At the same time US multilateral commitments should be subordinated to American national interests (Rice 2000).

The three most important documents of the US nuclear policy under the Bush administration released in 2002 which laid the framework for nuclear policy are: Nuclear Posture Review (NPR), National Strategy to Combat Weapons of Mass Destruction and National Security Strategy (NSS) of the United States of America. They prescribed developing new offensive nuclear strategies for potential counterterrorism purposes. These documents reaffirmed new rationale of nuclear weapons as to deter threat possessed by hostile states and terrorist groups (Huntley 2004).

Most important change that increased the role of nuclear weapons is the nuclear triad which equated nuclear weapons with conventional weapons. The *raison d'eter* for the US nuclear arsenal under the Bush administration was to reinforce credible deterrence for

counterproliferation initiatives. The Bush administration continued to emphasize over the concept of tailored deterrence to deter potential adversaries ‘where the weapons and attack strategies guiding US nuclear forces would be “tailored” to address the specific capabilities and goals of emerging adversaries’(Woolf 2007:6).

The nuclear strategy under George W. Bush administration remained focused towards sustaining US nuclear dominance and absolute superiority.

Salient Features of Nuclear Strategy during George W. Bush Administration:

1. Tailored Deterrence: Adaptive and Flexible Nuclear War Planning to fight global nuclear wars.
2. Reduction of targets in war plan but geographical distribution of targets increased
3. Conventionalization of Nuclear weapons: Equating Nuclear Weapons with Conventional Weapons through the new triad
4. Shift from ‘Threat based targeting’ to ‘Capability based Targeting’.
5. Expanding the scope of use of nuclear weapons to non nuclear weapons states possessing WMD, thus regressing from US adherence to ‘Negative Security Assurances’¹⁰
6. Unilateralist policy on Nuclear Arms Control: Avoidance of treaty based arms control with verification provisions
7. Quantitative reduction and qualitative improvement in nuclear arsenal
8. Pursuing Full Spectrum dominance and military primacy reaffirmed through increased role of missile defenses and advanced conventional forces. Missile Defenses complemented nuclear weapons, not replaced nuclear forces
9. Emphasis over ‘War fighting’ role of nuclear weapons and Nuclear Preemption

The above listed characteristics are discussed in detail below through the important policy guidelines of Bush administration.

¹⁰ An NSA (Negative Security Assurance) is a declaration that a country will not use nuclear weapons against a non-nuclear weapon state

The defining document of Bush nuclear weapons strategy is the **Quadrennial Defense Review (QDR) 2001** issued by the Department of Defense. It discussed four policy goals: to assure allies and friends, to dissuade future military competition, to deter threats and coercion against US interests, and to defeat any adversary if deterrence fails (Quadrennial Defence Review Report 2001).

Nuclear Posture Review was completed in late 2001 and issued by the US Department of Defence in January 2002. NPR recognized the importance of nuclear weapons in the defence capabilities of the US, its allies and friends. The NPR stated that 'nuclear capabilities possess unique properties that give the United States options to hold at risk classes of targets (that are) important strategic and political objectives'. The primary focus of NPR 2001 was strengthening national security by deterring adversaries from using or acquiring weapons of mass destruction. It emphasized on an assertive nuclear policy with greater role for nuclear weapons. The greater role for nuclear weapons described by the NPR reiterated the strategic nuclear framework earlier described by the Quadrennial Defense Review. The NPR at the same time urged United States to maintain the force structure and retain existing stockpile and to develop the new ones whose foundation has been laid by the earlier Clinton administration. The development of the capability against states with WMD led to a more flexible military posture which included preemptive strikes against the adversary (Rumsfeld 2001).

The role that nuclear weapons will play in Bush nuclear strategy resembled that of the Cold War and early post-Cold War period. For instance, the STRATCOM prepared in February 2004 stated the availability of different courses of action against coercion, aggression, WMD employment and escalatory courses of action. The Quadrennial Defence Review also noted the possession of sufficient capability to prevail against the adversary in any conflict. The National Security Presidential Directive 14 signed by President Bush in June 2002 stated the role of nuclear weapons against chemical and biological weapons (Woolf 2007:15). An important characteristic of the NPR was to carry out global strikes through the merger of conventional and nuclear forces. This merger of the nuclear and conventional weapons is visible in the composition of US

strategic command (STRATCOM). USSTRATCOM was formed on 1 October 2002 through the merger of US Space Command with STRATCOM that resulted in assigning of four missions:

Global Missile Defence

Global Strike (the ability to quickly hit any target anywhere on earth)

Department of Defence Information Operations

C4ISR (Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance) (Kristensen 2006:66)

The NPR was brought out to cater to congressional requirement for a comprehensive review of the policy, strategy, plans, stockpile and infrastructure for US nuclear forces. The earlier review was carried out in 1994. The NPR while studying changes in the Post-Cold War security environment defined the contingencies in which nuclear weapons could be used(Guthe 2002:3). Central goal of the NPR was to make nuclear planning more adaptive and rapid.

The NPR called for expansion of the command, control, communication and intelligence programs as to prepare the US command and control to fight global nuclear wars. It pointed to a number of shortfalls in the infrastructure and called for the need to plan a temporary plutonium pit manufacturing facility, a new facility to produce tritium to boost the yield of thermonuclear weapons, expansion of the capacity to built or dismantle nuclear warheads, a new intercontinental ballistic missile to be operational in 2018, a new strategic submarine and a new ballistic missile for 2029, a new nuclear capable bomber for 2040 and infrastructure to prepare for possible new nuclear testing and development of new nuclear weapons(Schell 2007:123).

The NPR, most importantly blurred the distinction between nuclear and conventional strikes (Schell 2007:124). Besides, the aim of the nuclear strategy was also widened to cover all kind of threat from potential adversaries.

The Pentagon while outlining changes in US strategy called for capability based targeting from threat based targeting which is an important change in the NPR. This would include review of broad range of capabilities and contingencies. It refers to use of nuclear weapons against non nuclear attack and in retaliation of attacks by nuclear, biological, or chemical weapons. It also mentions possibility of use of nuclear weapons in an Arab-Israeli conflict, in a war between China and Taiwan or an attack from North Korea. Global Strike has emerged through a number of guidelines issued by the White House and the Office of the Secretary since 2001 (Kristensen 2006:4).

The NPR while expanding the nuclear targeting called for the development of credible, low yield nuclear warheads. It emphasized over the need to develop new warheads, particularly hard and deeply buried targets to protect WMD, C3 systems and other strategic assets of more usable nuclear weapons.

Targets of nuclear weapons: The NPR listed seven countries as possible targets of nuclear weapons that includes the two old enemies, Russia and China. Besides, members of 'Axis of evil', Iran, Iraq and North Korea and countries which has been listed by US as terrorist states viz., Syria and Libya (Intriligator 2006).

New Triad

The NPR called for a new triad. The new triad will have three major elements: offenses, defenses, and infrastructure. Offenses are comprised by non nuclear and nuclear strike capabilities. While 'non nuclear strike capabilities include long range precision guided conventional weapons and their delivery means as well as capabilities for offensive information operations (such as electronic attacks and computer network attacks)', nuclear strike capabilities, on the other hand, include strategic nuclear forces (SLBMs, ICBMs, and Bombers), as well as shorter range, nuclear-capable strike aircraft based on land and nuclear armed cruise missile launched from attack submarines'(Guthe 2002:3). First component of the new triad will be nuclear defence with conventional armament. The second component of the triad constituted by active and passive defense with

emphasis on ballistic missile defense. Last component is the development of defense infrastructure.

Apart from the four missions, to assure, to dissuade, deter and defeat later on was added preemption known as “proactive counterproliferation”. Emphasis on superiority to prevent new regional powers from acquiring WMD with possibility of preemptive military strikes became a part of practical US policy. Nuclear policy became more dynamic and flexible during this administration. The new triad will have adapting planning with advance command, control and intelligence capabilities. This will bring flexibility in operations to meet emerging threats.

Defenses on the other hand were constituted by active defences, passive defences, and defensive information operations. Ballistic missiles, cruise missiles and strike aircraft constitute the active defences. Passive defences means protection against air and missile attack through concealment, hardening, redundancy, warning, dispersal, mobility and other measures. Defensive information operations mean counter attacks on critical information systems (Guthe 2002:3).

*A Capabilities Based Concept:
The New Triad*

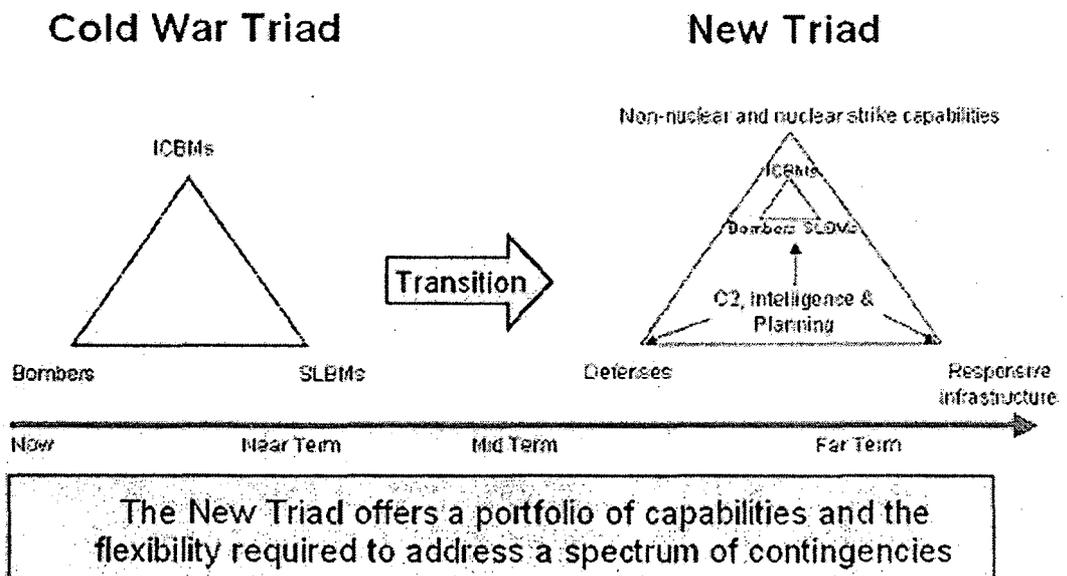


Figure: 3.1

Source: <http://www.armscontrolwonk.com/images/584.jpg>

The administration showed little interest in deep reductions in nuclear arsenal. The justification it provided for deploying national missile defense was that 'deploying the NMD would increase the possibility of low warhead level. The key barriers will be uncertainty about the effectiveness of NMD system and possibility of NMD breakout.' (Glaser and Fetter 2001: 87). The NMD system would possess large and immediate challenge to Chinese nuclear capabilities. Bush administration's NMD plans include number of ground based interceptors and adding sea and space based interceptors making it more threatening. Besides, while Bush administration showed its willingness to work with Russia for peace and security, withdrawing from the ABM treaty and going ahead with NMD seems a priority over relations with Russia. Secretary of Defence, Donald Rumsfeld described ABM treaty as 'ancient history' (Glaser and Fetter 2001: 87).

Infrastructure included lab, plants, workforce that develop, build, maintain and modernize the other elements of the New Triad which included both the nuclear weapons complex and the defence-industrial base that produces delivery platforms, weapons, sensor, communications systems, data processors, and other items needed for offensive strikes and defensive production (Guthe 2002:3). The strategic nuclear forces of the new triad would be constituted by operationally deployed force and the responsive force. While both operationally deployed force and responsive force shared the same force structure of SLBMs, ICBMs and Bombers, the difference lies in the kind of warheads. The operationally deployed forces are those which can be used immediately like those deployed on ballistic missiles, stored at bomber bases. Responsive forces on the other hand takes time to be constituted varying from weeks, month to more than a year by uploading additional warheads on ballistic missiles and bombers to cater to the new requirements. The operationally deployed force is meant to cover immediate and unexpected contingencies while the responsive force, potential contingencies. Regional powers like Iran, North Korea, Syria, Iraq, Libya has been cited as likely targets of immediate contingencies. Potential Contingencies include, 'more severe dangers that could emerge over a long period of time as a result of changes in the security environment' (Special briefing on NPR 2002).

New Triad and Nuclear Superiority

The implications of this new triad strategy would be enormous. It would give US ability and greater flexibility to use its nuclear coercion against an adversary during a crisis, thus further emboldening US nuclear superiority reminiscent of that of 1950s when US had nuclear monopoly. Rogue states have been stated as the most important rationale for the development of counterforce capabilities. However 'the new triad may lead to strategic nuclear instability among more important actors' like China and Russia. For instance, critics point out that US deployment of missile defence could motivate China to build up its small force of nuclear armed ballistic missiles (Kristensen 2004). While the NPR calls for reduction in operational nuclear weapons and adjusting alert level, it at the same time calls for developing new nuclear arsenals

Huntley (2004) notes that:

The NPR doesn't calls for reduced reliance on deterrence per se. Rather the new triad envisions supplementing deterrence with "new concepts" (such as counterproliferation), "active defenses" (principally meaning missile defense), and "responsive infrastructure" (principally meaning a reconstituted nuclear weapons production capability).

Nuclear Tests

Also, the administration made plans to resume nuclear tests at the Nevada Test Site. According to the Nuclear Posture Review, the NNSA is planning to accomplish this goal by:

- 'Replacing key underground test unique components'
- 'modernizing certain test diagnostic capabilities'
- 'augmenting key personnel and increasing their operational proficiency'
- 'conducting test-related exercises of appropriate fidelity'
- 'decreasing the time required to show regulatory and safety compliance'(NRDC 2003:3)

The second most important document was the **National Security Strategy (NSS)** in 2002 after the 2001 September 11 attack on World Trade Centre. It was the primary document linking US nuclear strategy and nuclear proliferation. There has been a momentum in the nuclear strategy to expand beyond Russia and China to regional aggressors. It directed nuclear doctrine to a more offensive military posture. The document has stated 'We must be prepared to stop rogue states and their terrorists clients before they are able to threaten or use weapons of mass destruction'. The document stated that the US will be prepared to use preemptive strikes to thwart such adversaries. It probably includes both conventional and nuclear weapons. The document called for a more comprehensive strategy to counter the WMD threat. The document without naming particular countries stated 'some states, including several that have supported and continue to support terrorism, already possess WMD and are seeking even greater capabilities, as tools of coercion and intimidation'.

Robert Lieber described the NSS as: 'broadly consistent with American strategic tradition while setting forth a coherent grand design for American policy in the face of new and dangerous threats' (Lieber 2002).

The 2002 NSS along with the Strategy for Combating Terrorism (SCT) and the Strategy to Combat WMD (SCW) present the administration's readiness to go for preemptive strikes as opposed to multilateral measures like nonproliferation.

Salient Features of NSS:

Preemption: The document's emphasis on 'preemption' is the most controversial aspect of this doctrine. 'The United States will continue to make it clear that it reserves the right to respond with overwhelming force including through resort to all of our options- to the use of WMD against the United States, our forces abroad, friends and allies' (NRDC 2004:26). The document advocated use of preemptive military action including use of nuclear weapons to deter others from acquiring WMD.

The United States has long maintained the option of preemptive actions to counter a sufficient threat to our national security. The greater the threat, the greater is the risk of inaction—and the more compelling the case for taking anticipatory action to defend ourselves, even if uncertainty remains as to the time and place of the

enemy's attack. To forestall or prevent such hostile acts by our adversaries, the United States will, if necessary, act preemptively.(NSS 2002)

Unilateralism

The document at the same time glorified unilateralism to serve US national interests.

While the United States will constantly strive to enlist the support of the international community, we will not hesitate to act alone, if necessary, to exercise our right of selfdefense by acting preemptively against such terrorists, to prevent them from doing harm against our people and our country(NSS 2002).

Military Primacy:

Bush NSS while acknowledging US dominant global position prescribed preventing the growth of new challenges to American power through military primacy and economic and political influence. This suggested new kind of multilateralism, international cooperation for global war on terrorism among like minded states.

The Spread of Democracy

Fourthly the NSS called for promotion of democracy and creation of a democratic free world to cater to American interests.

The NSS put this NPR conceptual shift into a broader strategic context, embracing the unprecedented fact of unequaled U.S. power and influence, and determining to maintain this position indefinitely in order to promote freedom throughout the rest of the world

The third important document defining the security strategy of Bush administration is the **National Strategy to Combat Weapons of Mass Destruction** issued by the White House in December 2002. It stated that WMD represents the greatest threat to US when possessed by states hostile to US and terrorists. It reaffirmed that an important characteristic of US national security strategy is including WMD proliferation. It accorded highest priority to counter-proliferation to combat WMD use, strengthened nonproliferation to combat WMD proliferation and consequence management to respond to WMD use.

It discussed three pillars of national strategy:

1. Counterproliferation to combat WMD 'will be fully integrated in to the basic doctrine, training and equipping of all forces in order to ensure that they can sustain operations to decisively defeat WMD armed adversaries.' Within this, all needed capabilities to combat WMD will be integrated in to the defence plan.
2. Strengthening Nonproliferation to Combat WMD Proliferation: All the efforts should be undertaken by the US and international community to prevent states from acquiring WMD and missiles. Traditional measures should be followed like diplomacy, arms control, multilateral agreements, threat reduction assistance and export controls as well as new methods 'of prevention such as national criminalization of proliferation activities and expanded safety and security measures'. Though there was also emphasis on ensuring reliance to international agreements like Chemical Weapons Convention, Non Proliferation Treaty, and the Biological Weapons Convention, US preferred unilateral informal initiatives over treaty regimes.
3. Consequence Management to respond to WMD Use that includes development of capability to respond to WMD against citizens, military forces and friends.

In its counterproliferation policy, there was strong emphasis on deterrence with development of new methods of deterrence. This will include strong declaratory policy and effective military posture. The document most importantly stated that ' The US will continue to make clear that it reserves the right to respond with overwhelming force- including resort to all options- to the use of WMD against United States , our forces abroad, and friends and allies.'

In its nuclear nonproliferation policy, the document emphasized over negotiation of fissile material treaty. The Bush administration, however, hadn't done much to realize this goal because of a number of irritants on this issue. Similarly, the document also emphasized on strengthening the NPT and the export control regimes like the Nuclear Suppliers Group and the Zangger Committee.

The other important document which has helped in defining the Bush administration's nuclear weapons policies are:

National Security Presidential Directive (NSPD) 17 (September 2002) : 'The United States will continue to make clear that it reserves the right to respond with overwhelming force- including potential nuclear weapons- to the use of (weapons of mass destruction) against the United States , our forces abroad, and friends and allies'.

Unified Command Plan, Change 2 (January 2003) Assigned four new missions to the STRATCOM: Global Strike, missile defence, information operations and global C4SIR. Global Strike is defined as a 'capability to deliver rapid, extended range, precision kinetic (nuclear and conventional) and non kinetic (elements of space and information operations) effects in support of theater and national objectives.'

Nuclear Posture Review Implementation Plan (March 2003) A 26 page list of specific items from the 2001 Nuclear Posture Review that the military services are ordered to implement.

Doctrine of Joint Nuclear Operations (September 2003) (: The plan foremost in its aims emphasized over development of long range plan to sustain and modernize US nuclear strategic forces in order to counter emerging threats and satisfy evolving deterrence requirements.' (Doctrine of Joint Nuclear Operations 2003)

Nuclear Weapons Employment Policy (NUWEP) (April 2004); A detailed outline of the countries that US nuclear planning shall be directed against , including a breakdown of the individual strike options (plans) and their target categories and objectives. The document states in part : 'US nuclear forces must be capable of destroying those critical war-making and war- supporting assets and capabilities that a potential enemy leadership values most and that it would rely on to achieve its own objectives in a post-war world'.

Unified Command Plan 2004 (March 2005): Assigns STRATCOM the mission of coordinating the Pentagon's efforts to combating weapons of mass destruction. STRATCOM planners went on to work on a new strike plan that could be used to implement Global Strike. Strategic Concept for CONPLAN 8022 had been developed in January 2003. A second concept was also completed in November 2003. It became operational in June 2004 when Defence Secretary Donald Rumsfeld ordered the military to implement CONPLAN 8022. On June 30 2004, Joint Chiefs of Staff General Richard Myers signed the Global Strike Alert Order which ordered the STRATCOM to put CONPLAN 8022 in to effect in coordination with the Air force and Navy. On August 17, 2004 STRATCOM published Global Strike Interim Capability Operations Order which changed the nature of CONPLAN 8022 from a concept plan to a contingency plan. On November 2005 Joint Functional Component Command Space and Global Strike achieved Initial Operational capability, after being thoroughly tested in the nuclear strike exercise Global Lightning 06.

New War Plan and Increase in the Role of Nuclear weapons

Nuclear Weapons got an important place in the CONPLAN 8022 particularly in the Global strike 8022 which is one of the pillars of Bush administration's new triad. So, while the Bush administration claimed to reduce the role of nuclear weapons, Pentagon included nuclear weapons in the very first plan that was supposed to reduce the nuclear role. This created new missions for nuclear weapons and broadened its role while lowering its threshold to be used during a conflict. Besides, Global Strike also lowered the strategic alert level. Global Strike incorporates not only strategic long range weapons launched from the United States but also potentially nuclear bombs deployed in Europe.

Global Strike and COMPLAN8022 both relied on the belief that deterrence may fail so defeat the threat before it strikes. It strengthened the nuclear warfighting capability being developed in the post-Cold War years. The implementation of that strategy can be seen with the Global Strike whose operational embodiment is called Contingency Plan (COMPLAN) 8022. This new strike plan was developed by STRATCOM in coordination with the Air Force and Navy to empower the President with prompt global action

including conventional, space and information warfare capabilities. The Global Strike mission and CONPLAN22 are different compared to the earlier missions for the reason that it is 'foremost offensive and preemptive in nature and deeply rooted in the expectation that deterrence will fail sooner or later. Global Strike is principally about warfighting rather than deterrence' (Kristensen 2006:3-8)

The focus of the new war plan remained the same, 'holding Russian and Chinese nuclear command, control and communications, and leadership targets at risk with thousands of nuclear warheads ready to launch at a moment's notice'. Among the modest reductions made by the SIOP is included removal of one nuclear-powered ballistic missile submarine with 24 missiles (144 warheads) and 17 peacekeeper ICBMs(170 warheads). However these are the only routine modifications to the SIOP that occur as new or upgraded weapon system are deployed and older ones retire. Also, there were plans for new intercontinental ballistic missiles. Reference. In 2002, the Air Force began soliciting conceptual designs for a missile to be deployed in 2018. Pentagon started studying two options for Trident missile, 'a variant of the Virginia class nuclear powered attack submarine'. The project will start in 2016 for induction in to the service by 2029. In addition the Navy began a three year development program in 2004 'to steer warheads delivered by the missile with global-positioning satellite like accuracy'. (NRDC 2004:13). Also, the NPR called for shortening the warning times and make possible rapid rearmament. 'The risk of an accidental nuclear war should be met with ballistic missile defence.' The reserve warheads should also be kept on alert so that they can be used immediately (Muller and Schaper 2004:47).

US Force Structure: Quantitative Decrease and Qualitative Increase

The NSPD-34 signed by the Bush administration in 2004 a classified nuclear weapon stockpile plan for 2004 to 2012, stated that the nuclear stockpile would be cut to half. (Boese 2004). This will result to 3000 warheads in storage for use as either active, non deployed warheads in the responsive nuclear force or as a part of its inactive stockpile of warheads that have critical components removed. (McDonough 2006:45) Also, the NPR

called for adapting US nuclear force structure as per the changes in post-Cold War. It also called for reductions in deployed ICBMs by 9 percent and Trident launchers by 22 percent

However, it nonetheless still recommended a huge force structure. It prescribed around 3800 strategic warheads deployed by 2007 and 1700-2200 by 2012.

Nuclear reductions to be brought during the Bush administration can be studied under the ambit of Moscow Treaty

Strategic Offensive Reductions Treaty (SORT): Setback to Nuclear Arms Control

Also called Moscow Treaty, it is a treaty bound by international law announced on 24 May 2002 at Konstantin palace in St. Petersburg. It commits both sides to cut their deployed strategic arsenals systems to 1700- 2200 by December 2012. Both sides can determine the composition of their warheads. A bilateral treaty committee will meet twice a year until 2012.

- This treaty has no method for verifying that each side is meeting its commitments, the cuts are not permanent
- Also neither side is obligated to destroy or dismantle warheads
- There is no provision for interim reductions. Hence, either of the two sides can actually increase the warheads between 2002 and 2012 as long as a reduction to the agreed number occurs by 2012.
- There is no provision for those weapons that were removed from active deployment.
- The Bush calls for MX silos to be retained, rather than retired. As per the START II treaty. 'MX missile stages will also be retained with no control in the Moscow Treaty over future military use of analogous Russian land based MIRVed missiles, which Russia is free to re-equip with MIRVs'.

Also, under the Moscow treaty, Bush administration planned 'to invest billions to "revitalize" the US nuclear weapons research, development and testing complex.

Similarly, Bush administration annual funding stood at \$5.8 billion for nuclear weapons activity which is 45 percent higher than the cold war levels. Plans were also underway to expand the Pantex nuclear weapon assembly plant capacity to 600 warheads per year, up from 350 warheads per year (NRDC 2002:1). At the same time it made provision for several thousand warheads to be kept in reserve. Bush administration has called for reduction in nuclear weapon stockpile to 50 percent by 2007. (NRDC 2002)

Norris and Kristensen (2004) note:

The Bush administration continues to implement provisions of its 2001 Nuclear Posture Review (NPR), including phasing out weapons previously earmarked for retirement, developing new ballistic missiles, designing new nuclear warheads, building new production facilities to manufacture them, and modernizing the nuclear command and control system. None of these activities are banned or limited by the 2002 SORT.

The Bush administration declared that nuclear weapons will be a part of US military forces for the next 50 years. It is planning for a new ICBM by 2020, a new SLBM and SSBN in 2030 and a new heavy bomber in 2040, as well as new warheads for all of them.

While in June 2004, the Bush administration announced that it will significantly reduce the stockpile over the last eight years, at the same time the Department of Energy and the Pentagon called for creating different type of arsenal with greater accuracy, greater usability in limited conflicts. The administration has specified the threat posed by hard and deeply buried targets and need to develop capabilities against them that includes attacking preemptively.

Key officials of the Bush administration pointed that US nuclear arsenal will not be adequate for the future. The strategic arsenal deployed in 1970s and 1980s to deter Soviet Union and carry out nuclear war plan known as the Single Integrated Operational Plan would not be of much use in military missions such as those involving hard and deeply buried targets. (NRDC 2002)

U.S. Nuclear Forces, 2004

Type	Name	Launchers	Year deployed	Warheads x yield (kilotons)	Warheads active/spares
ICBMs					
LGM-30G	Minuteman III				
	Mk-12	150	1970	1 W62 x 170	150
	Mk-12	50	1970	3 W62 x 170 (MIRV)	150/15
	Mk-12A	300	1979	3 W78 x 335 (MIRV)	900/20
LGM-118A	MX/Peacekeeper	29	1986	10 W87 x 300 (MIRV)	290/50
Total		529			1,490/85
SLBMs					
UGM-96A	Trident I C4	72/3	1979	6 W76 x 100 (MIRV)	432
UGM-133A	Trident II D5	288/12			
	Mk-4		1992	8 W76 x 100 (MIRV)	1,920/156
	Mk-5		1990	8 W88 x 475 (MIRV)	384/16
Total		360/15			2,736/172
Bombers					
B-52	Stratofortress	94/56*	1961	ALCM/W80-	430/20

				1 x 5-150	
				ACM/W80-1 x 5-150	430/20
B-2	Spirit	21/16	1994	B61-7, -11, B83-1 bombs	800/45
Total		115/72			1,660/85
Non-strategic forces					
Tomahawk SLCM		325	1984	1 W80-0 x 5- 150	320
B61-3, -4, -10 bombs		n/a	1979	0.3-170	800/40
Total		325			1,120/40
Grand total**					~7,000/382

ACM: advanced cruise missile; ALCM: air-launched cruise missile; ICBM: intercontinental ballistic missile (range greater than 5,500 kilometers); MIRV: multiple independently targetable reentry vehicle; SLCM: sea-launched cruise missile; SLBM: submarine-launched ballistic missile.

*The first figure is the total inventory, including those used for training, testing, and backup; the second figure is the primary mission inventory: the number of operational aircraft assigned for nuclear or conventional missions. **Approximately 3,000 additional intact warheads are retained in the reserve or inactive stockpiles.

Table 2.

Source: <http://www.thebulletin.org/index.html>

New Weapons Concepts The NPR called for new nuclear capabilities under the ACI (Advance Concept Initiative) for additional yield flexibility, improved earth penetrating weapons and warheads that remove collateral damage (Kristensen 2004). The new NPR called for new nuclear missions especially designed to strike silos and bunkers to destroy weapon of mass destruction. Not only there is call for new weapons but there is also call for expanding the production facilities. The Bush administration in 2004 got the Congress to lift the ban on designing new nuclear warheads. The NPR called for expansion of production facilities

The new administration argues that the nuclear arsenals possessed by the US will not be sufficient to meet these objectives. The new weapons would be developed also with the purpose of reducing the collateral damage, weapons with high accuracy and low yield. The administration undertook to develop broadly two programs for this purpose. First, the RNEP (Robust Nuclear Earth Penetrator) to attack hard and deeply buried targets and the Advance Concepts Initiative. The latter authorized the weapons laboratories to renew various programs. In 2003, while Congress allocated \$15 million to study the RNEP, it was later defunded. The 2004 Defence budget included two requests regarding new nuclear weapons. First is to repeal a ten year old ban on the development of smaller, lower-yield nuclear weapons also called mini-nukes. The second request was to conduct research on a new bunker buster bomb called the Robust Nuclear Earth Penetrator. (Ciarrocca 2003:1)

Bush administration allocated more funds towards development of these new weapons. The Complex 2030 introduced by NNSA¹¹ was a program to facilitate development of upgraded nuclear weapons at each of the National Nuclear Security Administration's eight nuclear weapons-related sites throughout the country. The National Nuclear Security Administration (NNSA), formed in 2000 to manage the nation's nuclear weapons complex within the DOE, had a five-year "National Security Plan" calling for

¹¹ the semi-autonomous agency within the Department of Energy that oversees the nuclear weapons program

annual increases that will push the nuclear weapons budget to \$7.4 billion by 2012. The most important component of Complex 2030 was the RRW program to produce safer and durable warheads.

Critics however claimed that RRW will be costlier than LEP. Also, LEP can maintain the old warheads. US nuclear arsenal is highly reliable and doesn't need replacement. (Nelson 2006)

Besides, a NNSA study has also confirmed that the existing plutonium triggers, or "pits," may be viable for another 90 to 100 years. While DOE has rejected funding for Modern Pit Facility, DOE is pushing for Consolidated Plutonium Centre to bring all the plutonium related activities at one site.

There are four types of nuclear weapons proposed as tailor made to suit the present needs. (Levi and Hanlon 2005:27-30) First is Low Yield weapons that would explode in the air with a power perhaps a hundred times smaller than those bombs used in Hiroshima and Nagasaki. It is believed that these weapons would scare the enemy and make deterrence more credible. Second is the Earth Penetrating weapons also called the bunker busters to detect WMD hidden deep underground. Third, the Enhanced Radiation weapons also called the neutron bomb that kill enemy with radiation. Last but not the least is the Agent Defeat Weapons to penetrate facilities stockpiling chemical or biological weapons.

Non Proliferation Policy

Bush administration has remained opposed to formal treaty based obligations and has supported informal initiatives like Proliferation Security Initiative and Container Security Initiative to tackle nonproliferation. President Bush has followed a selective nonproliferation policy as has been the trend of US policymakers of taking action against selective countries while leaving others like Israel. While US government pledged to pursue goal of nuclear disarmament in the 2000 NPT Revcon, Bush administration didn't show willingness to bring reduction in nuclear arsenals. Similar commitment by made by Bush administration during Presidential campaign earlier when George W. Bush indicated willingness to bring unilateral reduction in the US strategic nuclear arsenal.

Comprehensive Test Ban Treaty Not only has the Bush administration opposed the CTBT but has requested funding to shorten the time and resume nuclear testing should it decide to end the current testing moratorium.

FMCT

This is an effort towards creating legal norm to prohibit all signatories from producing enriched uranium or separate plutonium for use in nuclear weapons. The FMCT has been under negotiation from a long time as US and China could not reach a consensus. The treaty was first proposed for discussions at the Geneva Conference on Disarmament at the urging of US. The primary obstacle was China linking this treaty to that of limiting the military use of outer space. While in 2003 China agreed to negotiate towards an FMCT, Bush administration continued to refuse to negotiate on outer space. In 2004, at the end of the Conference on Disarmament US announced that it would agree to an FMCT negotiation provided that the treaty would contain no significant inspection requirements. It argued that an effective verifiable FMCT was not achievable.

On May 18, 2006 Bush administration proposed a draft fissile material cutoff treaty at the conference on disarmament in Geneva. It could enter in to force only with the consensus of the five nuclear weapons states and was clearly written to cater to US needs. It would ban new production of plutonium and highly enriched uranium production for use in nuclear weapons for 15 years. It would allow uranium production for naval fuel. It could be extended by the consensus of the parties only and would contain no provision for verification except by national technical means. However US proposal is full of loopholes. To start with the consensus of P-5 to extend the treaty is a big threshold. Production of HEU for naval reactors creates a big loophole in the absence of verification measures. Another very important loophole is the lack of international verification mechanism (Woolf 2006:6).

Missile Defense

The Bush administration's missile defence plans to base missile interceptors in orbit and test them by 2012 has further aggrieved the differences. China has its agreement to start negotiations on FMCT contingent upon negotiations on PAROS (Prevention of Arms Race in Outer Space). On the other hand, the Bush administration has obstructed the FMCT by refusing to approve to parallel talks by linking FMCT to outer space treaty.

In a speech at the National Defense University on February 11 2004, President Bush announced seven proposals 'to strengthen the world's effort to stop the spread of deadly weapons that included: 1. to expand the PSI 2. gain UNSC approval for a proposal (which became UNSC Resolution 1540) that all states criminalize proliferation enact strict export controls, and secure all sensitive materials within their borders'.³ broaden the Nun Lugar Cooperative Threat Reduction program beyond Russia and former Soviet Republics 4. ask the NSG to deny enrichment and reprocessing equipment and technologies " to any state that does not already possess full scale, functioning enrichment and reprocessing plants while ensuring access to civilian reactor fuel 5. deny civilian nuclear reactor program to states that have not joined the additional protocol 6. create a safeguard and verification committee of the IAEA Board of Governors and deny membership on this committee or the IAEA board to any state (such as Iran) 'under investigation for proliferation violations.' (Remarks by Fort Lesley J. McNair 2004)

President Bush's policy regarding nonproliferation justifies US military intervention anywhere in the world against hostile states developing nuclear technology. The administration believes that nuclear weapons could fall into wrong hands and pass into terrorist hands and possibly be used against America. It used similar rationale for invading Iraq that the later possessed WMD. Washington took various strategies for tackling nonproliferation against 'Axis of Evil' States. The NPR came out with a list of target countries that included Libya, China, Russia, Iran and North Korea. The term rogue states came in 1990s to denote States that US considered as flouting international law but this use of this term by the Bush administration brought a different perspective to US nonproliferation policy. The shift in emphasis over the threat of nuclear weapons depending on their possession by particular regimes particularly increased during this

period. This also accelerated the nuclear weapons programs of many countries. In some ways, Bush administration's coercive style of handling troubled regimes only encouraged their nuclearization.

CONCLUSION

Bush administration has continuously increased the role of nuclear weapons in US defense strategy by spending millions on new nuclear weapons to be operational by 2030. The NPR increased the role of nuclear weapons in US security strategy, expanded the targets and scope of nuclear weapons, and lowered the level of nuclear weapon use. It hasn't contributed much to reduction in nuclear arsenal either. (Guthe 2002:1) It has also expanded the circumstances in which US could use nuclear weapons with the introduction of "nuclear preemption". Also, many of his policies have been contrary to the thirteen practical steps for disarmament agreed in the 2000 NPT Review Conference. It withdrew from the ABM treaty as well. Though Bush administration's nuclear policy is linked to earlier nuclear policy since 1990s but is much more offensive glorifying use of force and defying international consensus. The Hawks in the government have pursued their old objectives only with greater determination. (Muller and Schaper 2004:11)

Bush administration's capability based approach has been counterproductive. Bush administration's plan of Missile Defense has adversely affected US-Russian relationship bringing back the tension and hostility in the relationship. Russia planned to withdraw from the INF treaty¹². The START II treaty also ceased to be in force with the withdrawal of US from the ABM treaty.

The administration has brought some profound changes in US defense strategy. Nuclear deterrence gave way to nuclear preemption and defense. The role of preventive war had grown with US role in Iraq to counter WMD proliferation. The 2002 invasion of Iraq was carried to cater to US nonproliferation concerns regarding Iraqi WMDs. After the failure of UNSC inspectors to find WMD in Iraq, US invaded Iraq. US inspectors couldn't find any weapons. This revealed a blunder in US nonproliferation policy materialized through

¹² Under the 1987 INF treaty, US and Soviet Union destroyed their missiles with ranges between 500 and 5500 kilometers. Also, it has provided impetus for the anti-satellite test by China.

preventive war. This also reflected failure of administration's policy not only in countering proliferation but political failure in stabilizing Iraq.

Bush administration also emphasized over dissuasion in its National Security Strategy and Nuclear Posture Review for stopping the spread of nuclear weapons. This relies upon role of military power. Also this has been used as a rationale for developing new type of nuclear weapons like for destroying hard and deeply buried targets. The policy of dissuasion rather than for countering nonproliferation could be targeted for maintaining US military superiority.

The RRW could lead to replacement of old tested weapons by the new ones which are not tested. The result is that it would encourage testing by other countries and return to Cold War days. (Nelson 2006)

The role of deterrence in US nuclear weapon policy has considerably changed in the wake of September 11 attacks and focus on countering WMD threat. The NPR 2001 also named Russia and China in the list of US nuclear targets. US withdrawal from the ABM treaty and plan for missile defence has further reenergized nuclear rivalry of US with Russia and China. According to 2001 NPR, Russia's nuclear forces remain a concern (Nuclear Posture Review Report 2002). Similarly deterrence continues to play role in US-China relations. The NPR takes in to account the possibility of US nuclear confrontation with China over Taiwan. China's anti satellite test similarly along with plan for nuclear modernization seems to be preparation to tackle US deterrent (Kan 2007).

The new NPR rejected the arms control framework to attain maximum flexibility in its actions. The Bush administration terminated the ABM treaty to attain its goal of missile shield. NPR doesn't mention a word about the NPT, it rather included some nonnuclear weapon states on the list of target countries. Bush administration's withdrawal from the ABM treaty only can encourage NPT states from withdrawing from the treaty. Nuclear disarmament received a setback while arms control framework was revived as much as not to affect US nuclear defence. To sum up, US nuclear strategy moved towards a more realist nuclear strategy. When Bush administration announced withdrawal from the ABM

treaty it also led to Russian withdrawal from the START II.¹³ It cleared way for Russian modernization of SS-18s (each equipped with 10 warheads) and maintain them on alert status.

George Perkovich (2003) summarizes US security strategy during Bush administration, as:

1. Rejection of international cooperation in enforcing non proliferation commitment and greater emphasis on enforcement
2. Glorifying preventive military action and regime change
3. Large and modernized nuclear arsenal primarily to deter rogue states, terrorists and competitors, Russia and China

‘National Missile Defence, Theater Missile Defence, Space based weapons, first strike strategic nuclear weapons and precision, low yield nuclear weapons are interconnected parts of one, US led integrated, offensive global warfighting system.’(Western State Legal Foundation, 2001)

¹³ US ratification of the STARTII and adherence to ABM treaty were the criteria to be fulfilled to ensure Russian commitment to the STARTII.

CHAPTER FIVE

CONCLUSIONS

A study of the nuclear strategy of George W Bush administration during 2001-2004 and the earlier Post-Cold War administrations of George Bush and Bill Clinton reveals continuity in the trend of US nuclear strategy with few differences unique to the George W. Bush administration. There are significant continuities and some changes.

The factors which played crucial role in framing the US nuclear policy in the Post-Cold War, as discussed in the previous chapters are, cuts announced at the end of Cold War by the PNI initiatives, Iraq War and rise of Counterproliferation initiatives, the 1994 NPR, the Pdd-60 and the 2002 NPR.

The new perception of threat during the George W. Bush administration had roots in the early 1990s when the Department of Defense conducted surveys after the disintegration of Soviet Union to bring changes in the US nuclear targeting strategy and weapons employment policy. This brought changes in the target list with a new SIOP. The new rationale of nuclear weapons began to be set in third world countries with WMD. STRATCOM recommended creation of a global capability. The concept of nuclear preemption emerged during the Senior Bush administration Presidency. Also, the 1993 Silver Books (strategic installation list of vulnerability effects and results) were plans for military strikes against WMD facilities against rogue states like Iran, Iraq, Libya, and North Korea.

The process of adaptive planning with emphasis on flexibility in targeting decisions continued during the NPR1994 of Clinton administration and Bush administration's 2002 NPR. The difference that could be seen, is in terms of the rhetoric of the US deterrence and role of nuclear weapons. Bush administration came with a more strident tone while clearly naming list of states as targets of US deterrence. In fact, most of the

nuclear employment policy and changes in war plans during the Bush administration had begun in 1990s.

The new threat analysis and position of rogue states had a long term impact on the US nuclear strategy. During the Clinton administration nuclear weapon as a preemptive means of deterrence against states of concern (with WMD) widened scope of the use of nuclear weapons. This also triggered the development of new warhead designs by the nuclear laboratories. There was a significant focus towards China as a threat to US interests apart from the rogue states as revealed by the PDD-60. The wide range of nuclear retaliation options emerged during the Clinton administration was an important part of the Bush NPR 2001. These changes during Clinton administration had a considerable impact on George W. Bush nuclear strategy. PDD-60 built on many of the fundamentals of the Nuclear Posture Review of the George W Bush administration.

During Bush administration, however there was profound impact of the September 11 attack resulting to a more offensive nuclear strategy. An important change during the George W. Bush administration was the new triad. The old triad consisted of offensive nuclear weapons and the supporting command and control infrastructure with the primary motive to guarantee availability of a massive response, in case of a nuclear attack. This made an important change in US nuclear doctrine, making nuclear weapons more usable.

The new triad, on the other hand, is planned so that US policymakers could appropriately respond to any kind of unexpected threat. However, the foundation stone for most of the elements of the new triad like missile defence and call for new weapons was laid down during earlier administrations of the post-Cold War period. The development of new nuclear warheads plans by the NPR 2001 was discussed by the previous governments too. Similarly the idea of nuclear warheads developed during the 1990s, like the B-61-11 earth penetrating warheads during Clinton administration.

The RRW (Reliable Replacement Warhead) program that started way back in 2004 towards creating warheads that would be safer, more reliable and easier to maintain than the nine types populating the current stockpile of 10,000 nuclear weapons. It was an

effort to replace the Stockpile Stewardship program started by the Clinton administration in 1994.

The Ballistic missile defence system was developed by the George W. Bush administration. The foundation was however laid down by the research and development of missile defence carried during Clinton administration. While Clinton had prioritized the Theater Missile Defence, Bush went ahead with the National Missile Defence.

Another important difference is the emphasis of Clinton administration on multilateralism and international cooperation in tackling nonproliferation. However, George Bush W. Administration remains committed to unilateralism.

Bush administration rejected multilateralism and treaty based arms control like NPT. He preferred unilateral informal initiatives like PSI (Proliferation Security Initiative). There was a step backward in arms control as Clinton had announced Start III Treaty at the Helsinki summit. Clinton's review also provided for more transparency and irreversibility by including verification of the destruction of warheads.

While START was an effort towards nuclear disarmament, the SORT treaty signed by Bush and President Putin of Russia was simply aiming at arms control without verification provisions (Global-Security). So in arms control there was a step backward as Clinton's arms control and disarmament policy under START emphasized over irreversibility, transparency and verification. Contrary to the Moscow treaty when Bush administration announced withdrawal from the ABM treaty, it also led to Russian withdrawal from the START II.¹⁴ It cleared way for Russian modernization of SS-18s (each equipped with 10 warheads) and maintain them on alert status.

The concept of nuclear preemption was also not new to George W. Bush administration. President Clinton was willing to go to war with North Korea in 1994 over the alleged North Korean violation of NPT and attempts towards deployment of nuclear forces.

¹⁴ US ratification of the STARTII and adherence to ABM treaty were the criteria to be fulfilled to ensure Russian commitment to the STARTII.

Reference Similarly President Bush in 1991 attacked Iraq on the alleged Iraq's possession of WMD. Preventive war thinking which was prioritized by the George W Bush administration had always formed a part of US policy.

Despite the radical differences between Bush senior and Clinton multilateral approaches, and George W. Bush unilateralist approaches there was considerable continuity in nuclear doctrines. For instance, counterproliferation policy was inaugurated as US policy in the Clinton nuclear posture review laying the foundation for Bush administration's PSI initiative. The ideas of the Clinton's nuclear posture review also inspired Bush rejection of the NPT, and nuclear targeting against Iran, Iraq and North Korea. The Clinton administration's support for 'missile defence' research and development made possible Bush BMD plans (Gerson 2007:23).

The pillars of counterproliferation were led down in the DCI (Defense Counterproliferation initiative) of Clinton administration in 1993, which established the ground for George W. Bush administration's counterproliferation initiatives later on.

'The 2002 National Security Strategy document called for an active "counterproliferation" policy, but the term was coined during the Clinton period' (Wirtz 2005:17).

Hence, the most important characteristics of US nuclear strategy is drive for absolute superiority driven by realism. US nuclear strategy remained an offensive realist nuclear strategy to maintain US preponderance. Bush administration's nuclear weapon policy as a continuity to the Post-Cold War administration reflects US offensive behavior to maintain American hegemony. Policies during the Bush junior administration were geared towards nuclear warfighting.

Bush administration declared the doctrine of "full spectrum dominance" but the trend has started long ago. The Hawks in the government have pursued their old objectives only with greater determination (Muller and Schaper 2004:11). US nuclear strategy has also had a stabilizing effect in maintaining a balance of terror and provoking acquisition of

nuclear weapons by other adversaries as a defensive measure. It has repeatedly used nuclear arsenals during the conflicts to maintain escalation dominance.

‘During the first Gulf War, Iraq was encircled with an estimated 1000 nuclear warheads and Bush, Vice President Dan Quayle; Defense Secretary Dick Cheney... all “diplomatically” threatened to use them’ (Gerson 2007: 208).

The end of cold war while lessened chances of nuclear doom, US nuclear threats to expand its empire continued. The Desert Storm victory only confirmed US unipolarity. For instance, during the Desert Storm, a naval flotilla armed with 700 tactical and strategic nuclear weapons was dispatched to the Gulf. Also, land based tactical nuclear weapons were shipped to US forces in Saudi Arabia as per reports.

“Bush simply took over a doctrine developed under Clinton and pushed its logic to the doctrine of unsurpassable power, the corner of which is the threat of preemptive attack via nuclear and other weapons” (Gerson 2007: xii)

Counterproliferation initiative only brought the new perception of threat and which had consequences for nuclear strategy later with development of new weapons and aggressive nuclear posture. The decade moved towards uncompromising American superiority with emphasis over two policy components, unilateralism and supremacy. Bush followed the neo con foreign policy strategy which had promoted the “unipolar factor” (Muller and Schaper 2004:42). The unipolar exercising of American power was the best way to maintain stability in the world (Krauthammer, 1990/1991). September 11 led to clear profiling of US policies giving it a pretext to retain and develop offensive nuclear strategy. The January 2001 NPR stressed that nuclear weapons will continue to maintain a key role in US strategy supporting a flexible military planning. The Bush administration intensified the tendencies already prevalent since 1990s and organized them in an offensive nuclear posture.

Nuclear weapons have formed part of grand strategies of all administrations in realizing foreign policy objectives (Gerson 2007: xii). This is because US nuclear strategy is driven by realist logic While there were changes in the post-Cold War US force structure and military doctrine under Bush and Clinton, the main objectives of US grand strategy

remained the same, to maintain US preponderance, to prevent the reemergence of multipolar international system within Europe, to prevent the emergence of peer competitors and to maintain its hegemony and nuclear primacy (Folker 2007:43).

References

Arkin, William M and Robert S. Norris (1993), "Nuclear Alert after the Cold War", [Online web] Accessed 24 December 2007
URL:http://www.nukestrat.com/us/reviews/npr_1994.htm

Beisner, Robert L. (1998), "Strong State, Weaker Theory, Expansion of Political Interests in Other Countries", [online web] Accessed 1 May 2008
URL:<http://www.encyclopedia.com/doc/1G1-21223159.html>

Boesche, Roger (2003), "Kautilya's 'Arthashastra' on War and Diplomacy in Ancient India", *The Journal of Military History*, 67(1):9-37

Boese, Wada (2004) "Bush Plans to Cut Atomic Arsenal" *Arms Control Today*, 34(6)

Brodie, Bernard (1946), *The Absolute Weapon: Atomic Power and World Order*, New York: Harcourt, Brace and Co.

Bunn, George and Christopher F. Chyba (2006) (eds.), in *U. S. Nuclear Weapons Policy: Confronting Today's Threats*, California: Brookings Institution Press

Caravelli, Jack (2008), *Nuclear Insecurity: Understanding the Threat from Rogue Nations and Terrorists*, Westport.: Praeger Publishers

Christensen, Thomas J. and Jack Snyder (1990), "Chaingangs and Passed Bucks: Predicting Alliance Patterns in Multipolarity", *International Organization*, 44:137-68

Ciarrocca.M (2003), "Bush Nuclear Policy Do as I say, Not as I Do", [Online web] Accessed 24 December 2007 URL:<http://www.nrdc.org/nuclear/atreaty02.asp>

* Crouch, J.D. (2002), "Special briefing on NPR, 2002", [Online web] Accessed 20 June 2008 URL:<http://www.fas.org/sgp/news/2002/01/npr-briefing.html>

*Department of State (1987), [Online web] Accessed 5 May 2008. URL:<http://www.state.gov/www/global/arms/treaties/inf1.html>

Diamond,Howard (1999), "Cox Panel Charges China With Extensive Nuclear Espionage", [online web] Accessed 16 July 2008
URL:http://www.armscontrol.org/act/1999_04-05/chiam99.asp

*Doctrine for Joint Theater Nuclear Operations, February 1996 [Online web] Accessed 13 June 2008 URL: http://www.nukestrat.com/us/jcs/jp3-12-1_96.htm

Dunne, Schmidt (2005), "Realism" in John Baylis and Steve Smith (eds.) *The Globalization of World Politics An Introduction to International Relations*, New Delhi: Oxford University Press

Eli Corin (2004), "Presidential Nuclear Initiatives: An Alternative Paradigm for Arms Control", [Online web] Accessed 14 June December 2008
URL:http://docs.nrdc.org/nuclear/nuc_10189301a_004.pdf

Evara, Stephen Van (1999), "Offense-Defense and the Causes of War", *International Security*, 22(4) 5-43

Feiveson, Harold A. (ed.) (1999) "Executive Summary", in *The Nuclear Turning Point: A Blueprint for Deep Cuts and De-Alerting of Nuclear Weapons*, Washington, D.C.: Brookings Institution Press

Folker, Jennifer Sterling (2007), *Making Sense of International Relations Theory*, Boulder: Lynne Rienner

Gerson, Joseph (2007), *Empire And The Bomb: How the US Uses Nuclear Weapons to Dominate the World*, London: Pluto Press

Gortzak, Yoram, Yoram Z. Haftel and Kevin Sweeney (2005), "Offense-Defense Theory: An Empirical Assessment", *Journal of Conflict Resolution*, [online web] Accessed 1 May 2008 URL: <http://www.jcr.sagepub.com/cgi/content/abstract/49/1/67>

Guthe, Kurt (2002), 'The Nuclear Posture Review: How is the "New Triad" New?' Centre for Strategic and Budgetary Assessments

Harahan, Joseph P, "Epilogue: Continuity of Arms Control Amidst Revolutionary Changes" [Online web] Accessed 14 June 2008
URL: <http://www.fas.org/nuke/control/inf/infbook/ch9.html>,

Hartung, D and Michelle Ciarrocca (2000), "Star Wars Revisited: Still Dangerous, Costly, and Unworkable", *Foreign Policy in Focus*, 4(24)

Howard, Michael E. (1981), "On Fighting a Nuclear War", *International Security*, 5(4):3-17

Huntley, Wade L. (2004), "Unthinking the Unthinkable: U.S. Nuclear Policy and Asymmetric Threats", *Strategic Insights*, III (2)

Intriligator, Michel D, "A special Threat: US Nuclear Weapons Policy under the Bush Doctrine" [Online web] Accessed 16 July 2007 URL: <http://www.proteusfund.org>

Intriligator, Michel D, "Rethinking US Nuclear Weapons Policy", [Online web] Accessed 16 July 2008 URL: http://www.wagingpeace.org/menu/programs/international-aw/annual-symposium/2006_

Ivan Eland (2001) *Putting "Defence" Back into US Defence Policy: Rethinking US policy in the Post-Cold War World*, Westport:Greenwood Publishing Group

Jervis (1978), "Cooperation under the Anarchy Security Dilemma", *World Politics*, 30:167-214

*JFC (Joint Chief of Staff) (1993), *Joint Publications 3-12, Doctrine for Joint Nuclear Operations (2005)*, [Online web] Accessed 16 July 2007 URL: <http://zfacts.com>

*JFC (Joint Chief of Staff), *Joint Publications 3-12, Doctrine for Joint Nuclear Operations (2005)* [Online web] Accessed 16 July 2007 URL: <http://zfacts.com>

Jones, Sean M Lynn and Steven E Miller (1995), "Preface", in Michael E Brown, Sean M Lynn Jones and Steven E Miller (eds.) *The Perils of Anarchy Contemporary Realism and International Security*, Cambridge: MIT Press

Jorn, Gjelstad, and Olav Njolstad (1996), *Nuclear Rivalry and International Order*, London: Sage Publications

Kan, Shirley (2007), "China's Anti-Satellite Weapon Test", [Online web] Accessed 16 July 2008 URL: <http://ftp.fas.org/sgp/crs/row/RS22652.pdf>

Kimball, Daryl G. (1999), "Coalition to Reduce Nuclear Dangers", *Foreign Policy in Focus*, [Online web] Accessed 12 January 2008
URL: <http://www.fpiif.org/briefs/vol4/v4n25nuc.html>

Kimball, Daryl (1999), "The Presidential Nuclear Initiatives (PNIs) On Tactical Nuclear Weapons", [Online web] Accessed 12 January 2008
URL: <http://www.armscontrol.org/factsheets/pniglance.asp>

Krauthammer, Charles (1990/1991), "The Unipolar Moment", *Foreign Affairs*, 70(1):23-33

Kristensen, Hans M (1998), 'Nuclear Futures: Proliferation of Weapons of Mass Destruction and US Nuclear Strategy', *Basic Research Report*, 98.2

Kristensen, Hans M (1999), "US Nuclear Strategy Reform in the 1990s", [Online web] Accessed 12 January 2008 URL:<http://www.nautilus.org/archives/library>

Kristensen, Hans M (2001), "The Matrix of Deterrence US Strategic Command Force Structure Studies", The Nautilus Institute

Kristensen, Hans(2004), "Us Nuclear Policy and World Nuclear Situation", Presentation by Hans M Kristensen on August 1,2004 to the Gensuikin Conference, Tokyo, [Online web] Accessed 16 July 2008 URL: <http://www.nukestrat.com/pubs/gensuikin2004b.pdf>

Kristensen, Hans M (2005), "Role of US Nuclear Weapons: New Doctrine falls short of Bush Pledge", [Online web] Accessed 16 July 2007 URL:<http://www.armscontrol.org>

Kristensen, Hans M (2005), "Role of US Nuclear Weapons: New Doctrine falls short of Bush Pledge", [Online web] Accessed 16 July 2007 URL:<http://www.armscontrol.org>

Kristensen,Hans M (2006), "US Strategic War Planning After 9/11", [Online web] Accessed 23 July 2008 URL:<http://www.http://cns.miis.edu/pubs/npr/vol14/142/142kristensen.pdf>.

Kristensen, Hans M (2006), "Global Strike: a Chronology of the Pentagon's New Offensive Strike Plan", [Online web] Accessed 2 February 2008 URL:<http://www.nukestrat.com/us/stratcom/gs.htm>

Layne, Christopher (2006), *Peace of Illusions, American Grand Strategy from 1940 to the Present*, New York: Cornell University Press

Levi Michael A. and Hanlon Michael E. O (2005), *The Future of Arms Control*, Washington DC: Brookings Institute Press

Lieber, Kier A. and Robert J. Lieber(2002), “The Bush National Security Strategy”, [Online web] Accessed 16 July 2008
URL:<http://usinfo.state.gov/journals/itps/1202/ijpe/pj7-4lieber.html>

Lieber, Kier A. and Daryl G. Press (2006), “The Rise of US Nuclear Primacy”, [Online web] Accessed 16 July 2008
URL:<http://www.globalpolicy.org/empire/intervention/2006/0309usprimacy.htm>

Lieber, Kier A. and Daryl G Press (2006), “The End of MAD? The Nuclear Dimension of U.S. Primacy”, *International Security*, 30(4):7-44

Mc Douglas, David S (2004), “New Triad of the Bush administration, counterproliferation and Escalation Dominance in Nuclear Strategy”, *International Journal*, 59 (3): 13-34

Mearsheimer John J. (2001), *The Tragedy of Great Power Politics*, New York: W.W.Norton

Morgenthau,Hans J. (1978), *Politics Among Nations: The Struggle for Power and Peace*, New York: Alfred A. Knopf

Muller, Harald and Annette Schaper, (2004), “US Nuclear Policy after the Cold War”, *Peace Research Institute Frankfurt Report*, 69

National Academy of Sciences (1997), “The Future of US Nuclear Weapons Policy”, National Academy Press, Washington D.C.

National Resource Defense Council (2003), “The Bush Administration’s Campaign for a Return to Nuclear Testing”, [Online web] Accessed 16 July 2007
URL:<http://www.nrdc.org/media/pressreleases>

National Resource Defense Council (2002), "Faking Nuclear Restraint: The Bush Administration's Secret Plan for Strengthening U.S. Nuclear Forces", [Online web] Accessed 16 July 2007 URL:<http://www.nrdc.org/media/pressreleases/020213a.asp>

National Resource Defense Council (2003), "Bush Plans Permanent Nuclear Advantage under Moscow Treaty", [Online web] Accessed 31 May 2008 URL:<http://www.nrdc.org/nuclear/moscow/mosc nuc.asp>

*National Security Strategy of the United States of America 2002 [Online web] Accessed 31 May 2008 URL: <http://www.whitehouse.gov/nsc/nss/2002/nss3.html>

*National Security Presidential Directives-NSPDs(2002), National Strategy to Combat Weapons of Mass Destruction, December 2002NSPD-17/hspd 4

Nelson, Dr. Robert (2006) "New and Proposed Nuclear Weapons: Complex 2030: DOE's Misguided Plan To Rebuild The US Nuclear Weapons Complex" [Online web] Accessed on 21 March 2007 URL: <http://www.ucsus a.org>

Norris, Robert S. and Hans M. Kristensen(2004), "US Nuclear Forces 2004" , *Bulletin of Atomic Scientist*, 60(3):68-70

*Nuclear Brief, July 8, 2005, "The Nuclear Posture Review", [Online web] Accessed 24 December 2007 URL:<http://www.nukestrat.com/us/reviews/npr 1994.htm>

*Nuclear Posture Review Report, 'Nuclear Posture Review [Excerpts]' submitted to Congress on 31 January 2001, Accessed 24 July 2008 URL:<http://www.globalsecurity.org/wmd/library/policy/dod/npr.htm>

Nuclear Weapons Complex Assessment Committee (2007), "United States Nuclear weapons Program: The role of Reliable Replacement Warhead", [Online web] Accessed 16 July 2007 URL:<http://www.cstp.aaas.org/consent.html>

Perkovich, George (2003), "Bush's Nuclear Revolution: A Regime Change in Nonproliferation", [Online web] Accessed 16 July 2008 URL <http://www.foreignaffairs.org/20030301facomment10334/george-perkovich/>

Project of the Nuclear Age Peace Foundation, "Nuclear Strategies, Doctrines and Concepts", [online web] Accessed 15 July 2008
URL: <http://www.nuclearfiles.org/menu/key-issues/nuclear-weapons/history/cold-war/strategy/strategy-deterrence.htm>

*Quadrennial Defence Review Report, September 30 2001, [Online web] Accessed 16 July 2008 URL: <http://www.defenselink.mil/pubs/pdfs/qdr2001.pdf>.

*Remarks by Fort Lesley J. McNair on February 11, 2004, "President Announces New Measures to Counter the Threat of WMD", National Defense University, Washington D.C.

*Rice, Condoleezza (2000), "Campaign 2000: Promoting the National Interest" [Online web] Accessed 16 July 2008 URL: <http://www.foreignaffairs.org/20000101faessay5/>

*Rumsfeld, Donald (2001), Nuclear Posture Review Report Submitted to Congress, Library of Congress, [Online web] Accessed 16 July 2007
URL: www.globalsecurity.org/wmd/library.

Sauer, Tom (2005), *Nuclear Inertia US Nuclear Policy after the Cold War*, London, I.B. Tauris

*Secretary of Defense, William J Perry, *DoD News Briefing*, Feb. 16, 1996.

*Statement by President Bush on 15th Anniversary of the Cooperative Threat Reduction Program [Online web] Accessed 14 June December 2008
URL: www.whitehouse.gov/news/releases/2007/08/20070829.html

Strategy Nuclear Warfare Strategy and War Plans, "Clinton Nuclear Policy Review a Diminished Presidency", [Online web] Accessed 14 June December 2008 URL: [presidencyhttp://www.rense.com/general78/howclint.htm](http://www.rense.com/general78/howclint.htm)

Taliaferro, Jeffrey W (1999), "Security Seeking under Anarchy: Defensive Realism Reconsidered", [online web] Accessed 1 May 2008 URL: <http://www.ciaonet.org/isa/taj01/>

Taliaferro, Jeffrey W (2000-01), "Security Seeking under Anarchy: Defensive Realism Revisited", *International Security*, 25(3)

Thakur, Ramesh (2002), "11 September 2001, Nuclear Weapons and Doctrines and World Order", [Online web] Accessed 16 July 2007

Truesdell, Amy(1997), "Clinton's Defence Policy., A Re-examination of Requirements", [Online web] Accessed 15 June 2008 URL: <http://www.global-defence.com/1997/ClintonDefence.html>

*U.S. Department of State, "Intermediate range nuclear forces treaty (INF Treaty), 1987", [Online web] Accessed 15 June 2008 URL: <http://state.gov/r/pa/ho/time/rd/104266.htm>

US Military History Companion [Online web] Accessed 14 June December 2008 URL: <http://www.answers.com/topic/start>

Viotti, Paul R and Mark V. Kauppi (1993), *International Relations Theory Realism Pluralism and Globalism*, New York: Macmillan Publishing Company

Vitas, Robert A and John Allen Williams (1996), *US National Security Policy and Strategy, 1987-1994 Documents and Policy Proposals*, Westport: Greenwood Press

Waltz, Kenneth N. (1970), *Theory of International Politics*, New York: McGraw-Hill

Waltz, Kenneth N. (1998), "The Origin of War in Neorealist Theory", *Journal of Interdisciplinary History*, 18(4):615-628

Waltz, Kenneth N. (1990), "Nuclear Myths and Political Realities", *The American Political Science Review*, 84(3):731-745

Western States Legal foundation (2001), "Fewer but never: the role of nuclear weapons in US Pledge for Global Military Dominance", [Online web] Accessed 16 July 2007 URL:<http://www.wslfweb.org/docs>

Western States Legal foundation Special Report (2002), "The Shape of things to come: The Nuclear Posture Review, Missile Defense and the Dangers of a New Arms Race", [Online web] Accessed 16 July 2007 URL:<http://www.wslfweb.org/nukes/npr.html>

*White House "Cooperative Threat Reduction Agreement with Russia Extended," *Office of the Press Secretary*, June 19, 2006[Online web] Accessed 15 June 2008 URL:<http://www.whitehouse.gov/news/releases/2006/06/20060619-7.html>

Wirtz, James J (2005), "Historical Background", in James J Wirtz and Jeffrey A. Larsen (eds.) *Nuclear Transformation, The New US Nuclear Doctrine*, New York: Grave Macmillan

*Woolf, Amy F, "US Nuclear Weapons: Changes in Policy and Force Structure", CSR Report for Congress, Code- RL31623, February 2004, [Online web] Accessed 16 July 2007 URL:<http://www.fas.org>