Chapter - I

Nuclear Weapon: Theoretical and Conceptual Analysis

Studies and theoretical constructions on nuclear weapon and its implications were there even prior to the realization of the massive striking capability of the nuclear bomb in 1945. After the Second World War, there arose several theoretical arguments on the worthiness of nuclear weapon in determining the course of future international relations. Theorists on international relations are of different opinions regarding the implications of the proliferation of nuclear weapon. Depending upon their arguments we can conclude that one set of theorists regard the spread of nuclear weapons as good for peace because of their brawny deterrent strength. They consider that nuclear weapon under certain conditions would provide peace and strategic stability. Others are sceptic about the asserted robustness of the nuclear deterrence. To them extensive level of proliferation of the nuclear weapon would raise the propensity to conflicts and threat strategic stability. Most of the theories on nuclear weapon focus on integrating the concepts like, nuclear proliferation, compellence, dissuasion defence, and denial into strategies, policies, doctrines and their operation.

After the end of the cold war, theoretical debate over the role of nuclear weapon in shaping the future world has been given an altered impulsion. The new challenges posed by the proliferation of nuclear weapon in the new international environment have made the debate hot and live. Traditionalist’s thinking on nuclear proliferation and its impacts were dominated by realist theories. They regarded nuclear weapon as significant in the security realms and according to them it is natural for states to go with nuclear weapon. Contradicting this view, the idealists put forward a different approach, explaining the demand side of nuclear proliferation. Both these theoretical views consider nuclear weapon as a decisive power in determining the course of the future world.

Nuclear weapon in Realist Perspective

The most illustrious argument in the realist camp was made by Kenneth Waltz in 1981, in his monograph, ‘The Spread of Nuclear Weapons: More May Be Better’. It provided a strong support to nuclear proliferation arguments. In therealist’s view,
change in the state’s behaviour is a response to adapt the external constraints conditioned by changes in relative power (Wohlforth; 2010: 24). Here the external dynamics are regarded as the chief motive behind nuclear proliferation. So, the external compulsions affecting the state security forces them to develop the bomb. Most of them argue that the acquisition of nuclear weapons is a rational response of states attempting to protect their interests, since security represents the ultimate challenge to a state’s survival (White; 1996). In their perspective, it is natural that the nation states would develop atom bomb due to these external security compulsions. The proliferation of nuclear weapon, according to the realist, is a way to enhance the military capability and thereby the security of the state. In the anarchic world, nuclear weapon would be indispensable for survival.

The basic assumptions of the realist theory on the nuclear weapon expressed by scholars of different realist streams could be stated as follows. The international system is anarchic, uncertainties and misperceptions force state to enhance their military capabilities. Selfhelp is the best help in this uncertain world. Nuclear weapon, the absolute weapon, would provide maximum self help to the state. It is natural that states will construct nuclear weapon as to enhance their security. Unlike the cause of proliferation, proliferation effects are expressed in opposing views. According to certain theorists, nuclear weapon would create stability and enhance peace. They assume that war is a rational action, and state as rational actor will not be ready to wage war due to the annihilation caused by nuclear weapon. To others, the possession of nuclear weapon, though it forbids states from engaging in war, it does not dismiss war, and the states continue to be in the earlier antagonistic condition.

The realists give great emphasis to self security. This is because of the notion that friends now may become foes in the future. Offensive realists regard that in conditions of anarchy, there is no guarantee that other states would not use the force against the country. Therefore states shall improve their relative power positions by military expansion. This rejects the idea of extended deterrence and rides states to constructing nuclear weapon. In a state’s outlook the nuclear weapon as most powerful weapon, would be best suited for self security (Hymans; 2006: 456). Here states shall not wait for the situation to get worsened. As the construction of nuclear weapon takes long period of time, nations will begin it even while they are in friendly
relation. This will also help them to avoid unpleasant and unexpected results. To a certain extent Waltz and Mearsheimer rejected the influence of international organizations in providing security. They regarded states as primary actors depending in selfhelp.

The realists consider the acquisition of weapons for maximising security. Similar reason is given by the realists on the nuclear ambition. Though there is some commonality in them in stating the reason for proliferation of nuclear weapon, they differ about the impact of the nuclear weapon in establishing peace and stability. “According to Waltz, a widely proliferated nuclear world will be markedly peaceful and stable and perhaps one to be welcomed. Whereas, for Mearsheimer, since possessing nuclear weapons does not assure security, we should anticipate a future in which expansionist clashes aimed at thwarting the ability of rivals to undermine security are as frequent as they have been in the past but more dangerous because of the raised stakes inherent between actors that possess nuclear weapons” (Kreiger & Ilan; 2007: 370). Similarly, the classical realist Hans J. Morgenthau advocated nuclear disarmament while the Neo-realist like Waltz explored the peace-enhancing role of nuclear proliferation (Booth; 2011: 8).

To a certain extend, offensive realism and defensive realism also include the arguments both from structural realism and neoclassical realism. Offensive realists view that greater the military capability, the greater would the security of that state. Therefore nuclear weapon, ‘the absolute weapon’ as Bernad Bodie puts, would definitely augment the military strength of the nation and states are likely to construct nuclear bomb. Offensive realist denies ‘no-first use’ policy. Defensive realist considers nuclear proliferation as result of the uncertainty and misperception in the anarchic world. They advice states to pursue moderate strategies like ‘no-first use’.

A certain group of realist scholars, analysing the apparent contradiction between a peaceful nuclear past and a fearful nuclear future, argue that the further spread of nuclear weapons will be a stabilizing factor in international relations. Analysing the possibilities of war in a nuclearised world, Kenneth Waltz gives a rosy picture, explaining less chance for war. War is a rational act and the nation states will engage in calculating the cost and benefits of war (Waltz; 1990: 732). If war worsen the security,
it is irrational for a state to go with war. Under a nuclearised context, with sufficient second strike capabilities, it would be rational to refrain from waging war.

Structural realism explains international system relating to dominant structure, which is defined by the interplay of component units characterized by particular power distribution (Booth; 2011: 5). Structural Realists observe that the anarchic structure of the world system leads to nuclear proliferation. Nuclear weapons will continue to be valued as a strategic deterrent. Steve Weber argues that the step to ‘joint custodianship’ of the nuclear weapon is a structural change and an adjustment yet to come. He further says that the wide spread deployment of nuclear weapon leading to nuclear deterrence is a system wide condition that constitutes a particular kind of system change (Weber; 1990). The structural realist theories focus on how nuclear weapon has changed and reshaped the structures of international system.

To the realists the implication of the nuclear weapon in providing strategic stability and peace depends upon certain conditions. According to them, simply possessing nuclear weapon is not enough. States should attain a secure second-strike capability, that is, an ability to retaliate massively, no matter how devastating the first blow they are secure, because the outcomes of a potential war are clear and absolutely devastating. This, according to waltz, would bring stability in areas of conflict. They argue that the spread of nuclear weapon would reduce bilateral conflicts (Mesquita & Riker; 1982: 283). Acquisition of a nuclear arsenal by Germany and Ukraine will deter Russian military intervention (Evera; 1990: 54 and Posen; 1993: 45). The presence of nuclear weapons in South Asia will prevent future wars between India and Pakistan (Lavoy; 2006). Arab-Israeli conflicts could be stabilized if nuclear proliferation takes place in the Middle East (Feldman; 1982: 238). The rationale behind these pro-proliferation views crops up from the expected assumptions of nuclear deterrence. The argument that irrational leaders and decision makers would be the cause for nuclear war is rejected by the neo-realist1. Highlighting the illustrations of Saddam Hussein of Iraq and King Jong-II and Kim II-Sung of North Korea, Waltz says that these irrational leaders stood for regime’s survival (Hanft; 2012). Therefore the spread of nuclear weapon is regarded as better for the world.
Realism, which stands for maximizing state security through military capabilities, could not provide clear explanation about why states face insecurity even after acquiring the most powerful nuclear weapons. Critics could point out that nuclear powers have fought several wars since their ascension to the nuclear club, none of which has included the use of nuclear weapons. As a statement of fact, this is correct, but as evidence of an enduring trait, it leaves something to be desired, since all such wars were nuclear versus. While nuclear weapons promote strategic stability, they simultaneously allow for more risk-taking in lower intensity disputes.

Neo Realists have expressed the presence strategic stability in nuclear South Asia. Despite the regular low level conflicts between India and Pakistan, the advent of nuclear weapon has prevented them from waging major wars, and strategic stability is pervading in the region\(^2\). In the realist perception, the Kargil war and the terrorist insurgents in India, like the parliament attack, the Mumbai attacks in India which were linked to extremist elements in Pakistan, created extreme tensions between the two powers, but the two nations refrained from the use of military force. It was because of the presence of nuclear weapon that these issues were settled soon and did not transform into a real war.

**Nuclear Deterrence: Theoretical and Conceptual Analysis**

There exists a notion that nuclear weapon has made revolutionary changes in the military strategies. Today nuclear deterrence play pivotal role in the military strategies of the nuclear weapon states. The advent of nuclear weapon and the cold war experience gave paradigm significance to nuclear deterrence. Deterrence simply is the preparedness to respond to the aggressor. It is the midway station on the way to war (Harkabi; 2008:2). It is a threat intended to prevent an adversary from taking an action not yet started. It is the capacity to hurt another state and influence another state's behaviour. Deterrence can be defined as the use of threats by one state to convince another state to refrain from initiating some course of action against the first state (Adamsky; 2013: 8 & Huth: 1999:26). In military discernments, deterrence is threat to prevent state leaders from issuing military deployment and actions that lead to a crisis or militarized confrontation, possibly a war. Generally ‘deterrence theory looks at the conditions under which a state can deter another opponent from taking an
action that is contrary to that of the state's interests’. Usually, ‘deterrence involves a threat to use force against such actions’ (Powell; 1990: viii).

Deterrence which emerged out as part of the military strategies and presence of weapon was not merely the interest of the army circle. But policy makers and political heads of the states were driven by the strategies of deterrence. The advent of nuclear weapon gave a very significant impetus to the military men and policy makers. Nuclear weapon turned the strategic deterrence to a policy level of deterrence. Behind the concept of nuclear deterrence lies that in nuclear wars, unlike conventional wars, it is less likely to have victory of any of the sides. Both sides will be catastrophically damaged. Therefore, what will result in nuclear war is defeat at various degrees and levels (Harkabi; 2008:4). It is the extraordinary destructive power of the nuclear arsenal that makes nuclear deterrence functional (Cossa & Glosserman; 2011: 141). The credibility of nuclear deterrence depends on the ability to make the other side to the threat of retaliation.

Nuclear deterrence prevents the aggressor by threatening with unacceptable damages of the massive striking capability of the nuclear weapon. Punitive threat is the basis of the strategy of deterrence. Deterrence seeks to prevent undesired action by warning the actor that its costs would exceed its gains. “Nuclear deterrence is the condition that exists when the anticipated magnitude of a state’s nuclear retaliation outweights any benefit that might accrue from attacking it” (Body & Scouras; 2013: 339). The basic character of deterrence is dissuasion by means of threat. In the nuclear era, deterrence by punishment has come to be associated chiefly with the punishment of large-scale nuclear war (Huth & Russett; 1988). Deterrence is a condition where at least a nation is planning to make an attack while the other is making a threat of retaliation, so as to prevent it. Nuclear deterrence, in fact, is policy and action. It has the ability, not only to prevent a major war, but also to limit the area of conflict (Raman; 2006: 11). Now, to many scholars, nuclear deterrence is something that keeps us safe and secure in the nuclearised world.

The theory of nuclear deterrence owes its conceptual debt to Thomas Schelling who put forward the view that war is essentially a bargaining process, where the opponents influence each other's expectations by threats, promises, and
actions (Schelling; 1960 & Powell; 1990: viii). The first wave of nuclear deterrence theory was developed after the Second World War in the context of the nuclear weapon. The main exponents of this nuclear deterrence were Bernard Brodie, Wolfans, Schelling and Viner. Since it was in the uni-nuclear world, it lacked systematization, and could not make much impact on policy making. The second wave of nuclear deterrence emerged after in the late 1950’s with much popularity among the policy makers of nations. The third wave of deterrence in the cold war period had to address the issues such as risk taking rewards, probabilities misperceptions etc (Jervis; 1979). The fourth wave of deterrence came up after the end of the cold war especially illustrating the nuclear deterrence existing in South Asia. This fourth wave deterrence focuses on the asymmetrical strategical interactions in the growing complex international relations. It even goes further a step to applied deterrence in the realm of cyber warfare (Adamsky; 2013: 4).

Two types of deterrence are identified by scholars. They are general deterrence and extended deterrence (Alagappa; 2009: 83, Jervis; 1987 and Kavka; 1987:8). The protection of the homeland as well as the interest of the homeland using threats of nuclear strike is the basic or central deterrence. It is also called direct deterrence (Stein; 1990: 337). Extended deterrence refers to the extension of the function of deterrence to bring it under the nuclear umbrella. Extended deterrence threatens the nuclear retaliation to protect the allies, armed forces deployed overseas, or other vital material interests abroad (Kavka; 1987: 8). It requires nuclear arsenal capable of wide range counter force attacks to deter the conventional or nuclear attacks on the allies. Extended deterrence will force nations to enhance their nuclear weapons. Minimum nuclear arsenal will not fit for global engagement that includes the extended deterrence (Grey; 1999: 116). In case of extended deterrence, the willingness of the state which deter to involve in conflict depends its interest in the third party (protege) as well as threatened by another power (challenger) (Danilovic; 2001: 191). Extended deterrence, however, is less reliable as it has to depend on the policies of the host nation. For example, the US commitment to seek peace and security of a world without nuclear weapon has challenged the security of non-nuclear weapon states like Japan (Cossa & Glosserman; 2011). Similarly it was the failure of
faith in the US and Chinese assistance in dealing with India, Pakistan was forced to strengthen their military.

‘Deterrence theory shows only a correlation between deterrence strategy and avoidance of conflicts, and they find it difficult to provide causal connection between the two’ (Lupovici; 2010: 709). So the function of deterrence is not to deter the cause of the conflict but to avoid the conflict emerging due to different causes. Similarly, the absence of deterrence is not the cause of a conflict, though a conflict may mount up in the absence of deterrence. The most important assumption of the deterrence was it could force rationality on decision making (Kaplan 1991: 72 and Morgen 2003: 13). Deterrence using the power of nuclear weapon contains two options based on the nuclear policy. It is clear when a nation adopts the first use policy, this is not for merely deterring nuclear attack but also a conventional one. However, nations adopting ‘no-first use’ policy targets to deter only the nuclear attacks. Usually conventionally powerful nations adopt the no-first use policy. Nevertheless, the fear of low level conflicts and war escalating into nuclear one, prevents even conventional attacks. Indirectly no-first use policy too deters conventional attacks though not targeted.

Many had thought that nuclear deterrence would lose its significance with the end of the cold war. But the American strategic concepts still place nuclear deterrence in the forefront. The Clinton administration declared that the nuclear retaliatory actions are still kept in their foreign policy pursuits (David; 2006: 116). Under this context the the statement of the American President Barack Obama is to be considered. The idea of ‘Global Zero’ that demands for a ‘world without nuclear weapon’ undermines the relevance of nuclear deterrence. The slow and steady spread of nuclear weapon points out that it is this deterrent capability of the nuclear weapon that attracts states to construct the nuclear bomb. After the cold war period, a very clear application of nuclear deterrence was found in the Kargil crisis. Many believed that it was the effect of nuclear deterrence that this crisis did not escalate into a major war. Alike, many people consider that nuclear deterrence did help North Korea from military actions by the USA. In this nuclearised world, Huth finds three benefits of nuclear deterrence. They are protection against attacks with nuclear weapons, protection against attacks with conventional forces and indefinable additional diplomatic clout (Huth; 1999: 27).
The psychological aspect of deterrence has been expressed by many scholars. Nuclear deterrence has been an established technical reality and should be recognised as a psychological construct that depends on the threat perceptions (Arnold and Brown; 2010). The psychological framework of deterrence shapes the behavioural pattern of the state deters and the deterred (Jervis; 1984: 38). So it points to the capability of the state to create some elements of fear in the mindset of the opponent that an aggressive action will definitely invoke retaliation not in a similar manner but more powerfully. Though fear is irrational and emotional, for deterrence to be rationally effective threat must arise fear in the mindset of the enemy state. It is not the actual use of the nuclear weapon, but the threat to use them is relevant in the nuclear deterrence. Deterrence is not the secondary factor based on the use of arms but it is the primary factor that determines the use of arms (Harkabi; 2008: 3). However nuclear deterrence to be rational, the threat must convince the enemy nation.

Nuclear deterrence is worked out through certain strategies: massive retaliation, assured destruction and minimum credible deterrence are the important strategies associated with nuclear deterrence (Alagappa; 2009: 89). Massive retaliation was adopted by the US in the early ages of nuclear world as part of the containment policy. It was to contain the Soviet or communist aggression anywhere in the world. It could be regarded as part of the first use policy. Strategic parity was not acceptable to the US in the early cold war period. So it went beyond the assured deterrence strategy to massive retaliation (Narain; 1984: 21). Assured retaliation strategy is to deter a deliberate nuclear attack. It is a kind of threat that assures unacceptable damage to the aggressor. Assured retaliation requires a secure second strike capability. MAD (Mutually Assure Destruction) emerged as part of the assured destruction strategy.

Belief in the annihilating power of the nuclear bomb is the basis of this deterrent strategy. According to this strategy only a small quantity of nuclear weapons are needed to deter the enemy. The use of nuclear weapon, though in a few number, either by retaliating strike or by escalation of conventional war, would be catastrophic. Therefore a small number of nuclear arsenals remain at the heart of this strategy of deterrence. Though it seems to be effective and beneficial economically, it raises an important question about the minimum quantity of weapon required for the effective deterrence, especially considering the second and further strikes. Minimum
deterrence is the threat of retaliation against nuclear or other attacks on the home land (Kavka; 1987: 7). The doctrine that emerged in the late 1980’s was essentially one of “minimum deterrence.” This was the idea that a country with a small nuclear force could deter a large one from a wide range of threatening actions (Sokolski; 2004: 163). Crisis stability would be high under minimum deterrence as both sides won’t have incentive to strike first. In fact, minimum credible deterrence reduces risk. Under conditions of uncertainty minimum deterrence seems to be rational and it is better than unilateral nuclear disarmament. The same idea is expressed by Harold Fieveson in ‘finite deterrence’ which demands each state to reduce the nuclear arsenal into the minimum level capable of inflicting destruction to the opponent, only in retaliation, not in counter force mission. The amount of the nuclear warheads possessed by nuclear weapon states, particularly USA and Russia, are huge and beyond the need for assured destruction. So, finite deterrence demands the reduction of these weapons to sheer retaliatory levels.

Nuclear deterrence has been criticized as oversimplified, overblown, apolitical, immoral, illogical, too technological, too rational and irrational. Ken Booth states that it has become the opium of defence people now (Jervis: 1987:255). There are also certain views that the threat factor of the nuclear deterrence would make states extremely reluctant to act (Booth; 2001:83). Each strategical concept of nuclear deterrence has been prone to criticism. Some analysts regard nuclear Massive retaliation strategy as irrational and it causes tension and economic burden. To others, minimum deterrence is not credible and not suitable for extended deterrence. The level of force required for deterrence is the amount that can effectively affect the intention of the aggressor. To put it clear, the nuclear force should be adequate enough to influence the capability of the opponent. Here, successful deterrence the accurate estimation of the capabilities of the enemy.

The third wave deterrent theorists like Maxwell, in the 1960’s and 1970’s, raised serious doubts about the utility of nuclear deterrence (Danilovic; 2001:19). Certain group of scholars and analysts regard that nuclear deterrence could fail in the future due to political, cultural, technological, or bureaucratic reasons (Weinstein; 2011:30). Also if a deterrence crisis occurs, the presence of nuclear weapons may not balance the situation. Here the existing and local conventional forces are really
important. Nuclear weapon, though slowly, is spreading steadily. This shows that the credibility of extended deterrence under the nuclear umbrella slowly loosing. Further misperception of the deterrence is a major factor of in arms raise and crisis in international relations. Certain groups of scholars also raise their sceptic outlook about nuclear deterrence against terrorist and rogue states\(^1\).

Nuclear deterrence theory explains the basis for the role of nuclear weapon play in the strategic relations between and among the nuclear states (Basrur; 2008: 108). Deterrence seemed to have worked for several years. Though it is not an ideal solution for attaining international security and stability, it is still considered as the most viable and effective strategy in the nuclearised world (Kolkovicz; 1987; 9). Analysing the role of nuclear deterrence in the American security strategy, Dallas Boyd and James Scouras observes that eliminating nuclear weapon completely is not required. What is contentious and understood in the broader context of ‘Global Zero’\(^3\) is a modest nuclear reduction (Boyd & Scouras; 2013: 354). In providing security, deterrence can prevent unacceptable military deployments (such as the deployment of Soviet missiles in Cuba) or non-military actions threatening the national interest of the state which deters (Stein; 1990). Robert Jervis contents that now nuclear deterrence has turned to be an ideology. It covers a number of interrelated beliefs about the deployment and employment of nuclear weapons (Jervis; 1987: 255). It is also to be noted that the level of capability shall not be too limited to lose the credibility of deterrence or too large to escalate into war.

In the South Asian scene it is a kind of general deterrence\(^2\) that determines the strategic stability. However, the Kargil crisis paved the way for an immediate deterrence. A group of international scholars optimistically state that nuclear deterrence is working quite well in the region. They consider that nuclear deterrence nuclear has played significant role in producing strategic stability in the last 16 years. Conversely, the other groups of scholars have given a pessimistic view on nuclear deterrence in the region. According to them nuclear weapon has brought about a very perilous scene in South Asia.

The advent of the nuclear weapon brought about entirely different scene in international security. Now it is plausible to inflict maximum casualties at the
beginning of a war. The key feature that could be found with nuclear deterrence is that there is no clear evidence to prove the assured destruction, except the use of the weapon in the Second World War, and therefore to a greater extend it is psychological. But unrestrained nuclear exchange between two nuclear weapon states would destroy the civilians and consequently, there are a lot of inhibitions about the use of nuclear weapon due to mutually assured destruction.

**Doctrine of Mutually Assured Destruction**

The doctrine of Mutually Assured Destruction emerged as condition of a military strategy of deterrence in the bi-nuclear world. Nuclear weapon brought about a condition of mutually assured destruction, assuming that both sides have sufficient nuclear weapon capability to destroy each other. Therefore MAD leaves a condition where neither side has any incentive to set off a conflict. Neither side will be ready to make the first strike, due to the threat of the massive second strike and unacceptable damage. Similarly, the condition also forces the states not to disarm unilaterally. The notion is that the attacker will be retaliated with equal or greater force. The promising element of this doctrine is that it will force the hostile parties to remain in a balanced state. Also this assured destruction is contained in deterrent strategies of massive retaliation as well as assured retaliation.

The incidents of assured destruction in the Second World War\(^3\) laid the basis for Mutually Assured Destruction concepts. The lessons from history suggest that it is experience of city busting that definitely nourished the roots of MAD (Sokolski; 2004: 45). During the Second World War, aerial warfare against the cities and targeting the civilian population and important centres provided the idea of Assured Destruction. It was begun by the German air strike on the cities. Germany followed the strategy of raising threat among the US and its allies through this Assured Destruction. Assured Destruction was one sided. It did not expect an equal or more powerful retaliation. However, nuclear weapon changed the scene. It transformed the circumstances conducive for an equal or powerful retaliation. This brought about the concept of Mutually Assured Destruction. Scholars regard that despite the end of cold war, the doctrine of Mutually Assured Destruction is still relevant in the nuclear world (NRDC; 2013). They say that deterrent framework of nuclear Mutual Assured
Destruction (MAD) is still in effect for the United States and Russia. The underlying premise of MAD doctrine that small nuclear states can deter aggression by large nuclear states is still popular and made it highly significant even today (Sokolski; 2004: vi).

The application of the doctrine of MAD was found first in the cold war period. During the cold war period the fear of mutually assured destruction prevented the United States and Soviet Union from engaging in actual war. Its implication was also involved in the strategy of extended deterrence. However, in the context of Mutually Assured Destruction (MAD), the inherent value of a protégé for the deterrer's national interests becomes a secondary question, as this value could not possibly compensate for the costs the deterrer would have to sustain if the threat was carried out (Danilovic; 2001: 18). According to some analysts, though cold war ended the situation of MAD still continues. To them strategic stability prevailing in some conflicted areas is the result of MAD. For an illustration, the strategic stability prevailing in South Asia is another application of MAD.

It is also true that MAD has driven the superpowers to arms race as well as to reach on arms reducing treaties. To make the nuclear annihilation effective, they went on with large scale production of weapons and its delivery systems. Especially as part of the extended deterrence, they regarded it as quite essential. Also, it was not easy to make exact assessment of the abilities and disabilities of each side by each side. Consequently, there occurred the vertical proliferation of nuclear weapon. Conversely, this doctrine of MAD had raised threats and fears which forced them to reach on agreements to reduce the arms build up. Treaties and agreements such as SALT, START and ABM Treaty were signed by the big powers.

The operation of MAD requires certain necessary conditions. Firstly both sides must have nuclear weapons. Secondly, they should possess sufficient weapon capacity to make second strike with equal or more force. Finally, the state must be a rational decision maker, able to sense the threat raised by the other side. In fact, the consensus on the strategic deterrence for avoiding nuclear war condition of nuclear Mutually Assured Destruction emphasises on the rational decision making by the policy makers. The idea boosted up as part of the Mutually Assured Destruction was
if one side attacks the other it will inevitably be attacked itself. The scenario of MAD arising from nuclear weapon does not require a nuclear parity. This is because the strength of nuclear weapon does not lie on the numerical strength. It requires only a few atom bombs to make a total annihilation in an effective retaliation. This even brought up the concept of minimum deterrence, and especially followed by the nascent nuclear states. At the same time, there are also perceptions that mutually assured destruction threat will not effectively work out with non-state actors and rogue states.

The critics of the MAD doctrine argue that it is no longer relevant and immoral because it involves killing people for the sake of strategic stability (Kolkovicz; 1987: 3). This is because civilian people and cities are targeted under MAD. Again a group of analysts view the survival of MAD as mythology (Sokolski; 2004: 46) Doctrine of Mad has supported arms race among nations. So, to certain scholars, this doctrine is something destructive for the entire world. Mutually Assured Destruction presumes that both sides are threatened with annihilation using the nuclear bomb even affecting the very survival. Nuclear risk could be reduced if the scenario of mutually assured destruction is changed to a stable form of deterrence. This could be done with reducing the nuclear stockpiles. What is required is not assured destruction but assured security.

**Nuclear Brinkmanship**

Brinkmanship is policy or a practice by which each party raises the dangerous situation to the brink, brink of a war. It is escalating the dangerous situation at the brink of disaster. This is to make the opposite side to pull down. And this could be attained through diplomatic means by creating the impression that one is willing to use extreme methods against the other side rather than concede. According to former Secretary of State of United States John Foster Dulles⁴, brinkmanship is "the ability to get to the verge without getting into the war". It is effectively escalating the threat to achieve one’s aims. The concept of Brinkmanship could be traced in the Hungarian theory of pushing the military to the brink of a war. It was to force the other side to yield to the demands. It is a kind of coercive diplomacy. Under nuclear brinkmanship, treating the risk of nuclear war as a shield, a party may pursue political
objectives. This may include black mailing or compelling the others side to come on to its demand (Alagappa; 2009: 84).

Nuclear brinkmanship was conceptualized under the cold war context where USA and USSR raised the situation to the brink of war. By raising the threat of a nuclear war and massive retaliation, the nuclear brinkmanship played a significant role in the cold war strategies. Mutually Assured Destruction was the condition that promoted these nuclear brinkmanship policies. The Cuban Missile Crisis presented a typical instance of the nuclear brinkmanship. The opposing leaders, namely John F. Kennedy and Nikita Krushchev, continually issued warning, with increasing force, about impending nuclear exchanges, without essentially authenticating their statements.

In the post cold war period, the instances of nuclear brinkmanship are found in the Indo-Pak conflicts and US North Korean confrontations. Amidst Attempts made by USA and Its allies to force North Korea to dismantle nuclear weapon, it still continues to its weapon programme to as part of its nuclear brinkmanship policy. The third nuclear test by North Korea was high stake gamble in this nuclear brinkmanship game (The Guardian; 2013). Expert insights and analyses conclude that neither North Korea nor USA wants to fight a war. What they need is to dictate the terms of peace. North Korea wants the US to sign a non-aggression pact. On the others side, USA wants North Korea to completely dismantle its nuclear weapon programme. The actions to this cause by the USA and its allies forces North Korea to raise the nuclear threat. The Kargil war is considered to be nuclear brinkmanship raised by Pakistan (Johnson: 2002). The nuclear threat was raised by Pakistan several time during the Kargil war and it prove successful for Pakistan.

Brinkmanship is political or a diplomatic tool. To make the brinkmanship effective, threats are continuously escalated. Moreover, the threat must be credible. This is what the USA and USSR in cold war period, North Korea and Pakistan at present did with the nuclear weapon threat. Nuclear brinkmanship works easily than other forms of brinkmanship. This is because of escalation of threats of nuclear war is mutually suicidal. However, experts also point out that the danger of nuclear brinkmanship lays where it escalates into a war.
Strategic Stability and Nuclear Weapon

The core concept of strategic stability evolved during the cold war period, as part of the hostile relation, existed in the bi-nuclear age. “Perhaps more than any other issue, the threat of surprise attack was the catalyst to the line of thinking that ultimately led to the concept of strategic stability” (Colby; 2013:4). Strategic stability is a characteristic of nuclear deterrence based on Mutually Assured Destruction (Steinbruner: 1978:411). In the cold war period, with both nations obtaining nuclear weapon, strategic stability became the central component of global nuclear debate. Strategic stability is an expression used by scholars and practitioners to describe a set of interrelated concepts, theories policies and treaties designed during the cold war for the purpose of stabilizing the protracted nuclear rivalry during the cold war period (Harvey: 2003: 321).

Strategic stability is a condition that there is no strategic superiority or inferiority on either side. It is in fact, a state of mutual deterrence, deterring uniformly war and conflicts. In mutual deterrence there is a concern for security of the partner which becomes necessary concern for one's own security. This can bring forth strategic stability. Opposing complete nuclear disarmament, a group of analysts view mutual nuclear deterrence as an ideal military-strategic situation for strategic stability to operate. Conversely, the other group argues that total absence of nuclear weapons is the safest state for preventing a possible nuclear conflict. (Gelovani, el.; 1990). Two important components are to be considered- Strategic vulnerability and Strategic capability. The vulnerability depends on the ability of authoritative command channels to exercise precise, centralized control. The principles of stability are most naturally derived from an assumed precariousness of the command channels (Steinbruner: 1978: 422). Strategic capability relates to the military strength to make the threat real.

‘The importance of strategic stability lays on the recognition that changes in nuclear policies and force postures must be done carefully. This is because actions too far, fast, or without appropriate consideration could generate instabilities (Colby; 2013: 2). The rationale of strategic stability during the cold war period was rational leaders would refrain from hostilities that would threaten the survival of their nation
The idea of maintaining strategic stability through minimizing nuclear arms and nuclear war is very hot in the global nuclear debate. An emerging perception on strategic stability discards the significance of nuclear weapon. Using the conventional superiority, without breaking the nuclear taboo, strategic stability could be maintained. This even avoids the nuclear uncertainty (Gallagher; 2011: 433). The process of strengthening peace and security, preventing war and achieving disarmament is considered as the most significant function of the concept of strategic stability (Gelovani, el.; 1990: 242). Strategic stability can both minimize the chances of major war, including nuclear war, even under conflicted conditions and also is able to carry out deterrence objectives. Though, the concept of strategic stability is widely used without common understanding it relevance is found in the current nuclear strategy debates.

There are different concepts of stability such as arms race stability, crisis stability and first strike stability. Arms race stability is commonly understood as the condition wherein neither party to an arms competition will press military developments or deployments in quest of major advantage, because such a move will inevitably cause catastrophe. Crisis stability is a condition of strategic relation during periods of acute crisis where instruments of war like mechanical, electronic, organizational factors should not be the immediate cause of war (Gray; 1980: 135).

Discussion on strategic stability necessitates an analysis on various postures and doctrines. To put it precisely, a condition would become stable, if both sides find that launching first strike as to avoid the threat or disarm the opponent would be irrational. Therefore, both parties must have sufficient capability to strike back as Thomas Schelling observes, “balance is stable only when neither side, in striking first can destroy the other’s ability to strike back (Schelling; 1960: 232). The notion of nuclear first strike stability depends on the assessment that vulnerability of high intensity in retaliation is certain. Under the concept of strategic stability, use nuclear weapon is not to get out of the mutually vulnerable condition, instead, it would be to an attempt to dissuade the opponent form pursuing such actions. In fact, it is a warning to the opponent not to transgress one’s vital interests.
‘Stability in arms race and stability in crisis is maximized when each side is unambiguously vulnerable at home, and also confident that a large number of its strategic offensive weapons are invulnerable prior to launch and during mission execution’ (Gray; 1980: 136). Arms race stability could be obtained where one side maintains a permanent, variably substantial lead and is in a political, financial, and industrial position to deter most arms race challenges. The idea of arms race stability holds that the basic engine of competition is the first-strike fear encouraged by defense programs designed to threaten at least part of the opponent's ability to wreak massive societal damage in a second strike. The concept of crisis stability refers to a strategic condition, wherein the very character, readiness, and mobilization procedures of armed forces in confrontation should not themselves comprise the proximate cause of war (Gray; 1980: 146). Crisis stability depends on decision making in a crisis condition. It focuses on mitigating any pressures, including psychological ones, which would escalate a crisis out of control (Gerson; 2013: 49).

Strategic stability under nuclearised context includes the notion that it must be capable of averting not only nuclear attacks but also conventional ones. This is what could be considered as genuine stability. “if the concept of strategic stability is actually to contribute to a genuine stability between potential adversaries, it must incorporate rather than implicitly exclude the ways in which nuclear weapons deter not only massive nuclear attack, but also other forms of aggression against a nation’s core interests” (Gerson; 2013: 53). So, nuclear strategic stability, principally, attempts to reduce or eliminate incentives to nuclear attacks than all other forms of aggressions. It is only then effective deterrence and true stability could be launched. It is a situation, where no nation has the incentive to use the nuclear weapon against the other. However, the nuclear capability of each nation must ensure that any kind of aggression affecting the vital interest of the nation will be severely retaliated.

Strategic stability is a relative condition. To a greater extent, it depends on the rational behaviour of the state and the conditions created out of the rational actions of the states. It is also dynamic as it ranges from extremely stable to extremely unstable condition. The stability exists even amidst peaceful as well as confronting conditions. In the nuclear age, mutual annihilation arising from the massive striking capability of
the absolute weapon, indeed, regarded as the significant factor for stabilizing international relations.

Security Dilemma

Security dilemma in fact is born with the nations. Nations in the ancient period as well as in post modern times undergo security dilemma. Thucydides remark about the Peloponnesian wars shows how security dilemma is involved in the development of the war. He said that the growth of Athenian power terrified the Lacedaemonians and forced them to fight (Brunt; 1963: 13). Some elements of security dilemma would be traced in almost every war and conflicts. Security dilemma played significant role in colonial wars of 19th century in Europe. The two super powers also were entrapped in fear and uncertainties during cold war period. And this dilemma was expected to pave the way for real war during the period. Fortunately it didn’t but put them continuously in conflicting groups.

Security dilemma has been one of the most important theoretical ideas in the international relations for many decades. It attempts to answer many significant questions related to major themes of international studies such as war and peace; arms race and stability. It has been the theoretical basis for many ideologies. According to defensive realist, security dilemma causes plausible cooperation among nations, and to offensive realist, war becomes inevitable due to the presence of security dilemma (Tang; 2008). Both realist and neo-realist camp considers the institutional mechanisms like international, national and democratic institutions operate to alleviate security dilemma (Weinbrger; 2003 & Doyle: 1983). The constructivist perception regards that the removal of security dilemma eventually will bring anarchy again (Wendt; 1992). Such a way the concept of security dilemma became one of the key attractions of different theoretical perceptions.

According to Tang, security dilemma is a condition of anarchy where two states not intending to threaten each other’s security, as not sure of other’s intentions tends to fear and seeks to accumulate power towards security. This defensive step threatens the security of the other side and forces to adopt counter measures, putting both in vicious cycle (Tang; 2009). Herz defines security dilemma as human uncertainty and anxiety about the neighbour’s intention and places them in basic
security dilemma. To Barry Posen, Security Dilemma is a situation where “what one does to enhance one’s own security causes reactions that, in the end, can make one less secure” (Posen; 1993: 104). Dilemma of interpretation and the dilemma of response are the two important components of security dilemma (Wheeler & Booth; 1992: 31). Snyder contains that security dilemma is generally used to denote the self-defeating aspect of the quest for security in an anarchic system (Snyder; 1984: 461). Security dilemma implies that threat that initially may never have existed may subsequently bring about exactly what was feared (Herz; 1961: 241).

The major aspects of security dilemma can be summarized as follows. a) The anarchic nature of international politics is the ultimate source of the security dilemma; b) states cannot be certain about each other’s intentions; c) security dilemma is unintentional in origin and a genuine security dilemma can exist only between two defensive realist states; d) fear leads states to resort to the accumulation of power or capabilities (military); e) The dynamics of the security dilemma are self-reinforcing, depends on self-help and often lead to arms races; f) the vicious cycle derived from the security dilemma can lead to unnecessary or avoidable wars; and g) the severity of the security dilemma can be regulated by both material factors and psychological factors (Tang; 2009: 595 & Herz;1961: 241).

Nations are not ready to compromise their security for which any kind of uncertainty on their security forces them to respond. This response in most of the cases is to strengthen their military force. Security dilemma and arms race have a very close link in this regard. Military builds up are often influenced by security dilemma. Moreover security dilemma and arms build up are complementary. Security dilemma causes arms race and arms race causes security dilemma. Security fear forces a nation to strengthen its arms and this arms-build up cause security dilemma for the other state and forces them to respond. If one state increases its military strength another state might feel that they are taking the safe option by doing the same, which could inadvertently alarm the first state and hence set an arms race in motion (Gilgrist; 2008). Peace or war is the only point that breaks this chain. Peace through co-operation and diplomatic pursuits would stop or reduce this arms race as well as the uncertainties. Security dilemma forces states to co-operations. Nuclear proliferation in a chain reaction placed nations in alarm. The fear of such a chain reaction that
compelled most states to back the Nuclear Non-Proliferation Treaty (NPT) (Muller, Fischer and Kotter; 1994). It is the security dilemma that brought super power states in cooperation to reach on arms reduction treaties like START. But, at the same time, security dilemma has brought states in cooperation to form military blocks such as the WARSAW and NATO.

The most illustrative event of security dilemma could be traced in the arms race between the super powers during the cold war period. Feeling threatened by weapons on the opposing side, the U.S. and the U.S.S.R. built up their military strength to try and match each other. This led to vicious cycle in which each state created more and more weapons because although each side had enough nuclear power to destroy the other. To stop this arms race would mean to lose at their original objective (Gaddis; 2006: 234). Though cold war ended security dilemma still pays a vital role in the arms build up and confrontations in different parts of the world. The Israel-Palestine conflict is also explained under the context of security dilemma. The nuclear weapon development by Israel is considered as response to the threat raised by the Muslim countries in the Middle East. Conversely, the Muslim countries feel the threat of the absolute weapon and try to match Israel in an armament race (Hersh; 1991: 87). This leads to unstable conditions in the region. Security dilemma is also regarded as the cause for the South Asian nuclear competition. Similarly, many scholars contain the North Korean nuclear ambition in the background of security dilemma raised by the American military movements.

A military enhancement by a nation which is certainly a defensive action would be misinterpreted as offensive one and a response in the equivalent or more powerful manner is followed. This situation becomes common scene among mutually antagonistic and competing nations. It is because usually the intentions of a potential adversary are misinterpreted and the dilemma is set in motion. The arms race by the two super powers during the cold war period is the best illustration of it. Security dilemma suggests that it is difficult to strengthen a nation’s military without affecting the security of the other. So, adversarial relations double security dilemma. It is not easy to predict the effect of the action on each other (Lebow; 1983).
Security dilemma is highly dependable on the circumstances. Barry Posen defines the Security Dilemma as a situation where “what one does to enhance one’s own security causes reactions that, in the end, can make one less secure” (Posen: 1993: 104). States are always bounded by circle of arms race, dilemma and co-operation. Dilemma is at the maximum under antagonistic relations and conflicted conditions. Also, dilemma is at the minimum under co-operation and peaceful conditions.

Security dilemma varies across space and time. This is because security dilemma depends on the two variables - the offence-defence balance and offence-defence differentiation (Glaser; 1997: 171). Different international systems experience different level and kind of security dilemma. The South Asian security dilemma will be quite different from the East Asian, Central Asian or other systems. Similarly, there exist periodical differences. The dilemma faced by nations of the South Asian sub-region was different from that of a period before it was nuclearised. The offence–defence balance as well as the defence – offence differentiation were not as same as it was prior to the nuclearised period.

Security dilemma is not always the result of security maximization. It would be from an aggressive deed by an adversary’s greed. It would be also caused due to an attempt by a state to raise its prestige. Greedy nations are more likely to develop and amass weapons more than required for their security. Also, they would build up weapons of offensive capability. To certain extent the intention of an action by aggressive state may be rightly perceived, but the problem pertaining to responding to it still persists. The intention of an action of a state may be seeking security, power, or prestige, which is not easy to predict. It is also difficult to distinguish from the offensive and defensive capabilities of a state. So, this unpredictable intention raises fear, fear of being defeated, conquered or exploited. The fear of any type derives security dilemma (Jervis; 1978: 172).

It is important to analyse how dilemmas arise from actions and the dilemmas cause security crises. Interpretation of the intention and capabilities of the other nation (Wheeler and Booth; 2008: 133) forms the first dilemma. Any kind of misinterpretation of the action, such as judging defensive move as offensive,
aggressive as non-aggressive and vice-versa would invite severe security ramifications. Second dilemma matters about responding to the interpreted action of the other nation. What kind of response? Offensive or defensive? - puts the state in dilemma again.

Even in the anarchical world it is the balance of power persisting that allows stability (Cerny; 2000: 624). Any change in the balance of power operation affects the stability. The balance of power is generally changed by military developments. Any attempt to alter the balance of power status would result in security dilemma. Nuclear weapons provide states with additional bargaining power, threaten the interest of the other nations as well as challenge the statuesque establishments. The dilemma, that nuclear weapon places ahead, is not potentially equal to that of the conventional weapons. The problem of trust and mistrust is the central issue raising security dilemma (Kydd; 2005) in the balance of power. In a world of uncertainties, it becomes very difficult to trust other nations. It is not certain when a friendly nation would turn to be hostile. This uncertainty raises mutual suspicion and fear among nations. An environment with structural uncertainty of offence-defence balance will adversely affect bilateral cooperation (Acharya & Ramsay; 2012: 5).

The Strategy of nuclear deterrence and the massive striking capability of nuclear weapon have attracted nations to go nuclear. In most of the cases, states develop nuclear weapon as a response to their security threats. It is certain that nuclear weapon proliferation causes grave security concern to nation states. A cursory glance at the history of those states which developed nuclear weapons might suggest that proliferation begets proliferation as states threaten the security of others while trying to maximize their own. So, the dilemma sets in motion. Even mere pursuits of nuclear weapons provide a security threat for the enemy states. This is because of the fear that successful proliferation will confer substantial bargaining leverage to the enemy state especially through enhanced deterrence. By this, we mean that states will feel threatened by proliferating states that pursue nuclear weapons status because, once achieved, the weapons will alter the distribution of bargaining power between the proliferators and their potential opponents (Kyle & Victor; 2011: 341).
Fear factor played a very significant role in every nuclear weapon state’s nuclear ambition. Nazi Germany’s nuclear programme created fear to America and Soviet Union and gave impetus to their nuclear programmes; Britain, France and eventually Israel and South Africa proliferated in response to the Soviet threat; China proliferated in response to the American and Soviet threats; India proliferated in response to the Chinese nuclear capability; Pakistan proliferated in response to India’s programmes; North Korea proliferated in response to fear of American weapons; and Iran is likely to attain nuclear weapons in response to the Israeli and American nuclear threats (Williams & Cantelon; 1984, Meyer; 1986 & Sagan; 1997: iii).

It is the unpredictable action by an opponent that creates security dilemma and security crisis to a state. Though nations show certain regular characters it is irrational to think they shall not vary their traits. The common traits and behaviours of states shall not last forever. To certain extent states also possess dynamic behaviours. So there arises uncertainty in assessing the actions of those nations. In the South Asian nuclear context both India and Pakistan is skeptic to each other. The fear of an unanswerable nuclear strike by India forced Pakistan to develop its nuclear capability. The massive striking capability of nuclear weapon further added to this security dilemma. Atom bomb gave greater advantage to air power. One single bomb like the one used in Hiroshima (B-29) could cause as much as damage as 300 planes would have cause (Arnold; 1946: 26). After the Bangladesh liberation war of 1971, Pakistan feared Indian threat not only against its Kashmir demand but also to its very survival. Definitely these were uncertain perceptions of Pakistan. India with nuclear weapon as well as without nuclear weapon- both these contexts had created security dilemma to Pakistan, but on different degrees of intensities. The fear of Indian attack against Pakistan was repeatedly expressed by many Pakistan leaders and scholars. The statements by Pakistan leaders and rulers about its nuclear potential targeting India, Pakistani nuclear policy and command control challenges of its nuclear programme placed India in severe security crises and dilemma. Pakistani security dilemma faced a number of security questions such as- Will India use its nuclear arsenal against it? Can Pakistan withstand Indian conventional attack without nuclear power? Will the Indian nuclear power end the long standing claim of Pakistan on the Kashmir issue?
These security questions arose security dilemma mattering its prestige, sovereignty and even very existence.

Nuclear security dilemma is in fact a game of action and reaction. Nuclear capability of ‘A’ is the action that invites the reaction from ‘B’ and nuclear capability of ‘B’ invokes response from ‘C’. Such a way it goes on. However there are certain conditions for this chain of action and reaction. The reactor must have some security fear from the actor. What is special here is nuclear ambition of A may not be targeting B and nuclear capability of ‘B’ may not be against ‘C’. Intention threat dichotomy shows how an action creates reaction from an untargeted state. The following chart depicts it clearly.

Table-1.1

<table>
<thead>
<tr>
<th>Intention Threat Dichotomy Chart</th>
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<tbody>
<tr>
<td>A -- D</td>
</tr>
<tr>
<td>B -- A</td>
</tr>
<tr>
<td>C</td>
</tr>
<tr>
<td>Targeted state</td>
</tr>
<tr>
<td>Untargeted state</td>
</tr>
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In the above chart the intention of nuclear weapon development by ‘A’ is to deal with ‘D’. But the threat from ‘A’ is felt by ‘B’ which is unintended. Similarly nuclear weapon power of ‘B’ intending ‘A’, threats ‘C’ and forces ‘C’ to construct its own nuclear weapon. For instance, the American nuclear weapon was targeting the Germans but responded by USSR. Likewise, the Indian nuclear bomb was targeting China but was responded by Pakistan. So this intention threat dichotomy is one of the major reasons for horizontal nuclear proliferation. A notable factor of this dichotomy is that it depends upon the relation the states maintain-co-operation and conflicts. The US nuclear bomb did not cause severe security fear in either Britain or in France. But it did raise security fear in USSR. This was because Britain, France and the US had a
good relation and they formed an alliance, while the US and the USSR had an antagonistic relation placing themselves in opposing blocks. Also misinterpretation of the intention takes place under hostility and conflicts. This is very clear with respect to the South Asian scene.

The nuclear weapon capability of both India and Pakistan was intended to reduce the security dilemma. On the contrary it gave birth to security dilemma of new shape and form. Many have argued that after nuclearization, South Asian region has become highly volatile with issue ranging from low scale war to an all out war. Conversely, others consider that nuclear bomb in South Asia have reduced the security issues and established a kind of peace termed as ‘unstable peace’.

Theoretical debate over how nuclear proliferation takes place and it effect still continues. Along with the change in the international system, the conventional wisdom about the application of nuclear weapon also got shifted. It is true that the dynamics of nuclear weapon still remains a mystery. In fact the concept of security dilemma explains various difficulties and obstructions that states face in international relation.

**Critical Security Studies: Nuclear Security Reconstructed**

The last few decades of international relations and security studies have been overwhelmingly influenced by critical security studies. Certain scholars point out that critical approach to international studies gives a fresh and different approach to international relations (Krause; 1996: 9 and Booth; 2005). Critical security studies look into the problems and prospects of security in wider spectrum encompassing societal, political, ethical, environmental and such other human concerns. It contains different branches like feminist security studies, human security studies, green security, post structural security studies and post colonial security studies. Critical security studies is a broad subject that encompasses a range of approaches and analyses drawing on elements of Marxism, Feminism, Critical Theory, Critical Constructivism and Post-Structuralism (Krause and Williams; 1997).

Critical security studies challenge the traditional concepts of security and redefine the notion of security. According to Christopher Browning and Matt Mc Donald, critical security studies orient around three central themes- a) critique of
traditional approaches to security; b) concerned with politics of security and c) concerned with ethics of security. “The first is a fundamental critique of the epistemology, ontology and normative implications of traditional (realist) approaches to security that continue to privilege the state as the referent object of security and the ‘threat and use of force’ (Waltz, 1991) as the subject of security. The form and extent of this critique has been well documented, and in different ways has impacted upon the study and practice of security in international relations in general. The latter two central themes are more fundamental, involving a move beyond critique to the articulation of a research agenda with core concerns. The first of these is a concern with the politics of security: the question of what security does politically. Simply, critical security studies scholarship is interested in the function of representations or discourses of security in defining group identity, enabling particular policy or legitimating particular actors as security providers. This commitment, albeit evident in different ways and to different degrees, follows the recognition that security is socially constructed and politically powerful. The second concern is with the ethics of security. Here, critical security studies scholarship is concerned with the definition of the ‘good’ regarding security, a concern particularly associated with attempts to define the nature and dynamics of progress” (Browning & Donald; 2011: 238).

There is a great shift from the traditional view of treating state as the only referent object of security in the critical approaches. In other words there are non-state centric forms of engagements. Security in critical terms is the realization of basic needs and the minimisation of dangers (Browning & Donald; 2011: 236). Welsh school of critical security studies find security as emancipation. Some key elements of Welsh School thinking are that ‘emancipation’ should be the primary purpose of CSS, and that research is a form of political practice with normative elements (Robinson; 2012). The three tenants of security according to this school are:- recognition of individual as ultimate referent of security; encompassing on the political underpinning and implication of security praxis; and a normative commitment towards emancipatory transformation (Williams and Peoples; 2010: 192). Critical approaches challenge and disrupt the existing and familiar perspectives, and explore new perspectives and insights about security. Traditional approaches to security studies analyse the security as the study of the threat and use of force by and between states
Conversely, critical approaches ultimately serve to point to the normative preferences inherent in such choices and the political implications following from such choices (Browning & Donald; 2011: 238). The school of ‘critical security studies’ (CSS) wants to challenge conventional security studies by applying post positivist perspectives, such as critical theory and post structuralism (Buzon; 1998: 34).

Until the end of cold war, the security assessment was primarily placed in a narrow cage of military security. The end of cold war and the September 11 terrorist attack have given greater emphasis on critical security studies. Thereafter the security studies are concerned about growing international interdependence, the danger of arms races, the heavy burden of defence spending, and the changing nature of threats to people’s daily lives, as reasons to formulate a definition of security, less focused on military power and more inclusive of economic, social, political and environmental issues (Booth; 2005). In nutshell, the critical security studies is an established interest that brings together a variety of disciplines and theoretical approaches to bear on the ubiquitous deployment of security discourses and practices especially in the post cold war and 9/11 conditions.

Nuclear weapon security has been redrawn by the critical security analysts. The overemphasis of the deterrence has been challenged by the critical security scholars. Critics reject the traditional approaches that stand for the nuclear weapon construction as advised by the realist and at the same time question the advocates of counter proliferation; for they are over emphasising on the devastating power of nuclear weapon (Pelopedas; 2010). The desirability and possibility of eliminating nuclear weapon place greater ambivalence in the nuclear non-proliferation regime (Gallagher; 2011:431). In Muller’s point of view, whatever their impact on activist rhetoric, strategic theorizing, defense budgets and political posturing, nuclear weapons have been a substantial waste of money and effort, do not seem to have been terribly appealing to most States that do not have them, are out of reach for terrorists, and are unlikely to materially shape our future (Muller; 1988). Analysing the role of nuclear weapon, David Alexander Robinson contents that nuclear weapon is not critical to prevent another world war in the post cold war period (Robinson; 2012). Even during the cold war period, it had a very limited role in preventing war between
the super powers (Le Guelte; 1997). Critical Security Studies demand for the nuclear weapon security in a broader level. The state centric perception of nuclear security is to be transformed to encompass societal, political economical and environmental aspects of nuclear security. The overwhelming role of terrorist and non-state actors makes it necessary to frame the nuclear security in such a way as to incorporate political, ideological, social and ecological elements as Barry Burzon suggests (Burzon; 1998). Critical security study neglects the structural-realist notion explaining external compulsions as reason for the nuclear ambition (Waltz; 1976) and the neo-liberal theory that indicates the role of domestic politics in the nuclear ambition of a state (Rosecrance and Stein, 1993). As Runa Das points out, the threat perceptions are over emphasized in the nuclear security assessments (Das; 2009).

The precarious nature of the impact of nuclear weapon makes its theoretical construction quite difficult. Realism, neo-realism, liberalism and neo-liberalism, though attempts to explain nuclear weapon in terms of security and power, fails to provide proven as well as precise theoretical interpretations. Realists regard development of nuclear weapon as an action necessitated by security threat. The notion of self help in the anarchic world for ensuring security rejects the idea of collective security based on co-operation and mutual trust. There exist different international institutional mechanisms to provide safety and security than self help. If states find ‘better security in nuclear weapon’ (as Waltz (2002) suggests), the number of de-facto and de-jury nuclear states would have been not what we have today. Again the question why Germany has not nuclearized becomes unanswered by these theorists (Hyman: 458). The realist view of maximising security through nuclear weapon, in turn, has maximised security risk. Bernard Bodie’s idea of ‘absolute weapon’ and the assumption that state’s ambition to construct nuclear weapon, are opposed by many scholars. State’s ambition to develop nuclear weapon is conceive not out of sheer security threat rather there are several socio-economic and ideological factors. In another way, the influence of the domestic determinants to be considered (Reiss: 1988). The internal dynamics that forces a state to nuclear weapon production is to be mulled over here. The realist camp emphasises on the power of nuclear weapon in establishing stability. The stability found under the forty years of cold war as well as fifteen years of South Asian experiences reveals that fears and uncertainties
were the two things that permeated in the international relations. The neo-optimist view that new and minor nuclear proliferators would ensure safety and security problems cannot be accepted (Feaver; 2007: 94).

The concept of nuclear deterrence that echoes the two historical events of success, the Cuban crisis and the Kargil crisis, conceals the casual role of nuclear weapon in escalating crisis. Even deterrence places states in dilemma of action. They have two options to perform. Firstly, state can use the strategy that leaves something to chance by deliberately creating a risk of an accidental nuclear war even though they would not rationally start one. Secondly, they can use the strategy of limited retaliation, which threatens with limited punishment increasing both the credibility of the threat and the incentives of the opponent to comply (Powell; 1990: 230). Now nuclear proliferation has turned out be one of the most debated and disputed areas of inter-state relation. This has spread suspicion and conflicts in the relationship among nations. The confronted condition existing between Iran - American and US-North Korea relations has been centred on nuclear weapon issue. Though, nuclear weapon claims to deter war and conflicts, fear and uncertainty leads the international relations. To certain extent the ability of nuclear bomb to deter a major war could be comprehended. However, it neither has completely averted the chance of war nor has established stable peace among hostile relations. This perception belittles the role of nuclear weapon under antagonistic relations.

Mutually Assured Destruction targeting cities and civilian population is indeed a very dreadful situation where the very existence of mankind is challenged. However, Collin Gray (1999), argues that the idea any nuclear exchange will result in the assured destruction of both sides is not necessarily correct (Gray; 1999: 311). MAD based on the assumption of rational decision making is in fact the resultant condition of irrational decision to construct nuclear bomb. Fear of annihilation even prevents nations from taking constructive actions. It entangles states mutual distrust, fear and hostilities. While MAD emphasises on the capability of nuclear weapon to prevent war, nowhere in history nuclear weapon has completely averted hostility between nations. On the other hand, it has been a catalyst for mistrust, confrontations and enmity. The hostility between the USA and Russia has not yet ended even though the cold war has ended. Fear and distrust still continue in the relation though they
have reached on various agreements and treaties to settle the disputes. Correspondingly, the protracted hostility between India and Pakistan has not found any radical change in the nuclear context. Conversely, it has caused new fears and dilemma in their security.

The basic assumption of MAD is that both sides must possess nuclear capabilities, not simply enough for first strike but capable of second strike in equal or with more force. An aggressive state unilaterally possessing is a treacherous situation. Though extended deterrence can come to the rescue of the victim, it is limited and less reliable in the sense that the nation which comes for rescue won’t compromise their security for others. Because nuclear weapon is dreadfully dangerous, if not handled rationally it can cause the very demise of a state. Again under animistic conditions it is illogical to freeze one’s nuclear capability. The problem here is that nuclear weapon can be deterred or an attack with nuclear bomb could be equally retaliated only with nuclear weapon.

The fear and uncertainty principally arises from non-deliberate, unauthorised and misperceived use foe nuclear weapon. This questions the realist presumption of rational decision making in the use of nuclear bomb. The security risk cause by non-state actors is more vigorous than the state actors in the present world. Consequently it is irrational to discard the nuclear intention of the non-state actors. Now security is not the creation of a particular state, but the condition created by interaction of various institutional mechanisms of state and non-state actors. Regardless the short of proven evidence about the possession of nuclear weapon by non-state actors, nuclear terrorism still constitute a major part in the state security dilemma.

If security is what an uncertain and fearless condition provides, security dilemma arising out of uncertainty and fear is not security. Consequently, the question about the security ensured by nuclear weapon is to be rationally dealt with. This is because nuclear weapon produces fear and uncertainty. The present status of possession of nuclear weapon by nations is indeed the product of the first nuclear weapon as result of the action and reaction process. So what is required is neither the demolition of nuclear weapon by a single nation nor a nuclear free zone, but non-
nuclearised world. The target should be the decision uniformly taken by the nuclear weapon states to demolish their nuclear capability.

One could easily find that all these theories have received both bouquet and brick-bats. No theory has succeeded completely in explaining the cause-course-consequent sides on nuclear weapon. The table below shows the strength and weaknesses of various theories dealing with nuclear weapon.

Table-1.2

Nuclear Weapon Theories: Strength and Weakness

<table>
<thead>
<tr>
<th>Theory</th>
<th>Strength as theory of Nuclear Proliferation</th>
<th>Weakness of the theory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classical realism</td>
<td>Explains role of security consideration</td>
<td>Ignores domestic determinants</td>
</tr>
<tr>
<td>Neo- Realism</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neo-liberal institutionalism</td>
<td>Explain domestic determinants</td>
<td>Leaves decision making out of analysis</td>
</tr>
<tr>
<td>Idealism</td>
<td>Fits better in the historical record of proliferation</td>
<td>It is much individualistic centred</td>
</tr>
<tr>
<td>Organizational theory</td>
<td>Explains role of organization in irrational way</td>
<td>Underestimates role of individual and new information</td>
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The study shall be carried out principally within the theoretical frame works of security dilemma and critical security studies. In the South Asian context, nuclear weapon has quite different application and implication. The protracted hostility had already established security dilemma in the region even before the advent of nuclear weapon. The study will definitely evaluate the role of security dilemma in promoting nuclear weapon production in the region, particularly by Pakistan. Critically examining the role of nuclear weapon in the regional security, the continuance of security dilemma will be analysed here.
Note

1. There is a notion that rogue state possessing nuclear weapon may not be deterred easily. Also their nuclear capability is considered for altering the balance of power not for deterring their security. Nuclear weapon in the hands of terrorist has no political utility. Terrorist lack rationality, command structure and values necessary for deterrence (Brown and Arnold; 2010: 305 & 306).

2. General deterrence exists in adversarial conditions and it does not require any special overt challenge from any of the sides. The protracted hostility between India and Pakistan deepens the idea of general deterrence (Huth and Russett; 1988: 33).

3. Barack Obama addressing the nation in April 2009 remarked about the American commitment to disarmament. The President visualised a ‘world without nuclear weapon’, for ensure the security of the people and live free from security fear. This is commonly referred as ‘Global Zero’ (Barack Obama; 2009).

4. John Foster Dulles served as US Secretary of State under President Dwight D. Eisenhower from 1953 to 1959. It was he who put forward the idea of brinkmanship using the nuclear weapon force during the cold war period. He advocated an aggressive stance against communism throughout the world especially with the USSR escalating the nuclear threat.

5. Under the Agreed Framework of 1994 North Korea promised to suspend operations at its Yongbyon nuclear reactor and accept international inspections by the IAEA in exchange for a package of incentives. However, North Korea went on with its nuclear programme conducted its nuclear test in 2006. It in fact found nuclear weapon to gain economic benefits, used the nuclear programme as a tool to attain economic benefits. Even amidst the six-party talks, North Korea has attempted to increase pressure in recent months by making a series of claims concerning its development of a nuclear deterrent as part of the nuclear brinkmanship policy.
6. Strategic superiority means a situation in which one of the parties involved is in a position to inflict a disarming blow to the other. Contrary to this, strategic inferiority is a condition where one party is not in a position to deter the other. Neither strategic superiority nor strategic inferiority is good for strategic stability.

References


Disarmament Policy (2003): “North Korean Nuclear Brinkmanship”; 74


Nepram, Binalakshmi (2002): *South Asia’s fractured Frontier- Armed Conflict, Narcotics and Small Arms Proliferation in India’s North East*, India, New Delhi: Mittal Publications.


