Locating the problem of the NPT in world politics
INTRODUCTION

This research aims to analyze, explain and understand the Nuclear Non-Proliferation Treaty (NPT) in world politics. This chapter will review the literature on the NPT and relating issues in world politics to find the gaps there in, and to set the main research questions. However, there are a number of literatures on this topic of the NPT and non-proliferation, especially after the Cold War. The task is more demanding and complicating for several reasons. The NPT set multiple objectives of non-proliferation, arms control and disarmament, and civilian nuclear cooperation. In addition, there are many significant developments and changes since its creation in the 1960s. Therefore, there is a vast amount of literature on various issues relating to the NPT. This chapter sets several themes and reviews important books and articles relating to this research project on the NPT. By reviewing this literature, this chapter aims to locate the main research questions. This chapter review books and articles relating to the NPT in a thematic order. First, it starts to revisit Brodie’s classic on nuclear weapons. It goes on to review development of nuclear non-proliferation, arms control and disarmament, the Nuclear Non-proliferation Treaty, and its non-proliferation regime in a chronological order, first during the Cold War and then after the Cold War. Debates on WMD proliferation and nuclear disarmament issues after the Cold War are reviewed respectively. After reviewing these NACD issues relating to the NPT during and after the Cold War, this chapter reviews the literature on theoretical approaches to nuclear proliferation and the NPT and its non-proliferation regime, concerning Realist, Liberal, and Grotian/International approach. By reviewing this literature on the NPT and related issues, this chapter will conclude to find out the main research questions of this thesis.
REVISITING CLASSICS OF NUCLEAR WEAPONS

The problem of nuclear weapons has been one of the top agendas in international politics in theory and practice. However, our knowledge and thinking about nuclear weapons has been strongly constrained, or even distorted, by the Cold War experience from nuclear strategy to deterrence to nuclear arms control and non-proliferation. Here, we seek out the fundamental nuclear questions in world politics by reflecting on some classics in the discipline. Classics stand a test of time. Revisiting classics may not be able to give answers to our contemporary problems, but it will give some insights to understand the fundamental problems.

The pioneering volume entitled *The Absolute Weapons: Atomic Power and World Order* (1946) written by Frederick Dunn, Bernard Brodie, Arnold Wolfers, Percy Corbett, and William Fox, has been widely regarded as a classic of nuclear politics. Contributors ask the “fundamental questions about the role and impact of nuclear weapons on international politics”, trying to assess “the likely impact atomic weapons would have on international politics and how they would affect the establishment of a new postwar international order” (Paul, Harknett, and Wirtz, 1998: 1-15). This pioneering work explores three important theses on nuclear weapons and world order: (1) The impact of nuclear weapons: the revolutionary nature; (2) The role of nuclear weapons: deterrence; (3) The international control of nuclear weapons (nuclear non-proliferation, arms control and disarmament, and civil nuclear cooperation in today’s term).

According to Paul, Harknett, and Wirtz’s review, the contributors to *The Absolute Weapons* agreed to the three fundamental nuclear questions: “...The analysis
presented in Brodie et al. extrapolated from a very limited basis of experience and
knowledge. ... What is remarkable about the volume, however, is the relative consensus
that it presents. In general, Brodie and his colleagues viewed atomic weapons as
revolutionary military devices, judged retaliation in kind to be the guiding strategic
principle of the nuclear age, and concluded that international control of atomic weapons
would be exceedingly difficult to achieve…”(Paul, Harknett, and Wirtz 1998: 3-10).

Fox, Brodie and others argue the case for realism that international control of
nuclear weapons is difficult in anarchical international politics: “Many argued for some
supranational solution to the potential problem of nuclear proliferation. Fox, Brodie, and
others thought that such reasoning lacked a sophisticated understanding of international
politics. The arguments presented in The Absolute Weapon concerning international
control of atomic capabilities posited that any plan for control had to reflect the
rudimentary nature of international society and the absence of a global sense of equity.
Fox asserted that one could not ‘create a machinery of central control [authoritative
government] before one created a machinery of central justice [legitimacy].’ Since no
global set of values existed, Brodie’s volume concluded that any international
arrangement must ultimately rely on and therefore reflect the systemic distribution of
power. True international control requires not only the agreement of disinterested states
or those who support control, but also a solution [agreed enforcement measures] for the
hard cases: those states that find a world absent any controls over the possession of
nuclear weapons to be in their own interest. The contributors to Brodie’s volume also
emphasized that advocates of an international regime had to acknowledge that control
invariably meant convincing great powers and rising states to abstain from a perceived
great power asset…”(Paul, Harknett, and Wirtz: 1998). Their answers to above three
questions are quite insightful, but need to be critically re-examined and re-assessed in the
contemporary context of world politics.

Harknett, Wirtz, and Paul (ed,) *The Absolute Weapons Revisited* (1998) re-examines the three fundamental theses presented in Brodie et al. classic work on nuclear weapons and world order. These essays reappraise the atomic bomb as the instrument of contemporary international politics, especially the impact and role of atomic bombs in world order. It re-examine the three fundamental questions about atomic weapons posed by Brodie’s pioneering work: (1) the revolutionary weapon, (2) nuclear deterrence, and (3) the international control of nuclear weapons. “…the contributors to *The Absolute Weapon Revisited* diverge widely in their analysis of nuclear weapons and emerging twenty-first-century international politics. … each was asked to reevaluate fundamentally the role of nuclear military capability in contemporary international politics … the premise that the Cold War competition itself may have biased much of our thinking…” (3). “…the contributors to *The Absolute Weapon Revisited* diverge widely in their analysis of nuclear weapons and emerging twenty-first-century international politics. The experience of five decades of living with nuclear weapons has fostered conflicting perspectives on the significance of these weapons for state relations…. Fifty years of experience has led to a range of intellectual views about the significance of this terribly destructive force…” (Paul, 1998)

These fundamental disagreements on the fundamental themes of nuclear weapons suggest that contemporary debates on nuclear non-proliferation, arms control and disarmament (NACD) and the NPT regime are unlikely to reach any agreement. Siracusa stresses that “…we should bear in mind that at the beginning of the nuclear age, there were no rules, no non-proliferation norms, no concept of nuclear deterrence, and, particularly, no taboo against nuclear war…”(2008:27). Reminding these fundamental
themes in nuclear weapons, we need to think over and identify what has changed or unchanged in world politics during and after the Cold War. The problem of the NPT can hardly be analyzed without considering these fundamental nuclear issues in the historical and theoretical context of international security.

**RECONSIDERING THE COLD WAR EXPERIENCES**

Although history may never repeat itself as it happened before, we can never understand anything without reflecting the past. We have to go back to the past, to understand the present and to predict the future. The NPT is a product of the nuclear age, and the theory and practice of nuclear weapons developed during the Cold War.

Among the huge amount of literature on the nuclear questions during the Cold War, some of the acclaimed works of diplomatic history include: Michael Mandelbaum’s *The Nuclear Questions* (1976); McGeorge Bundy’s *Danger and Survival* (1988), Paul Nitze’s *From Hiroshima to Glasnost* (1939), and John Newhouse’s *The Nuclear Age* (1989). John Gaddis, *The Long Peace* (1987) remains one of the most important historical narratives on the Cold War, which explains the reasons why the Cold War did not turn into a total nuclear war. However, nuclear non-proliferation was not the supreme security agenda in world politics during the Cold War partly because nuclear proliferation did not occur actually as President Kennedy had been worried in the early 1960s. It is also because nuclear proliferation was less important than the supreme problem of the Cold War confrontation.

Under the shadow of the Cold War, there have been efforts to control and restrain nuclear weapons. Although we use “non-proliferation”, “arms control and disarmament” (NACD) quite commonly, these terms, ideas and concepts were developed during the Cold War in the specific political, strategic and security context of world
Hedley Bull, *The Control of the Arms Race* (1961) poses fundamental questions about nuclear weapons and international order. Bull explores the “Nth power problem” and international order: “...the problem of preventing the expansion of the nuclear club, or of making adjustments to it, is a single one faced by international society as a whole (The Problem), and that it is one raised by any addition to the club’s membership (Nth power)...” Bull asks the fundamental nuclear proliferation puzzles: Why some states acquire nuclear weapons while others do not; The role of norms and taboos in this nuclear context; How each state views their own possession of nuclear weapons and those of other possessors (that is, whether or not they are viewed as a threat); and The type of state possessing these nuclear weapons. (Bull 1961, quoted in Howlett, 2006)

Hedley Bull’s edited volume, *Hedley Bull on Arms Control* (1987) (edited by Robert O’Neill) is a collection of Bull’s important publications on arms control, spanning the period from the late 1950s to the early 1980s. His original and critical works deal with various arms control and disarmament issues and topics from strategic studies to classical approaches, from the debates on non-proliferation and disarmament to the problem of world order, from Washington and London Naval Treaties to the US-USSR arms control negotiation and the Indian Ocean as ‘Zone of Peace’.

Hedley Bull ([1976]1987), “Arms Control and World Order” explores the relationship between arms control and world order in theory and practice: “...we must recognize that the control of horizontal proliferation cannot be separated from the control of vertical... But whatever the requirements of ‘justice’, the requirements of a world order should lead us to doubt whether the present line of division is a viable one. World order would best be served by efforts to promote – immediately through steps such as a
reduction in great power strategic arms, the adoption of no first use positions by the nuclear powers and their acceptance of a comprehensive nuclear test ban – the idea of the diminishing political and strategic utility of nuclear weapons...” (204). Bull questions about nuclear (non-)proliferation, arms control and disarmament, and the problem of order and justice. His works are “an exploration, a progression of vital analyses, which offers an array of intellectual tools to help in thinking about the ever present and increasingly complex problems which bedevil international security...” Bull’s classical approach is “expert, experienced, critical and clear-sighted guidance towards what he hoped would be a more secure future” (Bull and O’Neill:9).

Ogawa, Shin’ichi’s Kaku: Gunbi Kanri/Gunsyuku no Yukue (1996) is an insightful historical analysis of nuclear arms control and disarmament efforts by the US-USSR. OGAWA’s book covers most of the important conceptual, historical, and policy issues on nuclear weapons arms control and disarmament during the Cold War and after, including chapters on the NPT and non-proliferation. This realistic analysis without losing a hope for a better nuclear future is written in a clear language, which would deserve to be a classic.

Umemoto, Tetsuya, Kaku Heiki to Kokusai Seiji: 1945-1995 (1996) analyzes the history of nuclear weapons strategy and arms control between the US and the USSR during the Cold War and search for the role of nuclear weapons after the Cold War. This analysis is based on the two “complement” nature of nuclear weapons as “the measure of confrontation” and “the object of arms control”, and analyze the US (and the USSR) nuclear policy objectives: strategic stability, nuclear extended deterrence, the control of vertical nuclear proliferation, and the prevention of horizontal nuclear proliferation. His analysis is insightful to understand the historical development of policy and concepts of
nuclear weapons, including the chapter on nuclear non-proliferation efforts and regimes during the Cold War and after.

Iwata, Syuichiro’s *Nihon no Hikaku Seisaku no Kadai* (1996) is an insightful historical analysis of nuclear strategy and arms control during the Cold War and after. IWATA stress the importance of realistic understanding of nuclear issues in world politics, especially the US nuclear policy and its problem, together with a hope to proceed to nuclear arms control and nuclear disarmament. This book also includes insightful chapters on the historical development of Japanese nuclear disarmament policy, and its assessment and challenges ahead.

Joseph Siracusa’ *Nuclear Weapons: A Very Short Introduction* (2008) cover a wide range of nuclear issues since the birth of nuclear weapons such as building the bomb, the Cold War-nuclear arms race, deterrence, arms control, and nuclear proliferation and terrorism. This small book is written for introduction but quite insightful to understand various complex nuclear issues in history, theory and practice.

By reviewing this literature on the Cold War experience, it is clear that nuclear proliferation was not the top priority in international security or in the US. However, these basic concepts of nuclear arms control, disarmament, and non-proliferation were developed during the Cold War age. Debates on the NPT can not separate from these relating issues of NACD. Considerable developments in practice can be observed in the areas of nuclear non-proliferation, arms control and civilian nuclear cooperation including the NPT during the Cold War.
APPROACHES TO NUCLEAR WEAPONS

How to see our current state, past and future can not be divorced from our ideals, ideologies, or models. In this sense, not only our political judgment and prospects but also our views and recognition of the social world are deeply influenced and affected by our underlying assumptions, theoretical framework, moral and value systems. In other words, it is important to acknowledge that each approach is based on different underlying assumptions and hypotheses.


*Three approaches to nuclear policy: Hawks, Doves, and Owls*

<table>
<thead>
<tr>
<th>Caricature</th>
<th>Primary Cause of War</th>
<th>Dominant Metaphor</th>
<th>Recommended Policy</th>
<th>Potential Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAWK</td>
<td>Weakness</td>
<td>Munich</td>
<td>Strength/ Superiority</td>
<td>Provocation</td>
</tr>
<tr>
<td>DOVE</td>
<td>Provocation</td>
<td>Pearl Harbor</td>
<td>Conciliation/Accommodation</td>
<td>Ineffectual Appeasement</td>
</tr>
<tr>
<td>OWL</td>
<td>Loss of Control</td>
<td>World War I</td>
<td>Strengthened Controls/ Stability</td>
<td>Unusable Weapons/ Paralysis</td>
</tr>
</tbody>
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(Source: Nye, Allison, Carnesale, 1985:211)

Hedly Bull, “Role of the Nuclear Powers in the Management of Nuclear Proliferation”(1966) and “Arms Control and World Order ([1976]1987)” examine
various theoretical assumptions and approaches to nuclear proliferation, arms control and world order. His dialogue among approaches is in the three IR traditions articulated by Martin Wight: Realists, Revolutionaries, and Rationalists (or the Hobbesians, the Kantians, and the Grotians). These three views are conflicting with each other on nuclear non-proliferation, arms control and disarmament. Above all, different approaches suggest different policy recommendation on nuclear issues, especially non-proliferation.

Shoettle (1979), *Postures for Non-Proliferation: Arms Limitation and Security Policies to Minimize Nuclear Proliferation* identifies three schools or approaches to nuclear non-proliferation policy: (1) “hawks”/the high posture doctrine, (2) “doves”/the low posture doctrine, and (3) “owls”/the Modified low posture doctrine.

**Approaches to nuclear weapons and deterrence**

1. **The High Posture Doctrine**

   - There is an inverse correlation between the vertical and the horizontal proliferation of nuclear weapons. In this view, the larger the nuclear weapon inventories of the major nuclear powers, the less likely it is that significant numbers of NNWS will acquire nuclear weapons. Conversely, by reducing their nuclear inventories, the major NWS will encourage the proliferation of nuclear weapons.
   
   - The two major NWS (the US and Russia) maximize the gap between their own nuclear weapon capabilities and those of minor NWS and NNWS by maintaining a large inventory of nuclear weapons, sustaining a rapid rate of qualitative development of nuclear weapons, and relying upon the deployment and threatened use of nuclear weapons in a wide range of diplomatic and military contingencies.
   
   - The High Posture Doctrine projects much of the existing international security system and rejects substantial changes in existing arms limitation and security policies.
(2) The Low Posture Doctrine

- There is a positive correlation between the vertical and the horizontal proliferation of nuclear weapons: the smaller the NWS’ inventories of nuclear weapons, the less likely it is that significant numbers of NNWS will acquire nuclear weapons. Conversely, by enlarging their nuclear inventories, the NWS will encourage the proliferation of nuclear weapons.

- The two major NWS (the US and Russia) minimize the gap between their own nuclear weapon capabilities and those of minor NWS and NNWS by maintaining a small inventory of nuclear weapons, constraining the rate of qualitative development of nuclear weapons, and relying upon the deployment and threatened use of nuclear weapons in only a very limited range of diplomatic and military contingencies. In the Low Posture Doctrine, the NWS adopt a comprehensive range of new arms limitations, arms reductions and security obligations in order to deter NNWS from acquiring nuclear weapons.

- The Low Posture Doctrine, by combining multiple policy instruments into a long-term anti-proliferation strategy, requires major shifts in existing arms limitation and security policies and seeks significant alteration in the international security system.

(3) The Modified Low Posture Doctrine

- The NWS extend unilateral or cooperative positive security guarantees to certain NNWS subject to actual or threatened nuclear attack by either a hostile major NWS or a minor NWS when all other policy instruments appear to have failed.

- The modified Low Posture Doctrine may well be a necessary if not sufficient condition of minimizing future nuclear proliferation.

- The modified Low Posture Doctrine would substantially raise both the domestic and
international costs for NNWS of exercising their nuclear weapon option.

- The modified Low Posture Doctrine would create a comprehensive arms limitation and security regime which would substantially constrain the role of nuclear weapons in the international security system.

(Shoettle, 1979)

This literature indicate that nuclear strategy, deterrence, and non-proliferation policy are inseparably interrelated, and that the hawks, the doves, and the owls suggest quite various policy recommendations based on their own theoretical assumptions. These approaches to nuclear weapons above are developed during the Cold War, but these basic approaches are very relevant to think nuclear issues and the NPT today. It is easy to understand the US Bush unilateralism was based on the Hawkish high posture approach to nuclear weapons.

**HISTORICAL CONTEXT OF THE NPT AND ITS REGIME**

Although the problem of nuclear proliferation and the NPT-based non-proliferation regime become one of the top international security agenda after the Cold War, the NPT and the non-proliferation regime was created in the 1960s and developed in the 1970s-80s during the Cold War.

Mason Willrich, *Non-Proliferation Treaty: Framework for Nuclear Arms Control* (1969) is an early survey of the Treaty to ascertain its meaning and explore its potentialities in terms of the specific problems after its implementation. This speculative research is insightful to highlight the gap between the necessity of international control of nuclear energy and the difficulties in achieving this in the current inter-national system and our modes of thinking.
Georges Fischer, *The Non-Proliferation of Nuclear Weapons* ([1969]1970 translated by David Willey) is an early study of the development of the Treaty. This book explains the historical development and various legal, political, and terminological issues within and surrounding the NPT from a critical French perspective.

Shaker's *The Nuclear Non-Proliferation Treaty: Origin and Implementation 1959-79* is a study of the NPT history, negotiations and its implementation. These three volumes surveys main international issues and negotiations on the NPT in details.

*The United Nations and disarmament: 1945-1985* (1985) and *The United Nations and Nuclear Non-Proliferation* (1995) give a UN view of nuclear non-proliferation, arms control and disarmament negotiations and contents of treaties. The former provide the historical background and overview of these issues till the mid-1980s. The latter is useful to understand the background and various issues on the NPT, its non-proliferation regime, and disarmament efforts, together with useful chronology, documents, and texts.

US ACDA, *Arms Control & Disarmament Agreements* (1985) and Blacker and Duffy (1984), *International Arms Control, 2nd edn.* (1984) are good surveys covering a range of arms control and disarmament. The chapters on nuclear non-proliferation and the NPT are well analyzed from the US standpoint.

David Dewitt (eds.), *Nuclear Non-Proliferation and Global Security* (1987) is a collection of articles to examine the NPT "...in the context of the changing global environment and, in particular, the issues of global security..." Dewitt argues: "...The
spread of nuclear technology in a state-centric world of inequality will necessarily foster competition and threaten security. In spite of all obvious problems attendant to treaty enforcement between unequal partners, the benefits probably outweigh the costs since uncertainty and ambiguity exists with or without treaties." This collection provides various countries and regional perspectives on the Treaty and also various cases of nuclear industries and safeguard policies in the late 1980s.

George Bunn, a former US diplomat on arms control negotiations, wrote case histories of U.S.-USSR nuclear arms control negotiations in *Arms Control by Committees* (1992). This is a description of governmental decision-making for arms control in Washington, D.C., and joint U.S.-Soviet decision-making at the negotiating table. As *recorded history*, his own experiences with the test-ban and nuclear non-proliferation talks, together with other American participants’ experiences in post-World War II arms control negotiations, are valuable sources and materials of history.

Henry Sokolski, *Best of Intentions* (2001) analyzes the evolution of America’s non-proliferation campaign for the half century, and examines the Baruch Plan, Atoms for Peace, The NPT, proliferation technology control regimes, and counter proliferation. His examination of the US role is valuable to understand how the US campaign, strategy and diplomacy affected the process of non-proliferation efforts including the NPT.

This literature on the NPT development during the Cold War indicates that the development of the NPT reflect the complexity and sensitivity of the issues and interests among the nuclear-weapon powers and non-nuclear weapon states. The Treaty and its non-proliferation regime is a product of political initiatives and negotiation including the US, the former USSR and other great and middle powers.
NUCLEAR PROLIFERATION AFTER THE COLD WAR

The proliferation of Weapons of Mass Destruction (WMD) has become one of the important security concerns in international security in the post-Cold War era. The development and evolution of the NPT and international non-proliferation efforts are largely reaction to these challenges of WMD especially nuclear proliferation, which become more salient after the Cold War.


Brad Roberts, (ed.), *Weapons Proliferation in the 1990s* (1995) is a collection which covers a wide range of WMD proliferation issues, policy debates and the problem of world order after the Cold War.

Victor Utgoff (ed.) *The Coming Crisis: Nuclear Proliferation, U.S. Interests, and World Order* (2000) includes a range of articles by American strategic analysts to address the problem of nuclear, biological and chemical (NBC) weapons proliferation and its impact on the US interests and world order. This collection justifies the US-centered nuclear order to recommend that the US and its allies should prepare that intervention and retaliation remains "an essential underpinning for the stability of the world order as we know it."

Nuclear proliferation in Asia is increasingly problematic. These Asian proliferation problems are well analyzed, for example, in William Walker, "International nuclear relations after the Indian and Pakistani test explosions" (1998), Delpech, "Nuclear Weapon and the 'New World Order': Early Warning from Asia?" (1998-99); Joseph Cirincione, "The Asian Nuclear Reaction Chain" (2000); Dinshaw Minstry, "Asia's Nuclear Dominoes" (2005).

The problem of nuclear terrorism has been dramatically highlighted after 9/11 terrorism in 2001. For Dr. Khan and his nuclear black market, see Langewiesche, *The Atomic Bazaar* (2007). Bosch and Van Ham edited *Global Non-Proliferation and Counter-Terrorism* assesses the effect of UN Security Resolution 1540.

Graham Alison (2004), *Nuclear Terrorism: The Ultimate Preventable Catastrophe* argues that the question about nuclear terrorism is not "if" but "when and where" it will happen, and what should be done to prevent it (Alison, 2004).

Darryl Howlett "Nuclear Proliferation" (2008) is a good survey covering a wide range of issues from theoretical debates and historical background of nuclear

These literatures on nuclear proliferation indicate that the development of the NPT and its non-proliferation can not be discussed without considering these nuclear proliferation issues, which has been widely regarded as more evident and urgent after the Cold War. The importance and effectiveness of the NPT was not much debated during the Cold War. It is because of the various challenges of nuclear and other WMD proliferation that makes the NPT one of the central agendas in international security after the Cold War. Thus question arises how much the NPT and its non-proliferation regime can cope with these proliferation challenges.

CAUSES OF NUCLEAR WEAPONS PROLIFERATION

Why does nuclear proliferation happen? This question about the causes of nuclear proliferation has been debated intensively, since the Cold War era, but especially after the Cold War.

Richard Betts (1993), “Paranoids, Pygmies, Pariahs and Non-proliferation Revisited” provides a strategic realist view of proliferation, arguing that “The misplaced focus on ways to isolate weapons-related capabilities obscures the importance of the stickier but more salient problem of the incentives many nations have to get a bomb: fear or ambition”. (Betts, 1993:101).

Benjamin Frankel, “The Brooding Shadow”(1993) suggests a neo-realist view of proliferation, claiming that the end of the Cold War cast “the Brooding Shadow” because the systemic change from bipolar stability to multi-polarity increase the pressures on further proliferation in the post-Cold War world” (1993).

Sagan’s three models of nuclear proliferation

(1) The Security Model: States build nuclear weapons to increase national security against foreign threats, especially nuclear threats.

(2) The Domestic Politics Model: Domestic political actors regard nuclear weapons as political tools used to advance parochial domestic and bureaucratic interests.

(3) The Norm Model: Nuclear weapons acquisition, or restraint in weapons development, is determined by the role of such weapons as symbol of a state’s modernity and identity.

Lavoy, Sagan, and Wirtz (ed.), Planning the Unthinkable: How New Powers Will Use Nuclear, Biological and Chemical Weapons (2000) explores a comprehensive view of the cause of proliferation. Authors explore how military threats, strategic cultures, and organizations shape the way leaders intend to employ WMD.


that nuclear weapons lost importance after the Cold War: "...in the wake of the Cold War, it is becoming more difficult to identify the value, importance, and relevance of nuclear weapons. There may be imaginable circumstances under which they could be useful. However, as stockpiles are reduced, s international status becomes determined more by economic and other nonmilitary factors, and as the world becomes dominated by nonthreatening, wealth-seeking countries, nuclear weapons seem to be fading even as an object of discussion as policymakers reorient their perspectives for a new era. Like the thermometer, nuclear weapons have essentially been ancillary or marginal to the main course of international events. In the present era, that seems to be increasingly true." (John Muller, 1998)

Kurt M. Campbell, Robert J. Einhorn, Mitchell B. Reiss, (ed.), *The Nuclear Tipping Point: Why States Reconsider Their Nuclear Choices* re-examines the possibilities of states reconsider their nuclear choice. Campbell points out five international and domestic factors "that could lead to a reversal in a country's nuclear posture":

- A change in the direction of U.S. foreign and security policy
- A breakdown of the global nuclear nonproliferation regime
- The erosion of regional or global security
- Domestic imperatives, and
- Increasing availability of technology (Campbell, 2004; 20)

Many researches claim that whereas many factors are involved in nuclear options, the realist approach is the most important of nuclear motivations: "...the desire for prestige and political clout could also conceivably play a role in inducing some countries to reconsider their policies of nuclear abstention." However, the security and
strategic factor is not the only factor of nuclear motivations, and many other factors should not be excluded. Campbell and Einhorn add, “...in most of the [concerned] cases studies, it would take a combination of highly threatening and mutually reinforcing factors – a “perfect storm” – to set in motion the momentous decision to reverse a non-nuclear course and initiate the pursuit of a nuclear weapons capability...”(2004: 320).

Ogilvie-White, “Is there a theory of nuclear proliferation?” (1996) provides a comprehensive picture of these theoretical approaches to the nuclear motivations and incentives covering from realism, to liberalism, to cognitive and social constructivism approach.

### Explanatory Powers/ Limitations of Proliferation Theories

<table>
<thead>
<tr>
<th>Theory or model</th>
<th>Strengths as a theory of nuclear proliferation</th>
<th>Weaknesses as a theory of nuclear proliferation</th>
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<tbody>
<tr>
<td><strong>Classical realism</strong></td>
<td>Explains role of security considerations.</td>
<td>Ignores domestic determinants.</td>
</tr>
<tr>
<td><strong>Neo-realism</strong></td>
<td>Presents an elegant, logically deduced explanation of nuclear proliferation, but side-steps empirical difficulties.</td>
<td>Explains systemic outcomes not unit level outcomes. Predictions and explanations are misleading and inaccurate.</td>
</tr>
<tr>
<td><strong>Neo-liberal institutionalism</strong></td>
<td>Explains domestic determinants, such as economic and political factors.</td>
<td>Leaves decisionmaking out of analysis.</td>
</tr>
<tr>
<td><strong>Organizational theory</strong></td>
<td>Analyzes implementation of decisions. Explains role of organizations in irrational behavior.</td>
<td>Underestimates impact of individuals and new information.</td>
</tr>
<tr>
<td>Belief systems theory</td>
<td>Focuses on role of individuals and groups and explains irrational decisions.</td>
<td>Difficult to quantify. Cannot explain causes of beliefs.</td>
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<tr>
<td>Learning models</td>
<td>Explain impact of new information.</td>
<td>Cannot explain what lessons are likely to be learned under what circumstances.</td>
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</table>

(Source: Ogilvie-White 1996:43-60)

These various theories of nuclear proliferation explain the role and effectiveness of the NPT and its international non-proliferation regime differently. Neo-liberal theory and social constructivism theory see the bigger role of the NPT-based non-proliferation regime, but realism theory see these international regimes as little important to state' nuclear decision-making.

**THE SPREAD OF NUCLEAR WEAPONS**

Joseph Siracusa asks “a deceptively simple question: Does the spread of nuclear weapons make the world safer or more dangerous?” This is a very central theoretical problem because “A central element of the proliferation debate revolves around the perceived effectiveness of nuclear deterrence. If deterrence works reliably, as optimists argue, then there is presumably less to be feared in the spread of nuclear weapons. But if nuclear deterrence does not work reliably, pessimists maintain, more nuclear weapons states will presumably lead not just to a more complicated international arena but a far more dangerous one.”(2008:110). This question is also important because the NPT is based on the fundamental assumption that nuclear proliferation is dangerous and that
nuclear arms control and disarmament is safer and desirable.

Scot Sagan and Kenneth Waltz, *The Spread of Nuclear Weapons: A Debate Renewed* (1998, 2003) address a hypothetical question about the consequence of the spread of nuclear weapons. Scott Sagan argues that the spread of nuclear weapons will make the world less stable: “More will be worse” since some new nuclear states will engage in preventive wars, fail to build survivable forces, or have serious nuclear weapons accidents.” Sagan warns against proliferation optimists that “Professional military organizations, because of common biases, inflexible routines, and parochial interests, display organization behaviors that are likely to lead to deterrence failures and deliberate or accidental war. Because future nuclear-armed states are likely to have military-run or weak civilian governments, they will lack the positive constraining mechanisms of civilian control while military biases may serve to encourage nuclear weapons use, especially during crisis.”

**Proliferation optimism: Kenneth Waltz’s thesis of “more may be better”**

- Nuclear weapons have spread rather than proliferated because these weapons have proliferated only vertically as the Nuclear Weapon States have increased their arsenals.
- Nuclear weapons have spread horizontally to other states only slowly. However, this slowness of pace is fortunate as rapid changes in international conditions can be unsettling.
- The gradual spread of nuclear weapons is better than either no spread or rapid spread.
- New Nuclear states will feel the constraints that nuclear weapons impose and this will induce a sense of responsibility on the part of their possessors and a strong
element of caution on their use.

- The likelihood of war decreases as deterrent and defensive capabilities increase; nuclear weapons, responsibly used, make wars hard to start.

(Sagan and Waltz, 1995)

**Proliferation pessimism: Scott Sagan’ thesis of proliferation risk and danger**

- Professional military organizations, because of common biases, inflexible routines, and parochial interests, display organizational behaviors that are likely to lead to deterrence failures and deliberate or accidental war.

- Because future nuclear-armed states are likely to have military-run or weak civilian governments, they will lack the positive constraining mechanisms of civilian control while military biases may serve to encourage nuclear weapons use, especially during crisis.

(Sagan and Waltz 1995)


Stanley Hoffmann (1966), “Nuclear Proliferation and World Politics” recognizes some kinds of stabilizing effects of nuclear deterrence like the Cold War, but still be cautious of dangers and risks caused by further nuclear proliferation: “a world of many nuclear powers would raise extremely difficult issues of management. ... With weakened restraints and exacerbated danger points, there would be a crucial need for corrective mechanisms to preserve a modicum of stability; yet in such a world the obstacles to these mechanisms would be formidable” (1966).
Proliferation cautious pragmatism: Stanley Hoffmann’s warning

(1) Proliferation peace:
To equate proliferation with peace (or at least with the absence or atrophy of war), one would have to assume that each nation would find automatically in its nuclear kit not only the kind of wisdom and responsibility that rule out “irrational” behavior, but the subtle skills that would guarantee success to wise and responsible calculations in a world of uncertainty: a breathtaking assumptions, to say the least, since it means that proliferation would entail an assurance against error as well as against folly.

(2) Proliferation disaster:
To equate proliferation with the certainty of disaster may be a good emotional argument for an international anti-proliferation agreement, but not for sound policy analysis, since it assumes that the kinds of restraints that have maintained over-all peace since 1945 would inevitably collapse.

(3) Proliferation cautious pragmatism
Both appraisals [of proliferation peace and proliferation disaster] are oversimplifications. One thing is sure: nobody knows, because there are too many unknown factors and unknowable relations between factors. The impact of proliferation would likely be extraordinarily varied. (Hoffmann, 1966)

For the analysis of consequence of nuclear proliferation, Hoffmann argues, the important but complex factors should be carefully examined such as (1) The rate of proliferation: slow, gradual, or fast, sudden; (2) The places of proliferation: foreign
policy objectives, political stability, military technology, alliance; and (3) The security dynamics of the region.

Harald Muller, “Viewpoint: Neither Hype nor Complacency” recognize both power and norms in nuclear proliferation and nonproliferation: “...While realism describes important variables of international relations at the systemic level, it fails to account sufficiently for the countervailing effects of international norms and the institutional structures in which they are embedded. It also glosses over the internal structures, including normative ones, of nation-states. Both factors play a major role in nuclear proliferation and nonproliferation. ...(62-71).

**Critiques of common understanding of proliferation by Harald Muller**

- The proliferation problem is neither global nor generic, but regional and specific.
- Proliferation is not a natural consequence of “shrinking umbrellas”. Power vacuums and changes in alliance coherence do not inevitably lead to a drive towards the bomb.
- Technology diffusion does not automatically lead to horizontal proliferation. There is no linear, causal relationship between holding technology and abusing it for weapons purposes.
- Proliferation is neither inevitable nor irreversible. The lust for proliferation is not a natural corollary of national development in an anarchic international system.
- Proliferation affects political balances, at most, marginally. The impact of nuclear weapons on power balances in the past was astonishingly small. The consequences of proliferation on world politics might be far less than we would expect at first glance (Muller, 1997).
Nicholas J. Wheeler and Simon J. Davies (1999), “Security, nuclear proliferation and the end of the Cold War” seek for a middle way between proliferation optimism and pessimism: “…The challenge is to refute both the utopianism of the Walzian realists and the stoical fatalism of those who would condemn us to an inescapable future of periodic nuclear disaster. The most promising long-term hope for controlling and reversing nuclear proliferation lies in strengthening those processes that marginalize the role of nuclear weapons in international politics…” (136-159).

Richard Betts (2000), “Universal Deterrence or Conceptual Collapse? Liberal Pessimism and Utopian Realism” claims that debates on Weapons of Mass Destruction tend “to turn typical thinking upside down”. Betts characterizes the debate on the effect of nuclear proliferation and stability as “liberal pessimism” and “utopian realism”. “For some of these actors, [as utopian realists expect] getting a strategic deterrent from WMD may improve their security, and sometimes the spread may even avert conventional wars that might otherwise occur in unstable regions. But for traditionally pessimistic realists as well as liberals, what may sometimes be good for weak and vulnerable states will not ultimately be good for those whose strengthen and security can only be compromised by proliferation…”(2000).

The academic debate on nuclear proliferation mismatch conventional wisdom and policy debates on proliferation. “…The Waltz argument cannot be brushed off, but surprisingly few academic strategists besides Scott Sagan have refuted it in detail. Although most intellectuals as well as normal people oppose proliferation, writings arguing the benefits are more obtrusive in the literature of international relations theory. Why this difference between conventional wisdom [or proliferation pessimism] and
some currents of academic fashion [like Waltz’s proliferation stability optimism]? … The main reason is the worry that real statesmen may not always have the courage of Waltz’s convictions, that one exception to the rule may be too many, and that the ramifications of the first breakage of the half-century taboo on nuclear use are too unpredictable to tempt us to run the experiment. If the probability that nothing will go seriously wrong in any one case of proliferation is a reassuring 90 percent, the odds that nothing will go seriously wrong in any of them decline steadily as the number of cases grows. In short, when it comes to nuclear weapons, “very” stable in “almost all” cases is great for purposes of theoretical clarification, but not good enough for purposes of policy prescription…”(Betts 2000: 63-66).

Betts suggest to use both realist and liberal theory intelligently in practice: “…The utopian realists are right about the statistically probable effects of proliferation in any specific case, but the liberal pessimists are right about the ultimate general effect. The first exception to the utopian rule may upset all confidence in stable order and set off dangerous behavior. But while the liberal diagnosis is a better guide to the danger, realist norms- relying on incentives based on interest rather than on law or preachment – are a better guide to policy. … The United States should act as if the utopian realists are wrong, but hope that they are right.”(Betts 2000: 52-85)

The spread of nuclear weapons pose fundamental questions to our thinking, theory and practice in nuclear weapons. This nuclear debate has been enhanced by Kenneth Waltz and Scot Sagan and the development of nuclearized South Asia today. It is noteworthy that the spread of nuclear weapons question the legitimacy and rationale of the NPT, and also echoes Brodies’ three theme of nuclear weapons: nuclear deterrence, the revolutionary weapons, and the international control of nuclear weapons.
NUCLEAR DISARMAMENT AFTER THE COLD WAR

The NPT set three main objectives: nuclear non-proliferation, civil nuclear cooperation, and nuclear arms control and disarmament. Although nuclear disarmament was regarded as a pipe-dream in front of the reality of nuclear arms race during the Cold War, the end of the Cold War has changed the context and discourse of nuclear disarmament agenda. These changes in nuclear disarmament debates can be seen in the NPT Review Conference and various disarmament proposals and initiatives.


The Tokyo Forum, *Facing Nuclear Dangers*, express the Japanese disarmament policy orientation: "...A core question in the nuclear disarmament debate is whether nuclear deterrence or the abolition of nuclear weapons offers more national, regional, and global security. States possessing nuclear weapons continue to claim that they enhance their national security. But their actions may also have led rivals to acquire weapons of mass destruction, leading to diminished security for both these states and their non-nuclear neighbours. National, regional and global security has not been enhanced by
the possession of nuclear weapons…”(44-45).

*Japan’s Disarmament and Non-Proliferation Policy* (2004) is a useful booklet aimed to promote deeper understanding on Japan’s diplomatic policy in the area of the disarmament and non-proliferation. It deals with nuclear/WMD weapons and conventional arms, regional case studies, and non-proliferation regimes and international/regional efforts. This booklet provides a bird’s-eye-view on the overall picture of Japan’s disarmament and non-proliferation policy in the simplest words and phrases with many figures and photos.

Carl Ungerer and Marianne Hanson, (ed.), *The Politics of Nuclear Non-Proliferation* (2001) provide global and regional analyses of contemporary nuclear arms control and disarmament. In spite of an eclectic range of viewpoints and case studies, a common belief and recognition of this volume is a liberal viewpoint: “…nuclear disarmament and non-proliferation are two sides of the same coin – one cannot be achieved in isolation from the other…” They argue the case for progressive arms control and disarmament that “…a discriminatory non-proliferation regime cannot be sustained indefinitely. The consequence of maintaining such an imbalance in international security relations could be the further weakening of non-proliferation norms and the attendant security risk that this would bring…non-proliferation is beneficial to the longer-term security interests of all states (including those currently with nuclear weapons) but that non-proliferation itself is inevitably linked to advances in disarmament…”

Gold blat, *Arms Control* argues the case for arms control and disarmament. “States become persuaded that the possession of nuclear weapons is a liability rather than
an asset and that a nuclear-weapon-free world will be safer than a world with nuclear weapons.” (2002: 133-134)

Michael Quinlan, “Abolishing Nuclear Armories: Policy or Pipedream?” (2007-08) argue that the end of the Cold War stimulated the studies of nuclear disarmament. Nuclear debates on “nuclear disarmament and abolition” cause a wide divergence between two polarised extremes from “the righteous abolitionists” to “the dismissive realists” (7-16).

Baylis and O’Neill’s edited volume *Alternative Nuclear Futures* (2000) gives a comprehensive picture of the different positions related to the nuclear future.

The proposals for the abolition of nuclear weapons have been discussed in the 1990s, but international efforts have been declined in the 2000s. In response to the revival of nuclear disarmament agenda, realists, especially strategic realists, strongly criticize the liberal agenda of nuclear disarmament.

Lawrence Freedman (1997), “Nuclear Weapons: From Marginalisation to Elimination?” is a staunch realist critique of liberal disarmament proposals after the Cold War.

Colin S. Gray, *The Second Nuclear Age* (1999) argues that “…nuclear abolition is feasible and desirable” is a harmful flaw and mischief. “…Nuclear abolition is impractical … To argue for a policy that is inherently and permanently impractical has to be foolish, given that it can raise public expectations that cannot be fulfilled, it wastes scarce intellectual effort, and it can serve as a counsel of perfection that destabilizes more
sensible nuclear policy…."(84). His provocative thesis warns that “we should not be lulled by five-plus decades of nuclear peace in to the complacent” but “we continue to live in a nuclear era” together with increasing threats, risks, and dangers of WMD. Gray emphasizes more continuity than change of the nuclear problem and condition after the Cold War. He criticizes a range of liberal hopes as “nuclear-fallacies”.

Charles Glaser, “The Flawed Case for Nuclear Disarmament” (1998) criticize nuclear disarmament advocates claiming that “…disarmament appears more likely to increase than decrease the probability of nuclear war between current nuclear powers. While it would reduce the probability of nuclear escalation in a limited set of scenarios, disarmament has two major drawbacks: it could contribute to a downward spiral if political relations begin to sour; and rearmament races promise to be more dangerous than deployed forces…” (Glaser, 1998)

These literatures indicate that the debate on nuclear disarmament remain unsolved and increasingly problematic today. As this nuclear disarmament issues has been the central dispute at the NPT Review Conference, this agenda add more and more difficulties or problems to the NPT and its non-proliferation regime. It is necessary to examine the relationship between nuclear non-proliferation and disarmament issues in the NPT.

THE NPT REGIME AFTER THE COLD WAR

The problem of nuclear proliferation has been regarded as a more salient security issue after the Cold War. A large number of works were published on the NPT and its non-proliferation regime. Various debates and issues such as WMD and nuclear
proliferation, and great powers' arms control and disarmament leads to the question about the traditional NPT-based non-proliferation approach.

Garry Gardner (1994), *Nuclear Nonproliferation: A Primer* provides a comprehensive overview of nonproliferation from the technical issues to the history and politics of nonproliferation efforts, regime and treaties in a clearest words and phrases.

Diehl and Moltz, *Nuclear Weapons and Nonproliferation* (2002) explains the parallel development of nuclear weapons and associated nonproliferation efforts through the beginning of research into atomic fission, through the making of nuclear weapons in the US and eventually eight other countries. It also describes issues, debates and controversies on nuclear weapons from the role of nuclear weapons to the reason of non-proliferation, the CTBT and nuclear disarmament efforts in a clear expression.

Joseph Pilat and Pendley’s *Beyond 1995: The Future of the NPT Regime* (1990) is a collection of essays, which tries to answer the question: “Does the NPT have a future beyond 1995?” Benjamin Sanders, Lewis Dunn, David Fischer, and Joseph Pilat explore the probable consequence of the NPT demise and extinction. “...The authors have sought to evaluate the prospects for, and the value of, a continued multilateral nuclear weapon nonproliferation regime, with special attention to the NPT, to assess the actual and perceived failings of the regime; and to define policy initiatives that may be required...”(5) “...For the majority of authors the decline or demise of the NPT would appear as a tragedy for nonproliferation and arms control efforts and would have consequences for regional and global security...”(168) Although the 1995 NPT REC decided indefinite extension successfully, this volume is insightful to remind us the importance of the NPT, and its problems and criticisms, and to search for a desirable
Kathleen Bailey, *Strengthening Nuclear Nonproliferation* (1993) examines various measures of nuclear non-proliferation efforts including the NPT and its non-proliferation regime. This is a balanced analysis combining both demand and supply side approaches to nuclear proliferation issues.

David Fisher's *Stopping the Spread of Nuclear Weapons* (1992) is a study of non-proliferation efforts and the non-proliferation regimes covering history, case studies, the prospects and the policies required. It examine and reassess "the Atoms for Peace", the NPT, safeguards and controls. This study is useful to understand the NPT-based non-proliferation regime and various players of the nuclear-weapon states, the non-nuclear-weapon states, and the threshold states.

David Fisher, *Toward 1995: The Prospects for Ending the Proliferation of Nuclear Weapons* (1993), published by the UNDIR, examines nuclear proliferation, the nuclear non-proliferation regimes/measures, and the prospects of containing proliferation, especially focusing on the 1995 NPT Review Conference, crucial to the direction of the NPT. Fisher explains the issues on each of the Articles of the NPT in detail and their bearings on nuclear and conventional disarmament and a CTBT are examined.

nonproliferation regime.

Joseph Cirincione (2000), *Repairing the Regime: Preventing the Spread of Mass Destruction* is a significant volume which seeks “to provide a comprehensive assessment of the global non-proliferation regime as it currently exists, to identify weakened areas, and to other positive suggestions for repair”. Cirincione’s historical overview of the regime and Dhanapala’s analysis of the state of the regime are well argued from liberal institutionalist perspectives.

For understanding of the 1995 NPT Review and Extension Conference, Dhanapala, *Multilateral Diplomacy and the NPT: An Insider’s Account* and Graham, Jr., *Disarmament Sketch* provides a valuable diplomat account of policy-making process of the NPT. Conference President Dhanapala and American representative Graham, Jr. agree the importance of the NPT’s three pillars and central bargain between NWS and NNWS, so vital to the NPT.


These literatures on the NPT and its non-proliferation regime indicate that the NPT and its non-proliferation regime face various challenges and problems after the Cold War and September 11 Terrorism. It is also noteworthy that a wide gap of perceptions and
interpretations of the NPT can be observed regarding what are the main objectives and nature, and what the NPT and its non-proliferation regime can and should do. Facing both nuclear proliferation problems in South Asia, East Asia and West Asia, and stale disarmament negotiations and progress, these contesting issues seem to become increasing problematic in the last decade.

THEORETICAL APPROACHES TO THE NPT AND NUCLEAR REGIME

The previous literatures show that the NPT is perceived in various ways and meanings. Considering the complexity, uniqueness and size of the Treaty regime, theoretical approaches will be quite rewarding to analyze, explain, and understand the characteristics, meanings and nature of the NPT.

Gompert, Mandelbaum, Garwin, and Barton, *Nuclear Weapons and World Politics: Alternatives for the future* (1977) analyzed ideal types of an international nuclear system and speculate possible models and scenarios. Gompert argues:

"...A sense of direction about the nuclear future must emanate from a basic philosophy about the meaning of nuclear weapons and how to govern them...a nuclear regime may be thought of as a system of international obligations (formal accords, tacit commitments, and informal understandings), national force structures (how many and what kinds of weapons), and doctrines (when, where, why, how, and which nuclear weapons ought to be used) that together govern the role of nuclear weapons in war, peace, and diplomacy. Each regime is based on a set of values and goals and on certain premises about the dangers and virtues of nuclear weapons. Each is shaped by certain expectations about the political and technological future. A preference for one regime over others
should be based not only upon sympathy with its underlying values, but also upon satisfaction that the specified characteristics of the regime would in fact help deliver those values…” (Gompert, 1977)

In his “Approaching the Nuclear Future”, Gompert project several ideal types. Each type roughly corresponds to bipolar stability realism, Grotian/International Society theory, liberal utopianism, and strategic realism.

- **a nuclear bipolar stability world:**
  
  ”…the First Regime (in essence, the current regime [during the Cold War] projected into the future) rests on the premise that the nuclear weapons of the United States and the Soviet Union, however they offend our intuitive sense of safety and proportionality, have in fact fostered – if not forced – moderation and stability in international politics…”

- **a world of less important nuclear weapons:**
  
  ”…The Second Regime (an ensemble of arms control prescriptions) is derived from the belief that nuclear weapons are an inescapable burden and that our efforts should be devoted to reducing dependence on them in the conduct of world politics and the maintenance of international security…”

- **a nuclear-weapon-free world:**
  
  “…The Third Regime (a “denuclearized” world) does not accept the fate of an eternal nuclear predicament. It sees nuclear weapons not as a manageable burden but as an intolerable menace and therefore seeks to ban them…”

- **a nuclear proliferated world:**
  
  “…the Fourth Regime (one of “strategic deterioration”) anticipates a number of plausible developments in technology and politics … that could undermine
strategic stability, shake world politics, and perhaps increase the chances of nuclear conflict. Specifically, it confronts several adverse possibilities: extensive nuclear proliferation, technological disequilibria, and nuclear imbalance between the United States and the Soviet Union..." (Gompert, 1977)

These Weberian ideal types (future scenarios) remains relevant to our thinking and policy toward nuclear strategy, arms control policy, and the debate on the NPT.

Zachary Davis and Benjamin Frankel, (ed.), *The Proliferation Puzzle* (1993) develops theoretical debates on nuclear (non-)proliferation after the Cold War. In this collection, Richard Betts, "Paranoids, Pygmies, Pariahs and Nonproliferation Revisited" is a strategic realist analysis of the cause of nuclear proliferation. Peter Feaver, "Proliferation Optimism and Theories of Nuclear Operations" examine the debate on the consequence of proliferation. Glen Chafetz argues the case for a republican pluralistic security community and non-proliferation. This is a pioneering volume on the theoretical debate on nuclear non-proliferation, and it needs more development on this theoretical inquiry of the proliferation puzzle.

**Liberal approach**

Jayantha Dhanapala (2001), "Multilateralism and the Future of the Global Nuclear Nonproliferation Regime" explore two understandings of the non-proliferation regime: "...In the nuclear realm, the unilateralist sees nonproliferation as either an end in itself, or more precisely, a means to pursue the end of maximizing the national interest. The multilateralist, mean while, is more likely to view nonproliferation as a means to pursue common security benefits that would be most reliably achieved through the physical elimination of the deadliest of the world's weapons..." (2001).
Keith Krause, (ed.), *Culture and Security: Multilateralism Arms Control and Security Building* (1999) is a volume to explore alternative viewpoints of arms control and security in theory and practice. Policy, practice and discourse in security should not be taken as ‘objective’ but they work within the shared images, cultures, and the structures of meaning. Krause observes that: “…the ‘multilateralization’ and regionalization of security, the rapidity of global change and the interdependence of states and regions have meant that the cross-cultural aspects of contemporary security dialogues have assumed a much more prominent place in policy debates....”


Trevor McMorris Tate, “Regime Building in the Non-Proliferation System” (1990) is a liberal institutionalist analysis of the non-proliferation regime, which is consisted of various laws, rules, norms, and policies.

Michael McCurry (2005), “The rise and fall of the NPT: an opportunity for Britain” is a liberal critique of the US/West military and nuclear policy. McCurry strongly argues the case for nuclear arms control and disarmament.

**Realist approach**

the neo-realist case for bipolar stability of the Cold War. Whereas Waltz is defensive realism, Mearsheimer is offensive realism to predict the demise of bipolarity lead to a multi-polar world and great powers’ intensive competition.

Steve Weber, “Realism, Détente, and Nuclear Weapons” (1990) modified structural realist arguments that “…the condition of nuclear deterrence constitutes a structural change in the international political system…” The US and the USSR’s joint custodianship to provide extended nuclear deterrence functioned as bipolar stability in the 1970s-80s.

Benjamin Frankel, “The Brooding Shadow: Systemic Incentives and Nuclear Weapons Proliferation (1993) is a structuralist critique of the effectiveness of the NPT-based non-proliferation regime, arguing that the end of bipolarity and the emerging multipolarity is likely to intensify further nuclear proliferation.

Bradley A. Thayer, “The Causes of Nuclear Proliferation and the Utility of the Nuclear Nonproliferation Regime” (1998) is a realist critique of the utility and effectiveness of the non-proliferation regime. Thayer argues that “...the NPT and the nuclear non-proliferation regime fail in their primary goal, they cannot stop nuclear proliferation for states that are determined to acquire nuclear weapons...It is because the cause of nuclear proliferation is the insecurity of states and the regime does nothing to address this insecurity…”(76).

T. V. Paul, “The NPT and Power Transitions in the International System”(1998) is a neo-realist approach to the NPT and its non-proliferation system drawn from power transition theories. Paul argues that “... A major danger of the extension of the NPT in
perpetuity is that it has frozen the nuclear status of the present five while disallowing future great powers from acquiring these weapons…”(70).

Rajesh Rajagopalan, “Why the Non-Proliferation Regime Will Survive”, and “The Prospects for the Nuclear Non-Proliferation Regime”(2005) are a structural (hegemonic) realist critical view of the nuclear non-proliferation regime. Rajagopalan argues that “…it [the NPT] is the strongest international security regime in existence. It is strong not because it embodies the common interest of the international community but of embodying the strongest of its members…”(2005:13).

Ira Straus “Reversing Proliferation” (2004) insists an American neo-conservative (hegemonic stability realist) view of the non-proliferation regime. Straus argues the necessity of the US leadership to make the non-proliferation regime stronger to counter nuclear proliferation effectively.

*Grotian/ International Society approach*

Bull’s *The Control of Arms Race, The Anarchical Society*, and *Hedley Bull on Arms Control* (1987) provide a wide range of insightful analysis of nuclear disarmament, arms control, and non-proliferation in world politics based on his Grotian/classical approach. His arguments and papers, originally written in the 1960-70s, are still relevant to world politics today.

Roger Smith, “Explaining the non-proliferation regime: anomalies for contemporary international relations theory”(1987) examines the hegemonic stability theory and the functional (neo-liberal) theory approaches to the non-proliferation regime. By critically examining “…an analytically limiting parsimony in the realm of
independent variables”, Smith suggests “a more promising avenue of research for regime analysis might be amending the functional theory to make it more consistent with the ‘Grotian’ assumptions…”(281).

William Walker considerably develops this Grotian tradition to analyze the international nuclear order. His ‘Nuclear order and disorder’(2000) argue that the Cold War nuclear order was based on “two linked systems”: a managed system of deterrence and a managed system of abstinence. He concludes that “…there has to be nuclear order, but that order is much more than a structure of power and a set of deterrent relations, just as it is much more than a security regime rooted in international law. It is a complex edifice founded on instruments of both power and law which is held together by mutual interests and obligation…”

Walker’s Weapons of mass Destruction and International Order (2004) examines international nuclear order from its development during the Cold War, its two diverging paths in the post-Cold War, and the breakdown of WMD order since 1998. It argues that “…A re-establishment of order cannot however be achieved merely by identifying disturbing events and trends and designing policies to alleviate them, important though that task may be. It has to be rooted in an understanding of international order — and of the ‘WMD order’ … and its historical construction and recent destabilization. Above all, it requires an understanding of the nature and effectiveness of ordering strategies and of the forces shaping them in given periods…” According to Hassner’s review, “…nobody since the early works of Kissinger and Bull had tackled the problem of the relationship between the nuclear and the political international order head on. Walker’s dazzling analysis presented a unique combination of philosophical, political and strategic considerations …” (Hassner, 2007:455).
William Walker's more provocative thesis, "Nuclear enlightenment and counter-enlightenment" (2007) analyzes the problem of international nuclear order -- more than the problem of proliferation, or of non-compliance, and on recovery --. It argues that "the effort to construct such an [effective, legitimate and durable] order displayed the characteristics of an enlightenment project, with its emphasis on balance and rationality, the quest for justice and trust among states, the feasibility of instrumental regulation, and the attachment to hope and progress." According to Hassner, "by doing this Walker makes his argument more profound and challenging but also more vulnerable and, in some respects, closer to being misleading". Walker's stimulating and provocative thesis is critically analysed by various contributors in a special volume of International Affairs (May 2007).

These theoretical works suggest various interpretations and understanding of the NPT and nuclear futures. It is important to recognize that our view and arguments on the NPT are based on some theoretical assumptions. Realist theory, liberal theory, and Grotian/International Society theory are classical IR theories, which should contribute to our analyses, explanations, and interpretations of the NPT.

RESEARCH QUESTIONS

This chapter reviewed the literatures on various themes relevant to this research on the NPT. This literature review indicates some research puzzles or questions, which this thesis aims to answer.
The NPT is unique in that it is regarded as the most successful case of an international security regime. Realists argue that international regimes are desirable but very difficult to create, maintain, and develop. It can work for the specific interests of great powers. Liberals are largely quiet in dealing with international regimes due to its enormous difficulties. If possible, it can serve for common interests in member-states in the international regime/society. These theoretical research agendas in international regimes study shed fresh light on the NPT: What are the causes and sources of dynamics and evolution of the NPT regime?

The NPT is noteworthy that it has developed as an international law in the international society, which has almost universal membership. It is also unique in that it is very discriminatory in spite of the salience of nuclear weapons and deterrence in international security and the principle of reciprocity in international law and society. The contesting debates in the NPT Review Conference show the contesting demands for justice in the international society. These International Society perspectives shed new light on the NPT: How did the NPT evolve as an international law in the international society? How does the NPT reflect the dilemma between the demand for order and various calls for justice?

- Why did the NPT evolve into a global security regime by the 1990s?
- Why does the NPT face troubles and crises since the late 1990s?
- How did the NPT work? How should it work? How can it work?
- How did the NPT evolve as an international law in the international society?
- How does the NPT reflect the dilemma between Order versus Justice?
This research uses three classical IR theories to answer to these main research questions. The hypothetical theoretical views of the NPT are as below:

### Realist, Liberal, and Grotian/International Society approach to the NPT

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### CONCLUSION

This chapter aimed to review the literatures on the NPT and relating nuclear issues, to clarify the main questions of this research. This review cover a range of issues relating to the NPT because the NPT set multiple objectives of nuclear non-proliferation,
civilian nuclear cooperation, and arms control and disarmament, and also because the NPT can not separate from various policy debates, strategic thoughts, and ideological stands in international security and world politics in general. Bernard Brodie’s pioneering volume *The Absolute Weapon* (1946) poses the three themes on nuclear weapons in world politics: (1) the revolutionary nature of nuclear weapons, (2) nuclear deterrence, and (3) the international control of nuclear weapons. Nuclear arms control and disarmament have been discussed since the birth of nuclear weapons. The study of nuclear arms control developed in the 1960s. Hedley Bull’s classics ask the fundamental questions about nuclear arms control, disarmament, and non-proliferation in international order and justice. The end of the Cold War changed the narratives and agendas in international security. On the one hand, WMD proliferation has become one of the top security agenda. On the other hand, the debates on nuclear disarmament have become more intense. The NPT is at the heart of these debates because this Treaty set the basic norms and rules on nuclear non-proliferation, arms control and disarmament efforts, and international nuclear order and justice. Efforts in controlling of nuclear weapons are as old as the history of nuclear weapons. The Nuclear Non-Proliferation Treaty was created in the 1960s and evolved into a global security regime by the end of the 20th century. Though the importance of the NPT-based non-proliferation regime is widely acknowledge in the international society, many criticisms and problems have been raised at the NPT Review Conference held every five years. Although the NPT-based non-proliferation regime successfully overcame challenges in the first half of 1990s, the NPT face challenges and crises in many ways. As these debates on the NPT are quite confusing and complicated, it is necessary to approach to the NPT through the lenses of theory. Theoretical approaches to nuclear proliferation have debated on the causes and consequences of the spread of nuclear weapons. There are some insightful works on theoretical approaches to nuclear non-proliferation and prospects, such as Zachary Davis and Benjamin Frankel (eds.), *The
Proliferation Puzzle. Even though some scholars attempt theoretical approaches to the NPT-nonproliferation regime, this debate has left so much room to be explored.

This literature review indicates that there are no consensus on the basic interpretation, understanding and role of the NPT in history, theory, and practice. International theories shed fresh lights on the debate on the NPT. The study of international security regime has been developed by Neo-realist and Neo-liberal theory. Some scholars, like Hedley Bull, Stanley Hoffmann, Roger Smith, and UMEMOTO Tetsuya suggest that Grotian/International Law and Society approach is more promising to enhance our explanations and understanding of the NPT. This thesis seeks for the answers to the problem of dynamics, evolution, role and meanings of the NPT. It is necessary to re-examine the NPT through the lenses of classical and contemporary international theories to shed fresh light on this contested contemporary issue.