

The Proliferation Of Nuclear Weapons

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Abstract

This article examines the proliferation of nuclear weapon. It asks the following questions: why do nations go nuclear, what is the impact of nuclear proliferation on global security, how to stop nuclear proliferation, and to what extent is the global nuclear regime successful in preventing nuclear proliferations. It will be argued that, *first*, no single factor is able to explain why nation go nuclear. It is necessary to consider a range of variables which may have an influence on nuclear proliferation decisions. *Second*, in contrast to pro-proliferation position, it argues that the nuclear proliferation is very dangerous for the global security. *Third*, the global nuclear non-proliferation regime, Non-Proliferation Treaty, has achieved mix result. Most states comply with the rule of the regime because they see that their national interests are congruent with the regime. However, there are negative developments: there are states (Israel) that refuse to join NPT; some other states defy the rule of the regime. Finally, it goes on to argue that international community should strengthen the NPT regime to make a safe and secure world.

Keywords: nuclear weapon, proliferations, non-proliferation treaty (NPT), regime, global security

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Introduction

This article discusses critically the proliferation of nuclear weapon and its consequence on global security. This issue is very important because since the advent of nuclear weapons and their unprecedented capacity for wreaking destruction across national borders at the end of World War II, nuclear weapon has totally transformed the global security and strategy. Although “only” five states (the USA, Russia, Britain, French, and China) are acknowledged “formally” as possessing nuclear weapons, several other states (such as, Israel, India and Pakistan) have also developed their own nuclear capabilities. In Northeast Asia, North Korea is also believed to have developed its own nuclear capability. The concern about the spread of nuclear weapons has increased significantly on the global agenda since the end of the Cold War, especially after the collapse of the Soviet Union. The dissolution of

the Soviet Union, which left nuclear weapons deployed in several ex-Soviet republics, has created serious concern that new republics could damage the cause of non-proliferation.

This article tries to examine critically the politics of nuclear weapon: why do nations go nuclear, what is the impact of nuclear proliferation on global security, how to stop nuclear proliferation, and to what extent is the global nuclear regime successful of preventing nuclear proliferations.

Why nations go nuclear?

The first important question is: why do nations go nuclear? Since the United States used atomic bombs against Japan destroying Hiroshima and Nagasaki in the Second World War, other nations also tried to follow to develop their own nuclear capability: the USSR (1949), Britain (1952), France (1960), and China (1964). Is there a systematic pattern that underlies decisions of nations to acquire nuclear weapons?

Three general classes of schools of thoughts can be identified in the nuclear proliferation literature.¹ The first perspective posits that nuclear technology itself is the driving force behind decisions of nations to acquire nuclear weapons—that a technology imperative pushes nations from latent capacity to operational capability. Governments

“decide” to go nuclear because the technology is available, thereby making the technical or financial costs manageable and the opportunity irresistible.

The second perspective posits that the quest for nuclear weaponry as resulting from the systematic effects of a discrete set of political and military variables. Nuclear weapons are one of a number of policy options nations may pursue in trying to accomplish foreign, defence and domestic policy objectives. Proliferation decisions therefore are motivated by political and military considerations, and when the proper political-military conditions come together a proliferation decision follows.

The third perspective posits that the nuclear proliferation process as largely ideographic. Countries go nuclear because particular individuals and particular events come together at specific times and create the proper conditions. However, the mixing of variables is random and yields unpredictable results. Thus decisions to initiate nuclear weapons programs are *sui generis*.²

Darryl Hewlett³ also has interesting analysis of why nations go nuclear. He observes that traditional analysis of the motivational aspect of nuclear weapons acquisition tended to focus on the strategic or political rationales which led first, the United States, and then the

Soviet Union, United Kingdom, France, and China to seek nuclear weapons. The strategic motivation focused on the role that nuclear weapons played in the context of the Second World War and its immediate aftermath when initially they were seen as war-fighting or war-winning weapons.

Later on, as Darryl Hewlett⁴ notes, attention of the analysts shifted to the role that nuclear weapons played in deterrence, leading to the assumption that one of the principal motivations for acquisition was *the deterrence* of other Nuclear Weapon States. In addition to these strategic motivations, the political benefits that nuclear weapons conferred on those states with the wherewithal to manufacture them were also deemed significant: nuclear weapons were seen as the most modern form of their technological prowess, were automatically to be afforded a seat at the "top table of international affairs." Inherent in traditional analysis of nuclear weapons acquisition was also a form of technological determinism that states seeking a nuclear weapons capability would tread the same path as the five Nuclear Weapon States. Thus, new nuclear weapon states would develop dedicated military nuclear facilities, conduct an overt nuclear test, produce a stockpile of weapons, and finally, acquire an effective means for delivering the weap-

ons to their target. While this explanation of the acquisition process and the motivations for embarking on a nuclear weapon program is still relevant, over time, our understanding of the dynamics of nuclear proliferation have become more complex.

It is now more difficult to explain the phenomenon of nuclear proliferation by only resorting to a single variable. Increasingly, it is necessary to consider a range of variables which may have an influence on nuclear proliferation decisions.⁵ These include such variables as: technological dynamics, the idea that the very availability of nuclear technology and a cadre of trained nuclear scientists encourages acquisition; domestic imperatives, the notion that domestic political events may compel a state towards nuclear weapons; diplomatic bargaining, that acquisition of a nuclear capability can be used to influence or bargain politically with both perceived allies and enemies; non-intervention, that a nuclear capability can deter or prevent intervention by other states; and finally, economic factors, the idea that the very possession of nuclear weapons enables a state to extract economic concessions as part of a political bargaining process

In fact, nations have their own different reasons to poses their nuclear weapon. For instance, the five perma-

ment member of United Nations Security Council has various reasons.⁶ For the United States, possession of nuclear weapons not only prevents nuclear attack from other weapon states, such as Russia and China; it also inhibits large-scale conventional war between the Weapon states or between weapon states and other states. Possession of nuclear weapons thus provides valuable insurance against major armed conflicts that could require United States participation. In the view of many senior U.S. officials, even in the absence of a declared U.S. policy to use nuclear weapons in response to attack by chemical or biological weapons, the mere possession of nuclear weapons can deter use of chemical and biological weapons against the U.S., its allies, or U.S. forces overseas.

For Russia, nuclear weapons are its sole claim to great power status. Russia's nuclear weapons provide an obstacle to total U.S. domination of Russian policy and a main source of foreign aid. Without nuclear weapons, Russia might be left in isolated misery. In addition, in the minds of Russian officials, Russia's nuclear arsenal has become the answer to the collapse of the Soviet Union and of Russia's armed forces, and to the nameless threats that arise from that collapse.

For France and Britain, nuclear weapons confer national status and some insurance against the recurrent nightmare that the United States, moved by unpredictable domestic political currents, will abandon them in a moment of security crisis, perhaps with Russia, or even somehow turn against them. For China, nuclear weapons have from the outset been a means of countering domination by the Soviet Union and the United States.

Besides the five-declared nuclear-weapon-states, other nations are also believed to have ambition (and some has already) developed nuclear weapon i.e. Brazil, Argentina, South Africa, Israel, India, Pakistan, North Korea, Iran.⁷ The spread of this weapon certainly has serious impact on global security and stability.

The Implication on global security

The next question is: what is the implication of nuclear proliferation on global security? It seems easy to argue that "the spread of nuclear weapon is dangerous for international security." However, the answer is not that simple. There are academic controversies within the study of international security: between scholars who are pro-proliferation vs. anti-proliferation. Let's examines the controversy.

The pro-proliferation is put forward by Kenneth Waltz⁸ in the early 1980s who arguing that “the more may be better”. This thesis has been restated more recently to account for any changes brought about by the end of the Cold War. Waltz adopts a theory of nuclear spread rooted in neo-realist theory. This places considerable emphasis on structural causes, which emphasizes that the units of an international political system tend to their own security as best they can. This includes acquiring nuclear weapons to deter potential adversaries. Waltz’s initial thesis was advanced at a time when the East-West strategic relationship was still predominant and caused controversy because of his assertion that the spread of nuclear weapons should be viewed in positive rather than negative terms.

What exactly are his main arguments? Kenneth Waltz⁹ argue that, *first*, nuclear weapons have spread rather than proliferated because these weapons have proliferated only vertically as the Nuclear Weapon States have increased their arsenals. *Second*, 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. *Third*, the gradual spread of nuclear weapons is better than either no spread or rapid spread. *Fourth*, 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. *Finally*, the likelihood of war decreases as deterrent and defensive capabilities increase and those nuclear weapons, responsibly used, make wars hard to start.

At end of the Cold War Waltz’s assertion that the spread of nuclear weapons to additional states may result in greater stability has met with some support. Other scholar, such as John Mearsheimer, has argued, for example, that the acquisition of the capability to manufacture nuclear weapons by India and Pakistan has introduced a new cautionary factor in their decision-making and created a kind of strategic stability between these two neighbouring states. John Mearsheimer¹⁰ has also adopted a positive approach to nuclear proliferation by advocating that the world would be more stable if states such as Germany and Japan became nuclear-weapon states.

Yet the above view is not held widely with the predominant opinion opting for a “more may be worse” assessment. Scott D. Sagan show that Waltz and Mearsheimer are ‘proliferation optimists’, a position which he suggests “flows easily from the logic of rational deterrence theory: the possession of

nuclear weapons by two powers can reduce the likelihood of war precisely because it makes the costs of war so great." Sagan offers an alternative position to the proliferation optimists, rooted in organization theory, which leads to a more pessimistic view of nuclear proliferation and the prospects for future stability.¹¹ He maintains that it is too optimistic to expect a rational deterrence arrangement to operate between any future new nuclear weapon states in the way that Waltz and others postulate. By contrast, Sagan argues that the most appropriate way forward is to encourage *alternative arrangements* which seek to reduce the demands for nuclear weapons and for strengthening the global nuclear non-proliferation regime, especially the NPT.

Let's look closer at Sagan's¹² 'proliferation pessimism' arguments. He maintains that, *first*, professional military organizations, because of common biases, inflexible routines, and parochial interests, display organization behaviours that are likely to lead to deterrence failures and deliberate or accidental war. *Second*, 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.

Waltz' and Mearsheimer's argument seems unacceptable by policy makers within international community. It is clear that "international community" support Sagan's view: nuclear proliferation is dangerous and must be stopped. The efforts to stop the spread of nuclear weapons have become known as the global nuclear non-proliferation regime which developed since 1945. The regime (Nuclear Non-Proliferation Treaty, NPT) was opened for signature on July 1, 1968.

Nuclear Regime: Non-Proliferation Treaty (NPT)

The next question is: how to stop nuclear proliferation? What is the essence of the nuclear regime as stipulated in the Non-Proliferation Treaty? Nuclear proliferation regime comprises an integrated network of arms control and disarmament treaties and other standard-setting arrangements which today provides a comprehensive framework for the behaviour of states, international organizations and other actors in the nuclear area.¹³ The prevention of nuclear proliferation in the future will therefore be dependent upon the capacity of the global nuclear non-proliferation regime to deal effectively with the range of demands for nuclear weapons that are likely to emerge.

Treaty on the Non-Proliferation of Nuclear Weapons (NPT) opened for signature on July 1, 1968, and entered into force on March 5, 1970. The Nuclear Non-Proliferation Treaty (NPT) defines “nuclear weapons states” as states that have “manufactured and exploded a nuclear weapon or other nuclear explosive devices prior to 1 January 1967.” According to NPT, 14 the five nuclear weapons states acknowledged by the treaty—the United States, Russia, the United Kingdom, France, and China—agree not to transfer nuclear weapons or nuclear explosive devices or to provide any recipient with the technology needed to process, use, or produce special fissile material. They also agree not to assist, encourage, or induce any non-nuclear weapons state to acquire or manufacture nuclear weapons or nuclear devices. Nuclear weapons states must nevertheless facilitate the exchange of information, equipment, and material related to peaceful uses of nuclear energy, such as power generation (as well as ensure, in the treaty’s original interpretation, that benefits arising from the application of peaceful nuclear explosions be made available to non-nuclear weapons states that are party to the treaty). Finally, nuclear weapons states should continue to engage in negotiations aimed at curtailing a nuclear weapons arms race. The ultimate goal

of such negotiations should be general and eventually complete nuclear disarmament.

It also stipulated in the treaty that non-nuclear weapons states must refrain from acquiring or producing nuclear weapons or nuclear explosive devices.¹⁵ To ensure that no diversion from the peaceful use of nuclear materials occurs, non-nuclear weapons states must set up individual nuclear safeguard mechanisms in accordance with the provisions of the International Atomic Energy Agency (IAEA). As part of this process, all nuclear material belonging to a non-nuclear weapons state bound by the treaty must be declared to the IAEA and access to all civil facilities holding nuclear material must be provided to IAEA inspectors at their request.

The United Nations Security Council and General Assembly have the authority to impose sanctions against member states that are in breach of the treaty. Sanctions can include suspension of assistance, voting privileges, or rights given as a function of the treaty as well as return of materials.

The Nuclear Non-Proliferation Treaty was extended indefinitely on May 11, 1995. States party to the treaty have the right to withdraw from the treaty if they feel that “extraordinary events” related to issues regulated by the NPT are “jeopardizing the supreme in-

terest of the country.” As of September 2004, 189 states had ratified the NPT. North Korea announced its decision to withdraw from the treaty in 2002. India, Israel and Pakistan are the only states that are not, and never have been, parties to the treaty.

Who will be international watchdog if a nation breaks the rule of the NPT regime? It is International Atomic Energy Agency (IAEA) that the main task of is to ‘administer safeguards designed to ensure that special fissionable and other materials, services, equipment, and information made available by the Agency or at its request or under its supervision, or control are not used in such a way as to further any military purpose’¹⁶ The objective of safeguards is the timely, *detection* (rather than the *prevention*) of the diversion of significant quantities of nuclear material from peaceful nuclear activities to the manufacture of nuclear weapons or other nuclear explosive devices and the deterrence of such diversion by the risk of early detection.¹⁷

The IAEA safeguards system includes the application of measures for materials accountancy, supplemented by containment and surveillance. IAEA safeguards begin to operate when an agreement is signed between the IAEA and the country owning the nuclear material under safeguards which-gives the agency the right to make *ad hoc* in-

spections, routine inspections and special inspections. Inspectors are sent to the country to verify information that the country must give to the Agency about the location, identity, quantity and composition of nuclear material subject to safeguards. Many exporters rely on the IAEA to safeguard nuclear material produced in exported nuclear facilities. The main role of the IAEA is to promote the use of peaceful nuclear technology, as defined an Article II of its Statute:

*The Agency shall seek to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world. It shall ensure, so far as it is able, that assistance provided by it or at its request or under its supervision or control is not used in such a way as to further any military purpose.*¹⁸

The problem is that military and peaceful nuclear programs are, for the most part, virtually identical. In fact, the initial research and development of the nuclear fuel cycle was funded from military budgets. And, even today, the evolution of peaceful nuclear programs depends, to a large extent, on the continuing interest in many countries in acquiring the capability to fabricate nuclear weapons.

Contemporary Developments

Since the creation of NPT, efforts to stop horizontal proliferation of nuclear weapon have produced *mix result*. In fact, there are positive develop-

ments.¹⁹ First, the group of non-nuclear-weapon states, which had for many years conducted significant nuclear activities not subject to international controls (Argentina, Brazil, and South Africa), has already dismantled the nuclear explosive devices which it had clandestinely manufactured. South Africa joined the NPT as a non-nuclear-weapon state and submitted all its nuclear facilities to extensive verification measures. This first case of a nuclear-weapon state voluntarily divesting itself of its nuclear weapons has proved that nuclear proliferation is not irreversible.

Argentina and Brazil has already signed a bilateral agreement for the exclusively peaceful uses of nuclear energy; they established a common system of accounting and control of nuclear material; accepted International Atomic Energy Agency (IAEA) safeguards on all their nuclear activities to ensure non-production of nuclear explosive devices; became full-fledged parties to the 1967 Treaty of Tlatelolco prohibiting nuclear weapons in Latin America; and started contemplating accession to the NPT. All three countries—South Africa, Argentina and Brazil—have been removed from the list of so-called nuclear-threshold states posing proliferation concerns.

Second, other positive development is that the majority of non-nuclear states see the NPT as an instrument serv-

ing their national interests, because it prevents other non-nuclear-weapon countries from acquiring nuclear weapons; it fosters peaceful uses of nuclear energy; promotes nuclear trade under international control impedes misuse; and facilitates reductions of nuclear armaments by the nuclear-weapon powers.

Third, the worry about who control the nuclear weapon of the ex-Soviet republics has also disappeared. Initially, the dissolution of the Soviet Union, which left nuclear weapons deployed in several ex-Soviet republics, has created worry that new republics who poses nuclear-weapon would emerge, damaging the cause of non-proliferation. But now, all ex-soviet republics (except Russia) have no ambition to maintain its nuclear weapon.

However, there are also negative developments.²⁰ First, Israel, India, and Pakistan continue to refuse to join the NPT and refuse to give up the option to acquire nuclear weapons. Israel has developed and already produced nuclear weapons. Because of its strategic interest, the United States (and other western powers) sees no evil to Israeli nuclear program. India and Pakistan also “enjoy” the impotence of weakness of the UN Security Council so that both countries develop and possess these dirty bombs.

Second, since March 1993 North Korea withdrew from the NPT, following the IAEA request for a special inspection at two suspect sites to check whether the entire North Korean Plutonium inventory had been declared, did set a precedent dangerous for the future of the Treaty. The withdrawal, though subsequently suspended, has halted all efforts to establish a nuclear weapon-free zone on the Korean Peninsula, as envisaged in the 1992 Joint Declaration of the two Korean states. Moreover, a nuclear-armed North Korea would be seen as a threat to East Asian security. It would certainly make South Korea *consider* a nuclear weapon option; Japan might follow suit (if only US nuclear umbrella is removed).

Third, other recent development is the case of Iran. As party to the NPT, Iran is suspected by the Western powers of having secret installations to develop nuclear weapons. Different from the case of Israel, India and Pakistan, the United States put strong pressures to stop Iran's nuclear ambition. Iran argues that its nuclear program is only for energy, for peaceful means. IAEA who visit and inspect Iran convinced that Iran violates the treaty. Iran did not cooperate with IAEA as Iranian President reiterated that "Iran will not forgo its irrefutable rights" to develop nuclear energy.²¹ IAEA believes that Iran "is intent on secretly de-

veloping a nuclear weapon". On 5 February 2006, IAEA has voted overwhelmingly to report Iran to the UN Security Council for possible sanction. Finally, the UN Security Council has vote for sanction against Iran.

Conclusion

This essay discusses the proliferation of nuclear weapon and its consequence on global security. It has been argued that: First, no single factor is able to explain why nation go nuclear. It is necessary to consider a range of variables which may have an influence on nuclear proliferation decisions. *Second*, the spread of nuclear weapon is dangerous for the global security. *Third*, the global nuclear non-proliferation regime, NPT, has achieved mix result. Most states comply with the rule of the regime because most states see that their national interests are congruent with it. However, there are negative developments: some of the NPT members defy the rule of the regime; while some other states still refuse to join NPT

What should be done? The answer is that international community should strengthen the NPT regime. The efforts of the five permanent members of UN Security Council to stop the proliferation of nuclear weapon must be assertive and just. It means that they should not use *double-standards* (*i.e.* some states

are punished while others are not) in implementing the regime***

Endnote

1 Stephen M Meyer, *The Dynamic of Nuclear Proliferation*, The University of Chicago Press, Chicago, 1984, p.8

2 Stephen M Meyer. p.9

3 Darryl Hewlett, "Nuclear Proliferation," in John Baylis and Steve Smith, *The Globalization of World Politics: an Introduction to International Relations*, Oxford University Press, 1997. p.344

4 Darryl Hewlett, *ibid*

5 Darryl Howlett. p. 344

6 Jonathan Dean, "Convincing Nuclear Weapon State to Disarm: Problems of Conventional Forces" in Jozef Goldblat (ed), *Nuclear Disarmament: Obstacle to Banishing the Bomb*, I.B Tauris, The Toda Institute fore Global Peace and Policy Research, London, 2000 p.43-4

7 Frank Barnaby, *How Nuclear Weapon Spread*, Routledge, London and New York, 1993

8 Kenneth Waltz, "The Spread of Nuclear Weapon: More May be Better," *Adelphi Paper* 171, 1981 p.1-32

9 Kenneth Waltz, *Ibid*

10 John Mearsheimer, "Back to the Future: Instability in Europe after Cold War" *International Security*, 15:1 (summer), 1990.

11 Scott D. Sagan and Kenneth Waltz, *The Spread of Nuclear Weapon: a Debate*, Norton and Co. New York and London, 1995

12 Scott D Sagan, *Ibid*

13 In general, NPT is important part of global regime on nuclear weapon. Other treaties among others are Partial Test Ban treaty (PTBT) 1963, Comprehensive Nuclear Test Ban Treaty (CTBT) 1996. However, this essay only discusses NPT

14 Michael A Levi and Michael E. O'Hanlon, *the Future of Arms Control*, Brooking Institute Press, Washington DC, 2005. p.141-2

15 Michael A Levi and Michael E. O'Hanlon, p.142

16 See, article III of the IAEA Statute

17 Frank Barnaby, *How Nuclear Weapon Spread*, Routledge, London and New York, 1993 p. 125

18 Article of Treaty on The Non-Proliferation of nuclear Weapon (NPT).

19 Jozef Goldblat, Towards a Stronger Nuclear Non-Proliferation Regime, p 119-124 in John Gjelstad and Olav Njolstad, *Nuclear Rivalry and International Order*, PRIO, SACSE Publication, London, 1996

20 Jozef Goldblat, *ibid*

21 See, Scott McLeod, "Behind Iran Nuclear Defiance," *TIME Magazine*, Wednesday. Feb 15, 2006.

Daftar Rujukan

Darryl Howlett, "Nuclear Proliferation," in John Baylis and Steve Smith, *The Globalization of World Politics: an Introduction to International Relations*, Oxford University Press, 1997

Frank Barnaby, *How Nuclear Weapon Spread*, Routledge, London and New York, 1993

John Mearsheimer, "Back to the Future: Instability in Europe after Cold War" *International Security*, 15:1 (summer), 1990

Jorn Gjelstad and Olav Njolstad, *Nuclear Rivalry and International Order*, PRIO, International Peace Research Institute, Saga Publication, London, 1996

Jozcf Goldblat (ed), *Nuclear Disarmament: Obstacle to Banishing the Bomb*, I.B Tauris, The Toda Institute fore Global Peace and Policy Research, London, 2000

Kenneth Waltz, "The Spread of Nuclear Weapon: More May be Better' *Adelphi Paper* 171, 1981

- Martin B. Kalinowski, "Nuclear Arm Control at the Beginning of the 21st Century", *Security Dialogue*, Vol.(35(2), 2004
- Michael A. Levi and Michael E. O'Hanlon, *the Future of Arms Control*, Brooking Institute Press, Washington DC, 2005
- Ramesh Thakur, "Envisioning Nuclear Future," *Security Dialogue*, Vol. 31(1), 2000
- Ronald Walker, "What is To Be Done about Nuclear Weapon: A Rejoinder," *Security Dialogue*, Vol. 31(2), 2000
- Scott D. Sagan and Kenneth Waltz, *the Spread of Nuclear Weapon: a Debate*, Norton and Co. New York and London, 1995
- Stephen M. Mayer, *the Dynamic of Nuclear Proliferation*, the University of Chicago Press, Chicago, 1984