
The World After Proliferation, Deterrence and Disarmament if the Nuclear Taboo is Broken

In collaboration with the Atomic Energy Commission (CEA)

Mark Fitzpatrick

Spring 2009



Security Studies Center

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The World After

***Proliferation, Deterrence and Disarmament
if the Nuclear Taboo is Broken***

Mark Fitzpatrick

Proliferation Papers

Though it has long been a concern for security experts, proliferation has truly become an important political issue with the last decade, marked simultaneously by the nuclearization of South Asia, the weakening of international regimes and the discovery of frauds and traffics, the number and gravity of which have surprised observers and analysts alike (Iraq in 1991, North Korea, Libyan and Iranian programs or the A. Q. Khan networks today).

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Contents

Introduction	9
The Days After: The General Implications of Nuclear Use	11
Spur to Proliferation and Deterrence	11
Spur to Disarmament	13
Unprecedented Event	14
The Primacy of Context: What, Who, Where, and Why?	17
What Constitutes Use?	17
Who Uses?	18
Motivations and Immediate Results	22
The Importance of Non-Proliferation Norms	24
Conclusion	27

Introduction

The nuclear taboo is customarily seen as a black and white norm, separating the world of the familiar from that of an unknowable afterlife.¹ Nina Tannenwald argues that “once the threshold between use and non-use is crossed, one is immediately in a new world with all the unimaginable consequences that could follow.”² It is not correct, however, to say that the consequences are “unimaginable.” They are certainly unpredictable, but one can imagine at least some of the consequences. This article attempts to do so with regard to consequences for proliferation, deterrence and disarmament.

If the nuclear taboo were broken, whether by design, accident, miscalculation, or a breakdown of command and control, one of the more easily imagined consequences would be the collapse of the Nuclear Non-Proliferation Treaty (NPT).³ It is safe to assume that the use of nuclear weapons in war for the first time since 1945 would be a transformational event. But would nuclear use spell the failure of deterrence and doom the prospects of a nuclear-weapons free world, making obsolete much of the current thinking about nuclear disarmament and nuclear deterrence? Not every nuclear use scenario would necessarily break the lock on the nuclear Pandora’s Box. A “demonstration shot,” for example, would not have the same impact as nuclear obliteration of a city. Both would be breaches of the taboo, but the use of a single nuclear bomb probably would not disrupt the status quo as thoroughly as would a massive attack or a two-way exchange. Breaching the taboo would not necessarily reverse the powerful norm and tradition that has developed in the last 60+ years against use of

¹ Without prejudice to either side of the academic debate on whether the non-use of nuclear weapons since August 1945 constitutes a taboo or is the result of a prudential calculation by nation states, the author for purpose of this paper uses the terms non-use and taboo interchangeably. For elaboration on the academic debate, see Nina Tannenwald, *The Nuclear Taboo: The United States and the Non-Use of Nuclear Weapons Since 1945*, Cambridge, Cambridge University Press, 2007; Thazha V. Paul, *Power versus Prudence: Why Nations Forgo Nuclear Weapons*, Montreal, McGill-Queen's University Press, 2000; Scott D. Sagan, “Realist Perspectives on Ethical Norms and Weapons of Mass Destruction”, in Sohail H. Hashmi and Steven P. Lee, eds., *Ethics and Weapons of Mass Destruction: Religious and Secular Perspectives*, Cambridge, Cambridge University Press, 2004, pp. 73–95.

² Tannenwald, “Stigmatizing the Bomb. Origins of the Nuclear Taboo”, *International Security*, Vol. 29, No. 4, spring, 2005, p. 8.

³ Michael Krepon, “Returning to Roots: Reinforcing the NPT”, Debate at Yale Law School, October 2006.

<http://openingargument.com/index.php?name=Home&file=article&did=94>

nuclear weapons. There is no compelling logic to assume that nuclear weapons would thereby become re-legitimized as instruments of war. The breaking of the nuclear taboo could actually spur either or both of two opposite reactions: an increased salience of nuclear weapons and a stimulus to disarmament. Which impulse prevails will depend on the circumstances, including *how* the taboo gets broken.

This paper first lays out the case for each of these two disparate reactions, noting that history provides limited predictive power for what would be an unprecedented event. The paper then assesses the various circumstances in which nuclear weapons might be used, and how the context of their use would affect the development of new norms.

The Days After: The General Implications of Nuclear Use

When states are subject to conflicting political impulses, it is hard to predict how breaking of the taboo will affect national nuclear strategies around the world. Nevertheless, even if one cannot predict *a priori* how the debate would ensue, it is possible at least to sketch out what shape these impulses are likely to take.

Spur to Proliferation and Deterrence

On one hand, nuclear use would likely reinforce security concerns on the part of many states, increasing the current weapons holders' reliance on nuclear deterrence and increasing the proliferation drivers for those non-nuclear weapons states that feel vulnerable or, for reasons of national pride, seek to match that recently demonstrated power. In this sense, deterrence and proliferation can be two sides of the same coin, labeled differently according to one's perspective. The salience of nuclear weapons may rise because their use would no longer be unimaginable. To date, there has been an increasing trend to regard nuclear weapons use as unthinkable, except as a last resort, a term for which the meaning in most nuclear-armed states has become more restrictive over time.⁴ Once their actual use makes a resort to nuclear weapons no longer unthinkable, the case for delegitimizing nuclear weapons could be much harder and could well disintegrate.

Even though nuclear use may reflect a failure of deterrence, nuclear deterrence postures are likely to be strengthened by the demonstration that nations were actually prepared to use the weapons in their arsenals. Any would-be aggressors who considered attacking a nuclear-armed state or its forces would have to anticipate with a higher level of probability that the defender would use nuclear weapons in response. Until now, the stigma against nuclear use has probably made non-nuclear-armed states anticipate that nuclear weapons would not be used against them, as in the case of China's attack against US forces in the Korean War, North Vietnam's war with US forces in South Vietnam, Argentina's invasion of the UK's Falkland Islands in 1982, and Iraqi missile attacks on Israel in the 1991 Gulf War.⁵ In each of these cases, another factor served to reinforce the stigma: the attacking party was not threatening any vital interests whose defense would justify nuclear weapons use on the part of the

⁴ Tannenwald, *The Nuclear Taboo*, p. 369.

⁵ *Ibid.*, p. 3.

stronger power. In the Korean War, the Chinese came dangerously close to miscalculating in this regard, but they had good reason to believe that Washington did not consider South Korea to be vital to American strategic interests in the Far East, as Secretary of State Dean Acheson himself had indicated in his oft-quoted speech to the National Press Club of 12 January 1950.⁶ Still, the longer that nuclear arsenals were not used, the stronger the presumption grew that their non-use would continue. Tautological though it is to say so, nuclear use would end that presumption and thereby strengthen the credibility of nuclear doctrines upon which deterrence rests.

Scott Sagan argues that the phenomenon of non-use is better understood as a “tradition of non-use,” and better explained by national judgments based on concerns about prudence rather than on normative values. In this formulation, a tradition is more fragile than a taboo because it depends heavily on precedent and is easily disrupted by a violation.⁷ If he is right, the use of nuclear weapons will surely strengthen proliferation impulses. This is not to say that a one-time resort to nuclear weapons would irreparably break the taboo or trigger permission for other countries to follow suit.⁸ Examples might be found in other cases of use of weapons of mass destruction, even though on a different order of magnitude compared with nuclear weapons. Although Saddam Hussein’s use of chemical weapons against Iran and the Kurds in his own country was not immediately met with harsh international condemnation, it did not lead to a proliferation of chemical weapons development programs nor legitimize their use. Nor did use of poison gas by Aum Shin Rikkyo overturn the prohibition on use by the 1925 Geneva Convention.

Today, the nuclear taboo counter-acts the attraction that nuclear weapons present to many national leaders as the “ultimate weapon” guaranteeing national security and conferring great-power status. In concert with extended deterrence by the nuclear superpowers, the taboo has helped keep proliferation in check,⁹ with far fewer nuclear-armed states today than the 20-30 that President Kennedy famously forecasted in the early 1960s. Use could act as a motivating factor for one or more other states to seek their own nuclear capabilities, particularly if they cannot count on being covered by extended nuclear deterrence offered by existing nuclear armed states or, worse, if promises of nuclear deterrence proved to be unreliable.

Depending on the circumstances of use, the breaking of the taboo might demonstrate the ineffectiveness of arms control and international legal constraints on nuclear weapons. In imagining the breaking of the taboo, it is easy to conjure scenarios in which confidence-building measures, bilateral arms reduction agreements, nuclear weapons free zones, non-first use declarations, negative security assurances, Security

⁶ Bruce Cumings, *The Origins of the Korean War*, 2 vols., Princeton, Princeton University Press, 1990.

⁷ Sagan, “Realist Perspectives”, *op. cit.*, pp. 82-83; Tannenwald, *The Nuclear Taboo*, *op. cit.*, p. 14.

⁸ Tannenwald, “Stigmatizing the Bomb”, *op. cit.*, pp. 37-38.

⁹ Tannenwald, *The Nuclear Taboo*, *op. cit.*, pp. 11, 372.

Council resolutions and International Court of Justice advisory opinions would all have been proven at best to be useless pieces of parchment. At worst, they may be seen to have been contributory accessories to nuclear horror by the false sense of reassurance they provided.

Spur to Disarmament

On the other hand, nuclear use would also likely stimulate another set of reactions that work in an opposite direction. The shock from use of nuclear weapons today could be expected to spur citizens in many countries to insist on nuclear disarmament. The international norms created by existing arms control and disarmament measures could prove to be vital in re-establishing and strengthening the nuclear taboo after it is breached. If deterrence policies are unable to prevent use, nuclear arsenals would be judged not only to have failed to prevent major conflict but to have greatly exacerbated it. This reaction is most likely to occur in parts of the world such as Japan and most European countries where arms control norms are already entrenched. In an age of instant global communications and round-the-clock television news coverage, the horrific devastation of nuclear weapons use would be beamed to every corner of the earth. Moral objections to the use of nuclear weapons and the opprobrium accorded the nation that used them could be stronger than ever. Nuclear abolition could rise to the top of the agenda in both domestic and international policy discussions.

In the aftermath of nuclear use, although some nations may conclude that treaty constraints are worthless, many other nations may react by strengthening arms control in an attempt to prevent re-occurrence. The UN Security Council as well as the Conference on Disarmament would be called to action, and there would be a special meeting of the NPT Review Conference to review measures to strengthen the Treaty, including by strengthening safeguards requirements and verification measures. Nuclear use would prompt consideration of ways to revise the treaty, and overcome the practical and bureaucratic constraints commonly seen as making treaty revision too difficult 40 years after it entered into force. The safeguards Additional Protocol may become mandatory, and Article IV of the Treaty might be re-interpreted so as to exclude uranium enrichment and plutonium reprocessing as part of the unalienable right to nuclear energy.

Nuclear use may spark prompt negotiation of a treaty banning production of highly enriched uranium and plutonium not just for military use as has been proposed in resolutions tabled in Geneva, but for civilian use as well. Existing stockpiles may also be subject to verification and control. There will be demands for legally binding negative security assurances and a "no first use" agreement -- unless the taboo-breaking use is by a country such as China and India that already stipulates a policy of "no first use," in which case the no first use construct would cease to be accorded any validity. There would also be increased demands for international control of the nuclear industry, at least those parts of it producing fissile material, as already suggested by IAEA Director General

Mohamed ElBaradei.¹⁰ Use could prompt the US and Russia to overcome impediments to making sharper cuts in nuclear arsenals, expanding launch warning time, and taking other steps in the direction of disarmament. The disarmament impulse could be strong even in countries on either end of the nuclear attack, especially if it was by accident.

To date, disarmament advocates have been far more effective in contributing to restrictions and prohibitions on use of nuclear weapons than on possession of the weapons themselves. If nuclear weapons were in fact used, it can be expected that there would be re-energized efforts to ban them altogether. Among the moves to restore the taboo, one can expect accelerated efforts to legalize prohibition, through measures such as an international convention outlawing nuclear weapons.

In the immediate aftermath of nuclear use, the two reactions of turning to deterrence or disarmament are not mutually exclusive. In fact, both impulses are likely to be evident. As immediate impulses are subsumed into policy formation and implementation, however, deterrence/proliferation and disarmament/non-proliferation policies will come into conflict. Which response prevails overall and whether the nuclear taboo will be irreparably broken, restored or even strengthened will depend on various factors including the circumstances of use as well as the geopolitical context.

Unprecedented Event

In attempting to assess the impact of a future event, it can be enlightening to turn to historical precedents. This is difficult in the case of the nuclear taboo, because there is no precedent, given that the non-use tradition was established only after the August 1945 bombings. George Quester notes that:

Since we have no experience to go on [...] the easiest prediction to make is that any actual use of nuclear weapons anywhere in the world will shock us all in a manner that will render us hardly capable of predicting our reactions.¹¹

The only partially comparable experience was the first use of nuclear weapons in August 1945 by the United States against Japan, destroying the cities of Hiroshima and Nagasaki. That was a very different world, however, amidst circumstances that are unlikely to be repeated. Among other differences, the US held a nuclear monopoly, and there was little understanding of the effects of radiation or sense of moral aversion to nuclear use among the US decision-makers, who, caught up in an all-encompassing war against an aggressor, had already ordered the destruction of dozens of Japanese cities and the death of many more

¹⁰ Mohamed ElBaradei, "Towards a Safer World", *The Economist*, 16 October 2003.

¹¹ George Quester, *Nuclear First Strike: Consequences of a Broken Taboo*, Baltimore, Johns Hopkins University Press, 2006, p. 23.

Japanese citizens by firebombing than were killed by the A-bombs.¹² When the US employed nuclear weapons to bring the Second World War to a swifter end and avoid the casualties that would ensue from an invasion of the Japanese homeland, there was no formal regime of arms control and little by way of informal restraints on use. The institutional framework of the global non-proliferation regime, bilateral arms control treaties, nuclear test ban treaties, negative security assurances and the like were all to come years and decades later.

The proliferation consequence of nuclear use in 1945 was to spur nuclear development (and technology theft) by the Soviet Union and the ensuing arms race. The Soviet Union later transferred the technology to China, which helped Pakistan, which in turn allowed nuclear starter kits to be sold to Iran, North Korea, Libya and possibly others via Pakistani black marketer Abdul Qadeer Khan. In 1946 the UK decided it needed its own nuclear deterrent after the US Congress legislated against sharing nuclear weapons technology. France joined the nuclear club in 1960 and along the way helped Israel to acquire an opaque program. Several other nations also started nuclear weapons development programs, although several of these were terminated before coming to fruition. The blame for the cascades of proliferation cannot be attributed solely to America's 1945 use of the bomb. The USSR and at least some of the other countries that went on to acquire nuclear weapons may have done so anyway, in order to keep pace with the US/UK nuclear program. The impetus of the Manhattan Project, after all, was fear of Germany developing atomic bombs, not actual German use (though nobody doubted that any such development effort would be used). The rush to build a bomb was an insurance policy against the possibility of Germany succeeding in its project. Under Stalin, the Soviet Union most probably would have sought to possess its own weapons even if an American bomb had never been used. Without the war-ending demonstration effect of Hiroshima and Nagasaki, however, the pace of the Soviet program might not have been as fast, and there might not have been as much motivation for others to pursue nuclear weapons technologies as a deterrent.

Nuclear use also sparked the first efforts to control the nuclear genie. A commission was created at the United Nations for pursuing nuclear disarmament, and the United Nations General Assembly, in its first resolution in January 1946, called for the newly established commission to make proposals for "the elimination from national armaments of atomic weapons and all other major weapons adaptable to mass destruction."¹³

The arms control measures pursued by the nuclear protagonists were spurred not by first use, however, which for the allied victors was seen

¹² By August 1945, 67 Japanese cities had been torched in a firebombing campaign that killed 300,000 to 500,000 civilians, compared to 140,000 deaths in Hiroshima and 80,000 in Nagasaki by the end of 1945 (although thousands more in the two A-bomb cities later succumbed to radiation injuries or illness). The author appreciates Robin Frost for highlighting the comparison.

¹³ UN General Assembly Resolution 1, 24 January 1946. See Tannenwald, *The Nuclear Taboo*, *op. cit.*, p. 101.

as the rightful way to end a long, costly war. Not until the arms race was in full swing did arms control efforts come into being. When the Soviet Union also acquired nuclear weapons, and broke the US monopoly with a test in August 1949, it raised the stakes in the US, which developed more destructive hydrogen bombs. To avoid an expensive conventional arms buildup that none of the NATO allies wanted, President Eisenhower established an asymmetric strategy dependent on a doctrine of massive nuclear retaliation.¹⁴ Although there was some debate among the Anglo-American elite in the 1940s and early 1950s about the moral implications of nuclear weapons, citizen pacifist movements to ban the bomb came only later, in the mid 1950s in response to weapons testing.¹⁵ These movements were informed, of course, by the knowledge of the nuclear devastation of Hiroshima and Nagasaki. Development of the H-bomb, long-range bombers and ICBMs led to greater awareness that almost nowhere on earth could be protected from total destruction.¹⁶ The need to establish rules of the game was felt because the arms race was intensifying *and* because the game was known to be deadly. Nevertheless, the development and enhancement of nuclear weapons had more immediate impact on disarmament/deterrence and arms control responses than did the first use of the weapons.

The responses of mutual nuclear deterrence postures and arms control and non-proliferation regimes created the conditions under which nuclear weapons have not been used again for 64 years now and counting. As non-use became the standard, the nuclear taboo developed as a global norm.

To the extent that history is a guide, it might suggest that the deterrence impulse will prevail in the aftermath of a breaking of the taboo. As has been noted, however, the analogy to the early Cold War years is misleading because of the very different set of circumstances that prevailed then compared with the world of today.

¹⁴ John Lewis Gaddis, *Strategies of Containment: A Critical Appraisal of Postwar American National Security*, New York/Oxford, Oxford University Press, 1982.

¹⁵ Tannenwald, *The Nuclear Taboo*, *op. cit.*, pp. 156-158.

¹⁶ The author is indebted to Ben Rhode for noting this point.

The Primacy of Context: What, Who, Where, and Why?

The effect of a rupture of the taboo on nuclear policies of deterrence, proliferation, arms control and disarmament would depend both on the nature of the international system that has evolved since 1945 and on the context in which nuclear use occurred. This section addresses the key variables, beginning with a definition of nuclear use and a description of some of the ways in which the taboo might be breached or eroded.

What Constitutes Use?

Nuclear use can be defined as a nuclear fission or fusion explosion used as a weapon. Nuclear tests, whether above or below ground, do not constitute nuclear use. Nor would the taboo be broken by the explosion of a “dirty bomb” made from dynamite strapped to radioactive material or by the deliberate bombing of nuclear facilities with conventional weapons in an attempt to spread radiation. An accidental nuclear explosion would not be considered to be nuclear use either, although an accidental launching and detonation of a nuclear warhead that strikes another country would be.

It might be asked, however, whether every use of nuclear weapons constitutes a breaking of the taboo, and whether size matters. Use of a 10kt weapon may not have the same impact on world order as a 10Mt weapon. The destructive impact of the weapon(s) would likely affect the degree to which nuclear use strengthens nuclear deterrence and proliferation drivers. As noted in the introduction, nuclear use is often considered to be a binary set – the taboo is either broken or it isn’t -- but the consequences are likely to vary depending on variables such as lethality and other attributes.

A demonstration shot that caused no casualties, for example, would have fewer repercussions than use in combat situations, and could be considered more a case of erosion rather than a breach of the taboo. If it were carried out during an escalating crisis, however, a demonstration shot would be considered far more than a simple test. In other examples of low-casualty use, a nuclear weapon might be targeted against an unpopulated area of an enemy’s territory, as a warning shot, or exploded high in the atmosphere for purposes of creating an electromagnetic pulse (EMP) to attack enemy computer and communication systems. This latter use would hardly be a case of surgical strike, however, given the danger that would be wreaked on satellites in low-earth orbit and the devastating impact from loss of the electronics systems that guide so much of modern life. Use of nuclear depth charges against submarines, tactical mini-nukes, and

bunker-busting nuclear weapons that produce few civilian deaths might produce different results in terms of their impact on proliferation and deterrence, but they would nevertheless be unambiguous cases of nuclear use.

The immediate moral stigma attached to nuclear use might be less if the nuclear weapon(s) used were very small, accurate bombs with minimal collateral damage and civilian casualties for which the “just war” criteria of necessity, proportionality and discrimination could be said to apply. Though less stigmatizing in the short term, however, use of “mini-nukes” could prove ultimately more dangerous in terms of deterrence and restraint. Deterrence is predicated on the enormity of the damage inflicted. Nuclear weapons deter because of the disproportion between the potential gains from aggression and its probable costs.¹⁷ A “minimal” nuclear strike that inflicted damage little greater than convention weapons could weaken deterrence.¹⁸ In an equivalent moral paradox, the more restraint and responsibility employed by the user of nuclear weapons, the more likely it is that such use will irreparably rupture the taboo by introducing shades of grey. This is why disarmament advocates are rightly alarmed at the prospect of low-level nuclear weapons. When a taboo is not absolute, it is less impenetrable.

If nuclear weapons are used by accident, the international community is likely to see them not as just another weapon but rather as what Quester characterizes as a “very dangerous potential booby trap, to be pushed further and further away from combat readiness”.¹⁹ Nunn-Lugar-type programs to secure nuclear weapons and materials would be accelerated, and the nuclear weapons states would likely do all they could to help newly nuclear-armed countries to secure their weapons. Concerns about not treading on NPT Article I prohibitions against assisting nuclear proliferation would be subordinated to the imperative of ensuring no further accidents. Pakistan would likely be the first priority for such assistance, but even North Korea might be offered help, if such assistance could be provided in a way that did not appear to condone or to bestow a nuclear-weapons status on the nation.

Who Uses?

The impact and consequences of nuclear use would depend greatly on who was the user – whether one of the NPT-recognized nuclear weapons states (NWS), one of the four threshold states, a new breakout state or a non-state actor. Use by one of the NWS cannot be ruled out, especially in reaction to a massive attack by chemical or biological weapons, or to preempt such an attack. For reasons explained below, however, breaking of the taboo is more likely to be the result of a terrorist attack; a desperation

¹⁷ Bernard Brodie, ed., *The Absolute Weapon: Atomic Power and World Order*, New York, Harcourt, Brace and Company, 1946.

¹⁸ Alternatively, it could be argued the other way: a state that shows it is willing to use tactical nuclear weapons could thereby increase the credibility of its strategic arsenal, and therefore its deterrent effect.

¹⁹ Quester, *Nuclear First Strike*, *op. cit.*, p. 57.

move, mistake or miscalculation by a failed state such as North Korea; a war between Israel and Iran; or an escalation of tension between Pakistan and India.

If mutually assured destruction capabilities are maintained, prudence should continue to inhibit intentional exchanges between nuclear-armed states. Meanwhile, “monopolistic principles” make use against non-nuclear weapons states less likely. The NWS are essentially status quo powers of the nuclear order, and can anticipate that use of nuclear weapons could trigger a collapse of the non-proliferation regime that protects their status and could spark a form of nuclear anarchy.²⁰ Nuclear weapons are useful to them primarily for deterrence, not war-fighting.²¹

Use by one of the established nuclear weapons states would represent a rupture of the prevailing consensus. In general, a taboo is likely to be strongest where it has been in place the longest; that is, in countries that have gone the longest without using nuclear weapons at their disposal or that they might otherwise have developed. The rupture to the system would be strongest if it were committed by one of the charter members of the nuclear club. Particularly if use were against a non-NWS state, one could expect a revolt against the NPT system that accords one small group of states the right to possess nuclear weapons and denies them to all the other signatories. Weapons use by one of the NWS would be seen by many other countries as a violation of its custodial responsibilities and implied promise of careful stewardship. The opprobrium attached to nuclear weapons use against a lesser-armed foe and the adverse political and international consequences that would follow may well outweigh any projected military benefit.²² How strong and how enduring this perception would be may depend on the circumstances of use, as discussed below. For now, let it suffice to note that the revolt would probably be strongest if the use were seen as part of a “clash of civilizations” – e.g., use by a largely Caucasian state against a mostly-Muslim population, with the associated racial and religious overtones that would accompany such a clash. For instance, were Iran or Pakistan to be the victim of nuclear use or to suffer the greatest loss in a nuclear exchange, this might create a motivation for proliferation on the part of other Muslim-majority states.

²⁰ This was one of the insights discussed at a June 2003 workshop cosponsored by the International Institute for Strategic Studies and the Mountbatten Centre for International Studies, on “Thinking about the Unthinkable: The Impact of the Use of Weapons of Mass Destruction (WMD) – Chemical, Biological, Radiological and Nuclear – upon their International Non-Proliferation Regimes: A US-European Dialogue.”

²¹ Use by one of the NWS cannot be ruled out of course; it is possible to think of circumstances in which a country such as Russia, perceiving its relative power position to be steadily weakening, would determine that it needed to re-establish balance through a demonstration or tactical nuclear strike during a confrontation in what it considered its sphere of influence.

²² Michael Krepon, *Better Safe than Sorry*, Stanford, Stanford University Press, 2008, Chapter V.

Use by Israel would have a similarly strong impact on proliferation motivations, particularly in the Middle East. Fortunately, few states in the region currently have the capability to act on any proliferation impulses that they may come to feel. But more of them would undoubtedly seek to develop or buy bombs. Although it may not be possible today to purchase nuclear weapons, the chances could increase in the event of the collapse of either Pakistan or North Korea or of Iran developing weapons. Israel is unlikely to be the first country to use nuclear weapons in the Middle East, for reasons both of long-established policy and practicality. Although Israel's oft-stated formulation that it will not be the first to introduce nuclear weapons in the region²³ has a disingenuous quality, given that it is the only regional state considered to possess an actual nuclear weapons capability, the policy has real meaning as applied to nuclear testing and use. In terms of practicality, Israel's conventional military superiority vis-à-vis its neighbors and America's unflinching support makes it unlikely that Israel would have to rely on its nuclear arsenal. It is conceivable, however, that if Israel went to war against Iran (for example, over the latter's support for terrorist attacks against Israeli citizens), nuclear weapons could be used in escalation scenarios to pre-empt Iranian attacks with chemical weapons or production of nuclear weapons.²⁴

South Asia is often seen as the most likely venue for nuclear use. Over the past two decades, India and Pakistan were judged by Western intelligence analysts several times to be on the brink of war that threatened nuclear escalation: in 1990; again in the 1999 Kargil crisis; and most problematically in 2002, in the crisis that erupted after a terrorist attack against the Indian Parliament in December 2001. A prevailing view in South Asia is that nuclear deterrence served to prevent war in each case, as is commonly perceived to have been the case of nuclear deterrence between the United States and the Soviet Union. In the Cold War, however, the adversaries came perilously close to a nuclear exchange over placement of Soviet missiles in Cuba in 1962. On other occasions, errors of warning signals and command and control brought nuclear use too close for comfort. In January 1995, for example, Russian forces prepared to retaliate against what their warning radars indicated was a submarine-launched ballistic missile heading for Moscow but which in fact was a scientific probe to study the Northern Lights, information about which had not reached key military commanders.²⁵ Similar kinds of miscalculations and mistakes could too easily lead to nuclear use in South Asia, where tension is frequently inflamed by recurrent acts of terrorism and where command and control

²³ International Institute for Strategic Studies, *Nuclear Programmes in the Middle East: in the shadow of Iran*, London, IISS, 2008, p. 122. Prime Minister Levi Eshkol's assertion to President Johnson in June 1964 that "Israel will not be the first to introduce nuclear weapons to the Middle East" became the trademark of Israel's opaque declaratory nuclear policy.

²⁴ See James A. Russell, "Strategic Stability Reconsidered: Prospects for Escalation and Nuclear War in the Middle East", *Proliferation Papers*, 26, Spring 2009, http://www.ifri.org/files/Securite_defense/PP26_Russell_2009.pdf.

²⁵ Lloyd J. Dumas, "No Room for Mistakes: Rethinking Nuclear Technology", *Foreign Policy in Focus*, Vol. 6, No. 34, October 2001. For examples of previous mistakes, see Scott Sagan, *The Limits of Safety: Organizations, Accidents and Nuclear Weapons*, Princeton, Princeton University Press, 1993.

networks and structures are less safe or secure than their cold war counterparts.²⁶ Wartime use of nuclear weapons in South Asia would probably have the greatest impact on regional neighbors, increasing Iran's security motivations for a nuclear capability and China's determination to retain and enhance its nuclear arsenal. As discussed below, the wider impact would depend, inter alia, on whether one side was perceived to have enjoyed real benefits from using nuclear weapons.

Detonation by terrorists seems to be the most plausible scenario for nuclear weapons use today. Nuclear deterrence does not appear to have great relevance for non-state actors who have no territory or fixed assets that could be targeted in retaliation. Neither is there any reason to assume that the nuclear taboo would apply to terrorists. Indeed, the prospect of breaking a taboo for dramatic effect may make nuclear weapons all the more appealing to terrorist groups.²⁷ The perceived utility of nuclear weapons is probably greater in the case of religious extremists, particularly those that subscribe to apocalyptic beliefs. It is unsurprising that Al Qaeda has shown great interest in acquiring nuclear weapons.

Because the taboo does not appear to apply to terrorists, their use of nuclear weapons would be less likely to weaken the taboo than would be the case of use by nation-states. By the same token, terrorist use of nuclear weapons would undermine deterrence policies, which would have been proved to be useless against such foes. Unless the terrorist group was seen to have gained something that a nation would also value, nuclear terrorism would likely stimulate a revulsion against nuclear weapons and demands for more effective prevention efforts. Among other measures to strengthen the taboo, more intense steps would be demanded to secure fissile material and to cap production, via a Fissile Material Cut-off Treaty that extends to production for civilian as well as military purposes and might also include controls on stockpiles.

If use were by a party effectively outside the NPT – that is, by Israel, India, Pakistan, North Korea, a new nuclear weapons state or a non-state actor– the impact on the Treaty would likely be different than if use were by a party to the NPT. Use by a non-NPT party would reinforce in many minds the salience of the treaty and the importance of making its provisions universal. It would likely spur collective and individual state measures to preclude further damage to the taboo, just as India's explosion of a "peaceful nuclear device" in 1974 stimulated a system of export controls by what came to be known as the Nuclear Suppliers Group and domestic legislation in the United States and elsewhere against nuclear exports to non-NPT countries. The effect of a detonation of nuclear weapons in combat would be a quantum leap above detonation as a test during peacetime, and the international response would likely be proportionately greater.

²⁶ For a systematic comparison see Michael Quinlan, "How Robust is India-Pakistan Deterrence?", *Survival*, Vol. 42, No. 4, Winter 2000-2001.

²⁷ Tannenwald, *The Nuclear Taboo*, *op. cit.*, p. 382.

To some major powers, however, nuclear use by a non-NPT state would demonstrate the limits of legal instruments of non-proliferation and encourage greater reliance on ad hoc pragmatic tools of counter-proliferation, including export controls, interdiction, and financial pressure. The UN Security Council could be expected to take steps to outlaw the activity that led to the taboo being broken by a non-NWS or a non-state actor. Security Council action in this case could encompass endorsing military action, as foreshadowed by Secretary of State Warren Christopher in 1995 when he restated US negative security assurances:

Aggression with nuclear weapons, or the *threat* of such aggression, against a non-nuclear-weapon State Party to the Treaty on the Non-Proliferation of Nuclear Weapons would create a qualitatively new situation in which the nuclear weapon State permanent members of the United Nations Security Council would have to act immediately through the Security Council, in accordance with the Charter of the United Nations, to take the measures necessary to counter such aggression or to remove the threat of aggression.²⁸

In the event of nuclear use against a non-nuclear weapons state for which such guarantees were offered, the US and its allies would probably be compelled to take military action. Otherwise promises of extended deterrence would lose all meaning. In fact, the need to reinforce deterrence would be evident in most scenarios of nuclear use. Only in the case of use by non-state actors does it seem clear that the disarmament impulse would outweigh the deterrence considerations. As noted above, terrorist use is the most likely scenario precisely because it is the case where the taboo and the deterrence logic exert the least influence on those whose fingers are on the trigger.

Motivations and Immediate Results

The proliferation impact of nuclear use will depend on the motivations of the user. There is a distinction between cases in which the national interests at stake are marginal from those in which they are vital. Nuclear use in response to or in prevention of an attack by chemical or biological weapons will likely be perceived differently from nuclear use in defense against a major attack from either conventional arms or weapons of mass destruction that threatened the integrity or survival of the state.²⁹ The resort to nuclear weapons in self-defense against an existential attack would be met with less revulsion, particularly if it were seen as truly a “last resort” and not simply as revenge. Use in such circumstances would be more likely to strengthen the case for and reliance on nuclear deterrence by other countries. Nuclear use in the prevention case would be harder to justify. Given the false claims of Saddam Hussein’s WMD capabilities that were used to justify the invasion of Iraq in 2003, the case for preventive war, let

²⁸ Statement issued on 5 April 1995 by the Honorable Warren Christopher, Secretary of State, regarding a declaration by the President on security assurances for non-nuclear-weapon States Parties to the Treaty on the Non-Proliferation of Nuclear Weapons. United Nations A/50/153, S/1995/263, 6 April 1995. <http://www.reachingcriticalwill.org/resources/S1995-263.pdf>

²⁹ Quester, *Nuclear First Strike*, *op. cit.*, p. 12.

alone the use of nuclear weapons for pre-emption purposes, requires an unassailable standard of proof or the tide of global public opinion would turn against the very concept of deterrence.

Another major factor determining the longer-term consequences would be the immediate results of use. Will the user achieve his objectives — e.g. bringing about a ceasefire, stopping the war, winning the war, stopping aggression and punishing the aggressor, acquiring territory, establishing dominance — or be punished by other nations for having broken the taboo? In other words, will use prove to be productive or counter-productive, especially over the long run? According to the “realist” view, the nuclear non-use tradition stems from a prudential strategic calculation that a military victory made possible by use of nuclear weapons may not be worth obtaining if it involved the large-scale destruction of the enemy, death of its population and contamination of its territory, with the moral condemnation that would be associated with wreaking such results. If, rather than such a Pyrrhic victory, the nation that used nuclear weapons in fact achieved its objectives (e.g., protecting its territory or that of an ally), the prudential bases of the non-use tradition will be undermined³⁰ and proliferation and deterrence motivations will probably become stronger.³¹

How the international community responds to nuclear use in its immediate aftermath will have long-term consequences for proliferation. The circumstances surrounding nuclear first use are impossible to predict but, as a general rule, the intensity and immediacy of punishment imposed on the state that initiated nuclear use would play a key role in determining whether the taboo can be reinstated. Perhaps the most important measure states could take in support of the taboo would be collective military action to defeat the nuclear initiator. The lesson would be clear that “crime does not pay.” Of course, this reinforcement of the taboo would be stronger if the retaliation did not itself take the form of nuclear use.

The taboo would also be strengthened if any leader who used nuclear weapons was ousted from office or successfully prosecuted for a war crime. The global response could include imposition of the standards of the 1996 International Court of Justice ruling that the very survival of the state is the only condition under which nuclear use would not be a war crime. If this standard were not met, the leaders of the state that initiated

³⁰ Paul, *Power versus Prejudice*, p. 31; Thazha V. Paul, “Sources of the Nuclear Taboo: Morality, Law, or Prudence?”. Paper presented at the annual meeting of the International Studies Association, Le Centre Sheraton Hotel, Montreal, Quebec, Canada, 17 March 2004.

³¹ In the aftermath of a nuclear attack, there may be an increased interest in missile defense for protection against future attacks, particularly if the nuclear weapon were delivered by a ballistic missile. Even if nuclear use were a demonstration of the failure of missile defense, one could foresee a demand for better missile defense systems on grounds (as would be argued by advocates) that the concept was not intrinsically flawed but simply needed more sophistication. Of course, this depends on whether the defense system worked at all or whether it failed completely and repeatedly. Alternatively, in the case of nuclear delivery by ship, there would be a manifold increase in demand for port security enhancements.

nuclear use might be subject to international punishment if they ever left their own territory and the offending state could be saddled with claims for compensation for human losses, material damage and long-term radiation consequences. Grievous, punitive and far-reaching political, economic and legal measures could prove that nuclear use had very considerable wider costs, whatever the immediate tactical efficacy of the weapons.³²

Finally, one can also imagine circumstances in which nuclear use would be an act of insubordination by rogue elements in a state or, alternatively, by what Quester calls the result of “insanity or a system going berserk.”³³ In such cases, there would be no justification of the nuclear use. It therefore would have less direct impact on spurring proliferation elsewhere or strengthening policies of nuclear deterrence. Instead, the demand for disarmament measures would be paramount, as in the similar case of use by a non-state actor.

The Importance of Non-Proliferation Norms

It is doubtful that use would lead countries such as Sweden and Switzerland to again launch nuclear weapons development programs as they did in the 1950s, when they considered the atom to be just the latest evolution of modern weapons technology before they abandoned their programs around 1970.³⁴ Since then, the non-proliferation norm has become so entrenched in the non-nuclear weapons states of Western Europe as to be unshakable even – or perhaps especially – in the event of re-use elsewhere.

In states where non-proliferation attitudes are not entrenched, however, one could expect the non-proliferation norm to break down. This is most likely to happen in the region where the use occurred. The neighbors and potential adversaries of the employing state would have a strong motivation to acquire an equalizer. The state against whom the bomb was used, however, would not necessarily react this way if, as in Japan’s case in 1945, atomic attack contributed to a change of regime and militaristic mindset.

The proliferation stimulus will also be stronger where the anti-nuclear norm is fragile. This is particularly the case in the Middle East, where Israel has secretly developed nuclear weapons and Iraq, Libya and Iran have egregiously violated their NPT obligations. Today in the region one sees stirrings of a potential nuclear cascade, spurred by concern about Iran’s nuclear development program. Since February 2006, 15 countries in the Middle East region have announced new or revived plans to pursue or explore civilian nuclear energy. Notwithstanding the legitimate energy and economic motivations behind this sudden surge of interest in nuclear power, political factors, most importantly concerns about keeping pace with

³² The author is indebted to Paul Schulte for suggesting this point.

³³ Quester, *Nuclear First Strike*, *op. cit.*, p. 12.

³⁴ Mitchell Reiss, *Bridled Ambitions: Why Countries Constrain their Nuclear Capabilities*, Washington, DC, Johns Hopkins University Press, 1995; Tannenwald, *The Nuclear Taboo*, *op. cit.*, p. 9.

Iran, play an important role.³⁵ For many Arabs, Iran's nuclear program is a sign of technological progress and political strength in standing up to the West. As much as Arabs distrust their Iranian neighbors, many Arab leaders privately respect and wish they could emulate Iran's defiance.³⁶ Egypt and Algeria, for example, appear to be keeping open their nuclear options by their reluctance to accept the IAEA Additional Protocol or to countenance the idea of voluntarily forgoing any intention to employ indigenous enrichment and reprocessing capabilities.

The impact that weapons use elsewhere would have on their calculations can be imagined by considering a counterfactual: What if Israel had used nuclear weapons in the 1973 Yom Kippur War, when the surprise Arab attack initially seemed to threaten Israel's very survival? If Israel's leaders had not exercised nuclear restraint (for both realist and taboo reasons, according to Avner Cohen³⁷) long enough for the Israeli military to repulse the attack with conventional arms, it is less likely that Arab states would have abstained from developing their own nuclear weapons the past 36 years. The financial and technological constraints and relationships with larger powers that eventually prevented Egyptian President Nasser from completing the quest for nuclear weapons that he had pursued ambivalently during the 1960s would have been less compelling.

In Egypt and Turkey today, the concern is less that a nuclear Iran would present a direct military threat to their territories, but rather that it would disrupt the relative power balance in the region.³⁸ In Saudi Arabia, for reasons both of security and prestige, the royal family would be unable to tolerate a nuclear-armed Iran that could compete for leadership of the Islamic world. Many observers believe that if Iran acquires nuclear-weapons status, Saudi Arabia would feel compelled to acquire its own nuclear deterrent, more likely by attempting to purchase nuclear protection rather than by developing its own weapons.³⁹ With the possible and partial exception of Algeria (which is believed to have a dormant reprocessing facility⁴⁰), none of the Arab countries have a nuclear infrastructure that could readily be put to weapons purposes, so any indigenous development would take many years. In the meantime, any efforts to embark upon weapons programs would have a cascade effect in spurring others to also consider acquiring nuclear capabilities.

³⁵ IISS, *Nuclear Programmes in the Middle East*, *op. cit.*, p. 7.

³⁶ *Ibid*, p. 8.

³⁷ Avner Cohen, "Israel and the Nuclear Taboo", unpublished paper, University of Maryland, 1999. Avner Cohen, "Nuclear Arms in Crisis under Secrecy: Israel and the 1967 and 1973 Wars", in Peter Lavoy et al., eds., *Planning the Unthinkable: How Powers Will Use Nuclear, Biological and Chemical Weapons*, Ithaca, Cornell University Press, 2000, pp. 104–24; Tannenwald, *The Nuclear Taboo*, *op. cit.*, p. 368.

³⁸ IISS, *Nuclear Programmes in the Middle East*, *op. cit.*, pp. 32, 70.

³⁹ *Ibid*, p. 47.

⁴⁰ *Ibid*, p. 110.

Conclusion

In addition to being highly conditional on the circumstances under which it took place, the impact of nuclear use on the non-proliferation regime would depend on how nations individually and collectively assess the utility of the regime. For those who believe the NPT is essentially a bargain between the nuclear haves and have-nots, dependent on “good behavior” by the parties, then nuclear use by any of them, particularly by one of the acknowledged nuclear weapons states against a non-NWS, would destroy the basis for nuclear constraint. This may be the outcome even if use is by a non-NPT party. There is, however, another more important bargain underlying the NPT, one based on realist security considerations. If nations calculate that abjuring nuclear weapons continues to be to their benefit as long as the vast majority of other nations similarly forego nuclear weapons, then the NPT will survive nuclear use and may even be strengthened by it.⁴¹

If nuclear weapons are used again, there will be recriminations about how it could have been allowed to happen. Efforts to tighten the global arms control and non-proliferation regimes will be accompanied by questions about why such steps were not taken earlier. Thinking about the unthinkable reminds us of the importance of considering what could be done now, before the unthinkable occurs.

It is difficult to predict the nature of an international system in which the nuclear taboo has been violated, and there are no guarantees that such a taboo could ever be reconstituted. The international community therefore has a duty to err on the side of caution by taking every prudent step to prevent such a violation.⁴² Preventing nuclear use will require action on many fronts, including strict export controls on dual-use materials and technologies, engagement with potential proliferators on their security motivations, and securing and disposing of all materials that could contribute to terrorist acquisition of nuclear weapons. Security assurances and extended deterrence will also form an essential part of the equation.

⁴¹ Paul Schulte eloquently posed this argument at a June 2003 workshop cosponsored by the International Institute for Strategic Studies and the Mountbatten Centre for International Studies, on “Thinking about the Unthinkable: The Impact of the Use of Weapons of Mass Destruction (WMD) – Chemical, Biological, Radiological and Nuclear – upon their International Non-Proliferation Regimes: A US-European Dialogue.”

⁴² Tannenwald, “Stigmatizing the Bomb”, *op. cit.*, p. 38.

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