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NUCLEAR THREATS FROM 1970 TO 2010

By SAMUEL BLACK

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By Samuel Black

It has been almost sixty-five years since the only battlefield uses of nuclear weapons. With each passing year, the tradition of non-use has become stronger, and the battlefield use of nuclear weapons seems increasingly unlikely.¹ But threats to use nuclear weapons continue. They were a significant feature of the Cold War competition between the Western and Soviet blocs. Despite the end of the Cold War as the driving force of international relations, threats to use nuclear weapons have remained a significant feature of the post-Cold War era. This essay analyzes threats to use nuclear weapons to gain leverage in a crisis or in war over a forty year period.²

The presumed value of nuclear weapons has become psychological and political: the knowledge that they might be used can deter potential adversaries from taking unwanted actions, influence their leaders' decisions during crises, and possibly compel them to take actions they otherwise might not. Nuclear weapons are used to deter or compel rather than to gain direct battlefield advantage. To maximize the perceived psychological advantages conveyed by the possession of nuclear weapons, national leaders have sometimes issued statements or authorized actions to remind adversaries of the potential for a nuclear war.

For example, China has warned Taiwan that it will not tolerate any steps that move Taiwan closer to independence—a political act—by testing nuclear-capable ballistic missiles near Taiwan, a demonstration of what might occur if Taiwan ignores China's warnings.³ India and Pakistan have both used missile tests for political purposes during periodic crises on the subcontinent.⁴ Other military actions—moving aircraft carriers closer to crisis-stricken areas, increasing alert levels of nuclear forces, and forward-deploying nuclear-capable military units—have also been used to wield a nuclear cudgel.

Verbal signals have been employed as well. For example, North Korea recently threatened to unleash “unprecedented nuclear strikes” on “those who seek to bring down the system in the

¹ See, for example, Nina Tannenwald, *The Nuclear Taboo: The United States and the Non-Use of Nuclear Weapons Since 1945* (Cambridge, MA: Cambridge University Press, 2008) and T.V. Paul, *The Tradition of Non-Use of Nuclear Weapons* (Palo Alto, CA: Stanford University Press, 2009).

² All references to threats should be taken to mean threats to use nuclear weapons during a crisis or war unless otherwise noted.

³ Robert S. Ross, “The 1995-1996 Taiwan Strait Confrontation: Coercion, Credibility, and Use of Force,” *International Security* 25:2 (Fall 2000), p. 110-1, <http://www.people.fas.harvard.edu/~johnston/GOV2880/ross3.pdf>.

⁴ Polly Nayak and Michael Krepon, “US Crisis Management in South Asia's Twin Peaks Crisis,” Stimson Report #57, September 2006, <http://www.stimson.org/southasia/pdf/USCrisisManagementFull.pdf>.

DPRK.”⁵ Other verbal threats are more subtle. Russian leader Vladimir Putin noted that if “part of the strategic nuclear potential of the United States is located in Europe,” Russia would have to “get new targets in Europe.”⁶ In the wake of North Korea’s nuclear test in 2006, US Secretary of State Condoleezza Rice purposefully underscored that the US would meet the “‘full range’ of its deterrent and security commitments to Japan.”⁷

While the military utility of nuclear weapons is being reduced in a number of ways, threats are integral to the perceived utility of nuclear weapons today.⁸ Without a keen understanding of how nuclear weapons are actually “used” in international relations, further reducing their salience will be a difficult task. Unfortunately, comprehensive data on when the use of nuclear weapons was threatened to gain leverage during crises or conflicts has never been compiled in one place.

There has been a significant amount of past research on crises and wars. Work on the International Crisis Behavior (ICB) data set led by Michael Brecher of McGill University and Jonathan Wilkenfield of the University of Maryland was invaluable in identifying possible instances of nuclear threats.⁹ However, further research, such as on what message was conveyed or which military action was taken on which specific day, is required. Many nuclear threats that occurred during the crises included in the ICB data set were not mentioned in its summaries. Other research has been focused on general threats, rather than on threats to use nuclear weapons.¹⁰ Other studies have focused on nuclear threats within crises and wars. However, rather than the comprehensive approach pursued here, these studies have instead focused on specific crises, on the theoretical utility and credibility of threats, or on the broader probability of catastrophe, as in the “threat from nuclear terrorism.”¹¹

⁵ Korean Central News Agency, “US-S. Korean Moves to Bring down System in DPRK Warned,” March 26, 2010, <http://www.kcna.co.jp/item/2010/201003/news26/20100326-04ee.html>.

⁶ Doug Saunders, “Putin threatens to target Europe,” *The Globe and Mail* (Toronto), June 4, 2007, <http://www.theglobeandmail.com/news/world/article763092.ece>.

⁷ Lou Dobbs Tonight, October 18, 2006, CNN Transcript, <http://transcripts.cnn.com/TRANSCRIPTS/0610/18/ldt.01.html>.

⁸ On the declining military utility of nuclear weapons, see Michael Krepon and Samuel Black, “Looking Back: Good News and Bad News on the NPT,” *Arms Control Today* 40:2 (March 2010), pp 56-60, http://www.armscontrol.org/act/2010_03/LookingBack.

⁹ Center for International Development and Conflict Management, “International Crisis Behavior Project,” Accessed March 23, 2010, <http://www.cidcm.umd.edu/icb/>.

¹⁰ See, for example, Barry M. Blechman and Tamara Cofman Wittes, “Defining Moment: The Threat and Use of Force in American Foreign Policy,” *Political Science Quarterly* 114:1 (Spring 1999), pp. 1-30.

¹¹ For studies of a single crisis, see, for example, Polly Nayak and Michael Krepon, “US Crisis Management in South Asia’s Twin Peaks Crisis,” Stimson Report #57, September 2006, p. 53, <http://www.stimson.org/southasia/pdf/USCrisisManagementFull.pdf>; On credibility see, for example, Daryl Press, *Calculating Credibility: How Leaders Assess Military Threats* (Ithaca, NY: Cornell University Press, 2005) and Anne E. Sartori, “The Might of the Pen: A Reputational Theory of Communication in International Disputes,” *International Organization* 56:1 (Winter 2002), pp. 121-149; On the threat of nuclear terrorism see, for example, Graham Allison, *Nuclear Terrorism: The Ultimate Preventable Catastrophe* (New York: Times Books, 2004).

The study most similar to this analysis was Richard Betts' work on what he described as "nuclear blackmail."¹² One of Betts' primary aims was to "compile and compare in one place what is known about cases of attempted nuclear coercion."¹³ Betts' study, like this one, focused on threats made during crises. However, his study excluded some lesser crises included here, had a somewhat narrower definition of what constituted a nuclear threat, and included an additional focus on the relationship between nuclear threats and the nuclear balance of power.¹⁴ The new data set created for this essay centralizes specific data about nuclear threats in multiple crises across a significant time span. This has allowed for a study of the practice of nuclear threat-making and the observation of trends in nuclear threat-making during crisis and conflicts over time.

There are three overriding macro trends in nuclear threat-making between 1970 and 2010. First, the number of nuclear threats made by nuclear-capable states between 1991 and 2010, the first two decades of the post-Cold War period, is more than twice the number of nuclear threats made during the last two decades of the Cold War, 1970 to 1990. Much of this increase can be attributed to the increase in the number of nuclear-capable states, and especially the dyadic competition between India and Pakistan. Second, since the end of the Cold War, almost two-thirds of the 55 observed threats have been directed against just three states: India, Iraq, and Pakistan. In contrast, the three most threatened countries between 1970 and 1990 were targeted a total of nine times, which constituted less than 40 percent of all threats during that period.¹⁵ Third, states without nuclear weapons that are in good standing with their nonproliferation obligations are rarely subject to nuclear threats. However, states developing weapons of mass destruction in violation of international laws and norms have increasingly been subjected to nuclear threats, whereas threats against non-nuclear weapon states (NNWS) in compliance with their nonproliferation obligations have declined since the end of the Cold War.

The threat-making practices of several countries have also shifted since the end of the Cold War. The United States, the most prolific threat-maker, issued more threats in the post-Cold War decades than during the preceding period. But 12 of the 14 US threats in the past two decades were directed against Iraq and North Korea, two countries that resisted their nonproliferation obligations. In contrast to the last two decades of the Cold War, when most US threats were directed against the Soviet Union and its allies, the US hasn't threatened Russia with nuclear weapons at all since the Cold War ended. US threat-making is now aimed at spoilers that are not in good standing with their nonproliferation obligations and that threaten its friends and allies. However, Russian threat-making is still primarily aimed at the US and its allies. Unlike during

¹² Richard K. Betts, *Nuclear Blackmail and Nuclear Balance* (Washington, DC: Brookings Institution Press, 1987).

¹³ Ibid, p. 3.

¹⁴ Betts' formal definition of nuclear blackmail is "coercion by the threat of punishment, a threat designed either to deter or to compel action by the opponent." This implies that special consideration was given to the intentions of the threat-maker, whereas this study focuses on the perceptions of the target. See *ibid*, p. 3-10, definition on p. 4.

¹⁵ The most-threatened countries between 1970 and 1990 were the Soviet Union (4) and Libya (3). Five countries (China, India, Pakistan, Syria, and the United States) were targeted twice during this period.

the Cold War, China has recently issued threats with some frequency to protect what it perceives as its vital national interest in the reunification of Taiwan with mainland China. The greatest change between the two periods is the emergence of Pakistan as the state issuing the most nuclear threats during the last two decades. This is not surprising, given its geopolitical position as the weaker party in a crisis-prone nuclear dyad, but is nonetheless worthy of note.

The most important lesson to be drawn from this study is that countries that depart from international norms and develop weapons of mass destruction are subject to many more nuclear threats during crises or wars than states that abstain from doing so. If a country's security is measured by the frequency with which it is subject to nuclear threats, then the way to maximize security is to remain in compliance with international norms and refrain from developing nuclear weapons.

DEFINITIONS AND METHODOLOGY

This article is based on research on nuclear threats occurring between 1970 and 2010.¹⁶ This period of time was chosen because it includes two decades of the Cold War and two decades of the post-Cold War period, allowing for comparisons between the two (with the caveat that during the latter period two additional states acquired nuclear weapons and issued threats). The selection of this time period also allows for an assessment of trends in threat-making.

What constitutes a nuclear threat? This article uses the following definition:

1. Observable actions taken, such as increasing nuclear alert levels, the flight-testing of nuclear-capable missiles, or the repositioning of significant military forces capable of employing nuclear weapons to demonstrate resolve during a crisis or in warfare.
2. Statements (whether made in public or transmitted through private channels and subsequently disclosed) by high-ranking government officials or their representatives during a crisis or in warfare expressing or indicating a willingness to use nuclear weapons in defense of national interests.

There are several clarifications worth making about the definition itself. First and foremost, the definition implies that the actions or statements are credible in the sense that the threat-maker is presumed to have or has demonstrated the capability to deliver a nuclear attack. For example, in 2007, Iranian Defense Minister Mostafa Mohammed Najjar stated that Iran keeps "various options open to respond to threats."¹⁷ Given the state of the Iranian nuclear program at the time, this threat could not credibly imply a willingness to carry out a nuclear attack. Therefore, it and others like it have been omitted from the data set.

¹⁶ The nuclear threat chart is available at: <http://www.stimson.org/pub.cfm?ID=948> and is also appended to this article.

¹⁷ Anne Penketh, "Iranian general issues threat to Israel if nuclear sites are hit," *The Independent (London)*, September 20, 2007.

Second, this definition focuses on “nuclear threats” as discrete events. These threats are meant to be coercive, act as a deterrent, or to send a signal, and often for exigent rather than long-term strategic purposes. The data set does not and is not intended to capture the broader threat of nuclear war, as measured, for example, by the Bulletin of the Atomic Scientists’ Doomsday Clock.¹⁸ As Betts put it, “there is a constant nuclear threat with a whiff of blackmail inherent in standing capabilities and doctrines, but this study is concerned with specific signals in crises.”¹⁹

Third, there is the question of forces like strategic bombers, certain fighter aircraft, and aircraft carriers that are capable of delivering conventional as well as nuclear weapons. When they are moved conspicuously in a crisis, what is the intended message? Often the action represents a signal of resolve and a reminder of the country’s nuclear capabilities in addition to facilitating the use of these capabilities. Such movements, when occurring during crises, have been included as nuclear threats unless they were specifically and clearly meant for a different purpose. For example, before British naval and amphibious forces—including the aircraft carrier HMS *Invincible*—moved to retake the Falkland Islands from Argentina in 1982, Prime Minister Margaret Thatcher publicly described the assembly of the fleet as aimed at showing “our quiet professional determination to retake the Falklands because we still regard them as sovereign British territory.”²⁰

Fourth, there is a difference between “significant” nuclear-capable units and, by implication, other nuclear-capable units. For the purposes of this essay, these units include all forces capable of delivering strategic nuclear weapons, as well as units with symbolic power, like aircraft carriers, that are armed with tactical nuclear weapons. The symbolism of moving elements of national power towards crisis-stricken regions, accompanied by a considerable number of escorts, is unmistakable and menacing.

Fifth, the political environment in which a military action takes place is vitally important in determining what the action is intended to signal. The definition is clear on this count. Both threat categories are dependent on context—they must take place in a crisis or in warfare. This being said, “crisis” has been defined somewhat broadly. While the word is commonly associated with periods of acute tension such as the Cuban Missile Crisis, nuclear threats occurring during less tense policy conflicts have also been included in the data set, so long as the context for the threat is characterized by a level of tension noticeably elevated above the baseline level for both the threatening and threatened states.

Sixth, the data set only includes military movements and statements that are most directly linked to national security and international relations, rather than actions carried out mainly to improve preparedness or statements issued for mainly domestic purposes. Information releases about

¹⁸ See the Doomsday Clock Overview at: <http://www.thebulletin.org/content/doomsday-clock/overview>.

¹⁹ Betts, p. 6.

²⁰ Prime Minister Margaret Thatcher, TV Interview with BBC, April 5, 1982, <http://www.margaretthatcher.org/speeches/displaydocument.asp?docid=104782>.

revised doctrine and policy have not been included in this data set for precisely this reason: states create these documents primarily to shape the character of their own forces. Signaling is only a secondary purpose of such releases. While there is no doubt that information releases of this sort can be threatening in a general sense, they don't play the same role during crises as the other signals included in the data set.

Any discussion of nuclear threats will confront many difficult methodological issues. A number of issues related to the specific definition used here have been discussed above, but three general points are in order. The first is the possibility of unobservable threats. Any threats made privately and not reported in the public domain are not included in the data set.²¹ If such threats were successful at coercing or deterring an opponent, the latter would face incentives to deny the existence of the threat so as to preserve its reputation and avoid the prospect of being subject to similar threats in the future. Another possibility is that government officials could make threats not authorized by the head of state. With this in mind, statements by officials outside the executive branch of government have been excluded. But even executive branch officials sometimes overstep their instructions or are simply not in the decision-making loop. Unless specific evidence exists that this is the case, statements by high-ranking executive branch officials have been included in the data set.

The second methodological issue is that, in an extended deterrence scenario, signals could be intended as a nuclear threat to one state and as a reassuring move or a conventional threat to another state. For example, the transit of a US aircraft carrier through the Taiwan Strait in December 1995 could have been a nuclear-tinged signal aimed both at deterring China and reassuring Taiwan. The movement of US aircraft carriers to the eastern Mediterranean Sea during the September 1970 Jordanian crisis may have been aimed at warning the Soviet Union not to intervene, facilitating a possible conventional strike on forces loyal to the Palestine Liberation Organization or its Syrian backers, reassuring the Jordanian regime of US support, or some combination of the three.

The third issue is that there may be some relationship between the amount of time a state possesses nuclear arms and the state's propensity to issue nuclear threats. The US and USSR had each possessed nuclear weapons for more than two decades prior to the period under consideration here. During this period they experienced numerous nuclear-tinged crises with each other, including the Cuban Missile Crisis and a series of crises over Berlin. As previously noted, a significant growth in nuclear threat-making during the post-Cold War period occurred in crises after Pakistan acquired nuclear weapons. Thus, a plausible hypothesis might be that states with newly-acquired nuclear arsenals are more likely to leverage them during crises than are states with longer nuclear histories. Considering the entirety of the nuclear age would allow for a more complete consideration of this hypothesis. However, it would also introduce other methodological

²¹ Notable academic papers on private signaling include James D. Fearon, "Signaling Foreign Policy Interests: Tying Hands versus Sinking Costs," *Journal of Conflict Resolution* 41:1 (February 1997), pp. 68–90 and Shuhei Kurizaki, "Efficient Secrecy: Public versus Private Threats in Crisis Diplomacy," *American Political Science Review* 101:3 (August 2007), pp. 543–558.

issues, most notably by widening the disparity between the numbers of nuclear-armed states at the beginning and end of the period being studied. This would make comparisons between the Cold War and post-Cold War periods, a major focus of this study, much more difficult. Thus, one is left with a choice between methodological challenges rather than a way of escaping them entirely. With these caveats in mind, we now turn to the data.

SUMMARY OF NUCLEAR THREATS

This section provides evidence in support of three trends: the increase in the overall number of nuclear threats after the Cold War, the concentration of these threats across a smaller number of target states, and the low and declining number of nuclear threats against non-nuclear weapons states that are not resisting their safeguards obligations or pursuing weapons of mass destruction. Table 1 lists the total number of nuclear threats in each time period, including a breakdown by country. In some cases, a single action was intended to threaten more than one country. When this occurred, it was treated as if a separate threat was made against each targeted country; some incidents have therefore contributed to a threat-maker's count more than once. As previously noted, threats have been omitted unless a country could plausibly have carried out a nuclear attack. All of the countries listed were capable of delivering on their nuclear threats for the entire period except for the DPRK (from 2006 on), India (from 1974 on), and Pakistan (from 1990 on). In the cases of the DPRK and India, these dates are based on the country's first nuclear test. In the case of Pakistan, the date is based on when the United States failed to certify, as per the stipulations of the Pressler Amendment, that Pakistan did not possess a nuclear explosive device. The last such certification was issued in 1989.²² A different standard was applied to Pakistan because it is widely acknowledged that Pakistan had the capability to deliver a nuclear weapon prior to its first nuclear test in 1998; this was not the case with the DPRK or India.

Table 1: Nuclear Threat-Makers

	1970-1990	1991-2010	Total
United States	11	14	25
Pakistan	1	16	17
India	2	9	11
USSR/Russia	5	4	9
China	1	5	6
United Kingdom	1	3	4
Israel	2	1	3
DPRK	0	2	2
France	1	1	2
Total	25	56	79

The data set includes 79 total nuclear threats, of which 70 percent have been issued since the end of the Cold War. During the last two decades of the Cold War, the US made the most threats,

²² Federation of American Scientists, "The Pressler Amendment and Pakistan's Nuclear Weapons Program (Senate – July 31, 1992)," Accessed March 17, 2010, <http://www.fas.org/news/pakistan/1992/920731.htm>.

followed by the USSR, and India. During the most recent two decades, the states issuing the most nuclear threats were Pakistan, the US, and India. The growth in nuclear threat-making by India and Pakistan is an important driver of the data. Those two countries issued the second and third most nuclear threats of all countries, and each directed its threats exclusively at the other. For the rest of the countries listed, with the exception of China, the number of threats issued in each period remained relatively stable. Several of China's threats were directed at Taiwan, prompted by the emergence of a multi-party democracy on Taiwan. The change in Taiwan's domestic political system was not causally related to the end of the Cold War, and thus the increase in Chinese threat-making may not be directly linked to the changes in the character of the international system that occurred around that time.

Table 2 summarizes the countries that have been threatened with nuclear weapons. The same process described above was used for tabulation. Recent nuclear threats are distributed unevenly across the target states, and the most frequently threatened states received a greater share of all threats than was the case between 1970 and 1990. In the latter period, seven countries were targeted more than once, but none was targeted more than four times. In the more recent period, India, Iraq, and Pakistan were targeted by more threats than all other countries combined, and by a significant margin. Another noticeable trend is that a few non-nuclear weapon states have been targeted multiple times. Iraq leads this group with 12 targets, but Libya, Taiwan, Iran, and Syria have all been targeted at least twice. Finally, there is the "unclear" threat: the aforementioned comments about targeting "Europe" made by Russian President Vladimir Putin in 2007. While Putin was likely directing his threats at the Czech Republic and Poland, which at the time were in discussions with the US to host missile defense installations on their territories, it is conceivable that he could have been warning other European countries as well.²³ There are reports of nuclear weapons being hosted by several European states, and in the context of Putin's statement, these countries might have feared that other parts of the "US strategic nuclear potential" would be targeted again.²⁴

Also of note is that, as highlighted above as a macro trend, threats against the most-targeted states have all increased dramatically since the end of the Cold War. The five most-threatened states—India, Iraq, Pakistan, the United States, and the DPRK—were threatened with nuclear weapons during crises more often between 1991 and 2010 than between 1970 and 1990.

²³ For background on the European missile defense issue, see Steven A. Hildreth and Carl Ek, "Long-Range Ballistic Missile Defense in Europe," Congressional Research Service Report RL34051, September 3, 2008, <http://www.usembassy.it/pdf/other/RL34051.pdf>.

²⁴ See, for example, Bob van der Zwaan and Tom Sauer, "Time to reconsider U.S. nuclear weapons in Europe," *Bulletin of the Atomic Scientists*, November 23, 2009, <http://www.thebulletin.org/web-edition/op-eds/time-to-reconsider-us-nuclear-weapons-europe>.

Table 2: Nuclear Threat Targets

	1970-1990	1991-2010	Total
India	2	16	18
Iraq	1	11	12
Pakistan	2	9	11
DPRK	1	5	6
United States	2	3	5
China	2	2	4
Taiwan	0	4	4
USSR/Russia	4	0	4
Libya	3	0	3
Iran	1	1	2
Syria	2	0	2
Egypt	1	0	1
Germany	0	1	1
Guatemala	1	0	1
Israel	1	0	1
Poland	0	1	1
South Korea	0	1	1
Unclear	0	1	1
Vietnam	1	0	1
Total	24	55	79

In conclusion, the data has revealed several trends. First, there were far more nuclear threats issued over the past twenty years than between 1970 and 1990. This growth was largely driven by the emergence of India and Pakistan as prolific threat-makers. However, the US, China, UK, and DPRK all made more threats during the second period than during the first. The second trend is that the pattern of nuclear threat-making in the last two decades is noticeably different from the Cold War period. Threats in the earlier period were spread between 13 different states, with no one being subjected to a significantly greater number of threats than any other. In last two decades, 11 states have been targeted by nuclear threats, but India and Pakistan have been targeted (by each other) a large number of times. A surge of threat-making directed against NNWS, including Iraq, Taiwan, Libya, Iran, Syria, Germany, Poland, and South Korea has also emerged in the post-Cold War period. The following sections will investigate these trends in greater depth.

THE TRENDS IN THREAT-MAKING

Prolific nuclear threat-making during crises involving India and Pakistan raises the question of whether the acquisition of nuclear weapons by states outside the Nonproliferation Treaty (NPT) is responsible for the bulk of the increase in threat-making since the end of the Cold War. However, while there were 31 more nuclear threats in last two decades than there were between 1970 and 1990, had India and Pakistan not made threats in either period, the total number of threats still

would have increased from 20 to 30, or 50 percent. A second question derives from the list of NNWS that have been the target of nuclear threats. Several countries on the list have attempted or may be attempting to acquire nuclear weapons. Thus, a natural question arises about the prevalence of nuclear threats against countries resisting their nonproliferation obligations.

Table 3 categorizes states that have been the targets of nuclear threats as being NPT Members, NPT Outsiders, or NPT Spoilers. NPT Members are states that have signed and ratified the treaty and are in good standing with their obligations under the treaty. NPT Outsiders have not signed and ratified the NPT. States can move between these two groups when they ratify the treaty—China’s two threats in the earlier time period are treated as coming from an NPT Outsider because China did not ratify the treaty until 1992. NPT Spoilers are states that have signed and ratified the NPT, but have resisted the letter and/or spirit of their obligations under the treaty, as indicated by findings of noncompliance by the International Atomic Energy Agency (IAEA) Board of Governors or serious violations observed by other states party to the NPT. States widely presumed to possess or be developing other weapons of mass destruction (WMDs) at the time that they were subject to a nuclear threat are also categorized as NPT Spoilers. The states falling in this category that have been subject to nuclear threats during crises or wars are as follows: the DPRK from 1985 to 1994 and in 2003, Iran from 2003 to the present, Libya from 1984 to 2003, and Iraq from 1991 to 2004. When not resisting their obligations, these states are categorized as NPT Members—Iran has been subject to one threat as an NPT Member and one as an NPT Spoiler. In parentheses is the percentage of all threats in the time period that was directed against NPT Members, Spoilers, or Outsiders. For example, 58 percent of threats between 1970 and 1990 were directed against NPT members. The threat for which the target was unclear isn’t included in these calculations.

Table 3: Nuclear Threat Targets and NPT Status

	1970-1990	1991-2010
NPT Member	14 (.58)	12 (.22)
NPT Spoiler	3 (.13)	14 (.25)
NPT Outsider	7 (.29)	28 (.51)

NPT Members in good standing with their obligations have been subject to fewer threats during crises or wars in the two decades since the Cold War both in absolute terms and as a proportion of all nuclear threats. However, while the proportion of all nuclear threats directed at NPT Members has fallen by almost two-thirds, the numerical reduction of threats targeting NPT Members is more modest at 14 percent. Meanwhile, the proportions of nuclear threats directed at both NPT Spoilers and NPT Outsiders have almost doubled. The rise in absolute terms is even more dramatic—nuclear threats directed at NPT Spoilers increased by almost a factor of five and nuclear threats directed at NPT Outsiders quadrupled from the last 20 years of the Cold War to the first 20 years after it. The increase in threat-making toward NPT Spoilers and Outsiders therefore helps to explain two of the trends noted above: the increase in the total number of observed nuclear threats, and the tendency of these threats to be spread unevenly across countries.

One lesson from the emergence of the nuclear competition between India and Pakistan is that when competitions occur outside framework of the NPT, the political role of nuclear weapons is exaggerated. While the applicability of this conclusion is limited by the fact that, thankfully, there are no other nuclear-armed dyads outside the NPT, the observation that India and Pakistan have led the world in nuclear threat-making over the past twenty years is inescapable. However, it lends further urgency to the task of returning Iran to the group of NPT-compliant states.²⁵ If the international community cannot succeed at this task, future crises and wars in the Middle East seem likely to be punctuated by nuclear threats. If more states were to follow Iran over the brink, this situation would be further exacerbated.

Since the end of the Cold War, the attention paid to, and threats directed against, NPT Spoilers has increased dramatically. As previously noted, both the number of threats and the proportion of all threats directed against these states have increased significantly. Thus, it is not only competition outside the bounds of the NPT that is riddled with nuclear threats, but competition in which one party is pushing the limits of, or disregarding entirely, international norms regarding WMDs. In fact, the surest way for a government to get nuclear weapons pointed its way is to strive to acquire WMDs. This raises two questions: one about the real security benefits of acquiring nuclear weapons, and the second about the gap between the rhetoric and reality surrounding the NPT.

The most common explanation for why states seek nuclear weapons, though by no means the only explanation, is that they face a new or rising security threat that cannot be deterred effectively with conventional arms alone.²⁶ Since all the states outside the NPT already possess nuclear arms, any states that move to acquire them in the future will have to do so from inside the NPT. While the would-be nuclear state's program moves forward, the recent record indicates, the state is likely to be subject to nuclear threats, perhaps on numerous occasions. Furthermore, if a rival state should follow it out of the NPT and into possession of nuclear arms, the record indicates that additional threats are likely to follow during any crises or wars experienced by the pair. So while security may be increased for a future proliferator in the broad sense of possessing a powerful deterrent, the state is likely to be subjected to a number of nuclear threats during the inevitable crises before and after its acquisition of nuclear arms. Potential proliferators must decide whether the acquisition of a deterrent is worth the heightened crises that will surely follow.

The second question concerns the gap between rhetoric and reality that has developed when discussing the NPT. A major demand of non-nuclear weapon states at NPT Review Conferences and other associated events is that they be assured that they will not be attacked with nuclear arms

²⁵ For official information on Iran's compliance with its NPT obligations, see International Atomic Energy Agency, "IAEA and Iran," Accessed April 15, 2010, <http://www.iaea.org/NewsCenter/Focus/IaeaIran/index.shtml> and in particular Report by the Director General, "Implementation of the NPT Safeguards Agreement and relevant provisions of Security Council resolutions 1737 (2006), 1747 (2007), 1803 (2008), and 1835 (2008) in the Islamic Republic of Iran," February 18, 2010, <http://www.iaea.org/Publications/Documents/Board/2010/gov2010-10.pdf>.

²⁶ For alternative explanations for proliferation, see Scott D. Sagan, "Why Do States Build Nuclear Weapons? Three Models in Search of a Bomb," *International Security* 21:3 (Winter 1996/97), pp. 54-86, http://iis-db.stanford.edu/pubs/20278/Why_Do_States_Build_Nuclear_Weapons.pdf.

or threatened with such an attack. For example, the second substantive item on the provisional agenda for the 2010 Review Conference, after a review of the implementation of the treaty itself, is entitled “Security Assurances,” which includes “effective international arrangements to assure non-nuclear weapon States against the use or threat of use of nuclear weapons.”²⁷ This item was surely included at the urging of the NNWS. As Leonard Spector and Aubrie Ohlde have noted, “In recent years, the demand for legally binding negative security assurances has been pressed most forcefully by the members of the Nonaligned Movement.”²⁸ As an example, the position of the Nonaligned Movement prior to the 2005 NPT Review Conference was that “efforts for the conclusion of a universal, unconditional and legally binding instrument on security assurances to non-nuclear weapon States should be pursued as a matter of priority.”²⁹

Table 4 is an effort to assess whether providing such assurances to NNWS would substantially enhance international security. The table lays out the number of threats that have been directed by nuclear-armed states against their peers, against NPT Spoilers, and against non-nuclear weapon states in compliance with their NPT obligations.

Table 4: States Targeted by Nuclear Threats

	1970-1990	1991-2010
Other Nuclear States	13 (.52)	34 (.61)
NPT Spoilers	3 (.12)	14 (.25)
Safeguards-compliant NNWS	9 (.36)	7 (.13)

Nuclear threats directed against NNWS have declined in both absolute and relative terms. The absolute number has declined by 22 percent, and the relative number is down by almost two thirds. A closer look at the specific threats targeting NNWS in the last two decades reveals even greater cause for optimism. Four of the seven threats recorded against NNWS were threats by China against Taiwan. The only other situation similar to this—in which the dissatisfied party in a major international irredentist dispute is armed with nuclear weapons—concerns Kashmir. In that case, the status quo party is also armed with nuclear weapons. So, if the unique situation of Taiwan is set aside, NNWS were subject to just three nuclear threats out of the 55 that have been meted out over the last two decades. As discussed in the opening section, the definition of “nuclear threat” used here excludes threats deriving from the mere existence of a nuclear deterrent. Thus, states perceiving a threat from Israel, for example, will likely remain dissatisfied, despite the evidence indicating that Israel rarely issues nuclear threats during crises in ways

²⁷ Preparatory Committee for the 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, “Final report of the Preparatory Committee for the 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons,” NPT/CONF.2010/1, May 20, 2009, p. 49, http://www.un.org/ga/search/view_doc.asp?symbol=NPT/CONF.2010/1.

²⁸ Leonard S. Spector and Aubrie Ohlde, “Negative Security Assurances: Revisiting the Nuclear-Weapon-Free Zone Option,” *Arms Control Today* 35:3 (April 2005), http://www.armscontrol.org/act/2005_04/Spector_Ohlde.

²⁹ Hussein Haniff, Statement on behalf of the Non-Aligned Movement during Cluster I discussion of the 2004 Prepcom, April 30, 2004, <http://www.un.int/malaysia/CC/CC30April04iinnam.htm>.

detectable by outsiders. It is responsible for only three of the 79 threats which make up the data set under discussion.

There is a significant gap between what the NNWS demand and the reality they face. Perhaps they are motivated by the existential threat from nuclear weapons, rather than by threats made during crises or wars. Their demands may also be purely political. But the facts are that the demand to be free from nuclear threats has largely been met without any dedicated legally binding arrangements on the matter. The best way for NNWS to ensure they are not threatened with nuclear weapons is to remain in compliance with their safeguards obligations.

CONCLUSION

The practice of nuclear threat-making during crises or wars has shifted dramatically since the end of the Cold War. In addition to the larger trends discussed throughout the paper, the practices of individual countries have shifted as well. US threats in the Cold War were directed against the Soviet Union and its allies and were used for signaling purposes. However, between 1991 and 2010, eight of the 14 US threats targeted Iraq, with an additional five targeting North Korea. Meanwhile, Russian threats in the last two decades have been directed against incursions upon its desire for influence in its so-called “near abroad.” Because nuclear threats are used to deter or coerce in service of perceived interests, these shifts are likely a result in the shift in strategic perspectives that accompanied the end of the Cold War. A victorious America pledged to do more to promote a “new world order” in which “there is no substitute for American leadership,” in the words of President George H.W. Bush. This world would be “freer from the threat of terror, stronger in the pursuit of justice, and more secure in the quest for peace.”³⁰ In practice, this vision has led to increased American attention to proliferation and compliance with NPT obligations. Meanwhile, as Russia undergoes the difficult transitions from a command economy to capitalism and from authoritarianism to democracy, it is increasingly focused on maintaining influence over the now-independent states formerly ruled from, or allied with, Moscow. The United States issued more threats during crises or wars in both periods, but the gap became more pronounced during the 1991-2010 period. The large number of security obligations to friends and allies taken on by America over the years, coupled with a more diverse threat environment, is one reason for this. But the United States and Russia, unlike during the Cold War, are no longer the primary nuclear threat-makers in the international system. China is increasingly making nuclear threats during crises with Taiwan, and the periodic crises between India and Pakistan have been rife with nuclear threat-making.

While the military utility of nuclear weapons has diminished over time, two surprising trends have become manifest in the last two decades: nuclear weapons’ perceived political utility as measured by nuclear threat-making has grown, and the number of countries either seeking them or maintaining the option to do so seems to have grown after a lull in the waning years of the Cold War. Since nuclear threat-making over the past two decades has been closely linked to

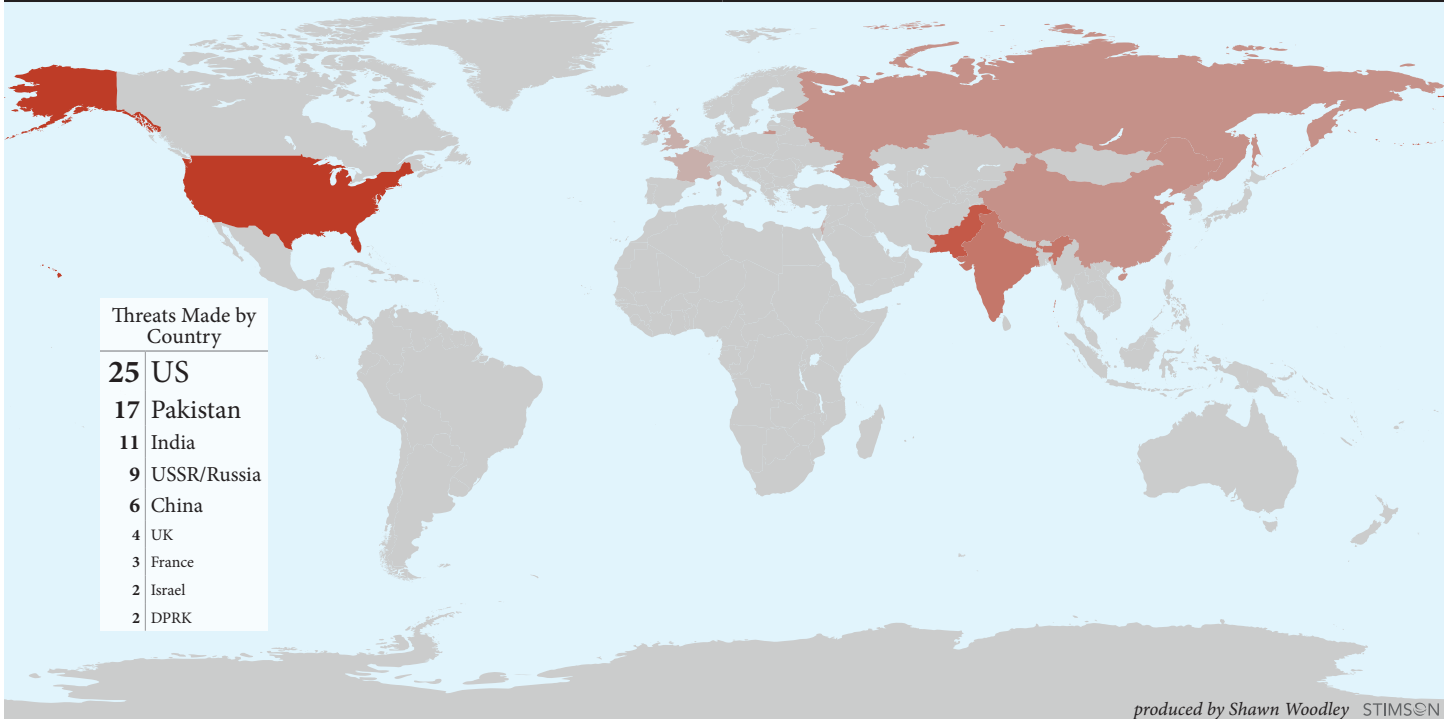
³⁰ George H.W. Bush, Address Before a Joint Session of the Congress on the Persian Gulf Crisis and the Federal Budget Deficit, September 11, 1990, <http://www.presidency.ucsb.edu/ws/index.php?pid=18820&st=&st1>.

resistance to nonproliferation obligations, an extension of this trend would indicate that many more nuclear threats are in the offing.

Nuclear threats are dangerous, and particularly so during crises or wars. They could open the door to escalation of these conflicts to the point where nuclear weapons are once again used on the battlefield. Nuclear threats could also lead to the unintentional escalation of a crisis if they are miscommunicated or misunderstood. The track record of nuclear threat-making demonstrates that countries in compliance with their nonproliferation obligations are largely free from being threatened with nuclear weapons. If this trend continues, it will cement the NPT as a cornerstone of international security for decades to come.

Nuclear Threats 1970-2010

Prepared by Samuel Black and Shireen Havewala



Date	Threatmaker Target	Speaker/ Action	Crisis Trigger	Quote/Description
March 26, 2010	DPRK US/South Korea	A spokesman for the General Staff of the Korean People's Army	Annual military exercises between the U.S. and South Korea	The Korean Central News Agency quotes a military spokesman as saying "Those who seek to bring down the system in the DPRK, whether they play a main role or a passive role, will fall victim to the unprecedented nuclear strikes of the invincible army." ¹
December 26, 2008	Pakistan India	Troop deployments near border and alert level increase	Terrorist attacks against Mumbai, November 26-29, 2008	Pakistan shifts troops from its western border to its eastern border with India. Pakistani intelligence officials say that Pakistani troops along the Indian border are on the highest state of alert. ²
December 22, 2008	India Pakistan	Foreign Minister Pranab Mukherjee	Terrorist attacks against Mumbai, November 26-29, 2008	"We will take all measures necessary as we deem fit to deal with the situation." ³
December 14, 2008	Pakistan India	Alert level increase	Terrorist attacks against Mumbai, November 26-29, 2008	After claiming that Indian Air Force jets had strayed into Pakistani airspace, Pakistan places its Air Force on alert. A Pakistani Air Force spokesman says the alert's purpose is to prepare to "thwart any aggression" from India. ⁴
August 15, 2008	Russia Poland	Gen. Anatoly Nogovitsyn	Prospective deployment of U.S. ballistic missile defenses in Eastern Europe	"By hosting these, Poland is making itself a target. This is 100 per cent certain. It becomes a target for attack. Such targets are destroyed as a first priority." ⁵
June 4, 2007	Russia Europe	President Vladimir Putin	Prospective deployment of U.S. ballistic missile defenses in Eastern Europe	"It is obvious that if part of the strategic nuclear potential of the United States is located in Europe, and according to our military experts will be threatening us, we will have to respond." "What kind of steps are we going to take in response? Of course, we are going to get new targets in Europe." ⁶

Date	Threatmaker Target	Speaker/ Action	Crisis Trigger	Quote/Description
May 1, 2007	US DPRK	US-Japan Security Consultative Committee Joint Statement	North Korea's announced nuclear test on October 9, 2006	"The North Korean provocations, including missile launches in July and a nuclear test in October 2006, serve as stark reminders of the importance of transforming the U.S.-Japan Alliance to ensure its continued effectiveness in the ever-changing security environment. ... U.S. extended deterrence underpins the defense of Japan and regional security. The U.S. reaffirmed that the full range of U.S. military capabilities -both nuclear and non-nuclear strike forces and defensive capabilities-form the core of extended deterrence and support U.S. commitments to the defense of Japan." ⁷
October 20, 2006	US DPRK	US-ROK Security Consultative Meeting Joint Communiqué	North Korea's announced nuclear test on October 9, 2006	"Secretary Rumsfeld offered assurances of firm U.S. commitment and immediate support to the ROK, including continuation of the extended deterrence offered by the U.S. nuclear umbrella, consistent with the Mutual Defense Treaty." ⁸
October 18, 2006	US DPRK	Secretary of State Condoleezza Rice	North Korea's announced nuclear test on October 9, 2006	"I reaffirm the president's statement of October 9th that the United States has the will and the capability to meet the full range. And I underscore "full range" of its deterrent and security commitments to Japan." ⁹
January 19, 2006	France Iran	President Jacques Chirac	Iran's announcement on January 10, 2006 that it would resume enrichment activities at its Natanz plant	"The leaders of states who would...consider using in one way or another weapons of mass destruction, must understand that they would lay themselves open to a firm and adapted response on our part." "This response could be a conventional one. It could also be of a different kind." The speech also condemned "the temptation by certain countries to obtain nuclear capabilities in contravention of treaties" and stated that "Against a regional power, our choice would not be between inaction or annihilation. The flexibility and reactivity of our strategic forces would enable us to exercise our response directly against its centres of power and its capacity to act." ¹⁰
January 26, 2003	US Iraq	White House Chief of Staff Andrew Card	Iraq's resistance to full cooperation with IAEA inspectors and presumed possession of weapons of mass destruction	Saddam Hussein "should anticipate that the United States will use whatever means necessary to protect us and the world from a holocaust," Card said. When asked if that included nuclear weapons, Card responded, "I'm not going to put anything on the table or off the table." ¹¹
August 2002	Israel Iraq	Advisor to the Prime Minister Amb. Dore Gold	Iraq's resistance to full cooperation with IAEA inspectors and presumed possession of weapons of mass destruction	"Israel is not only capable of enduring a strike from Iraq, but also striking back in a due way." "We have everything necessary for that, as well as full freedom of action to protect the population of this country in case Iraq still dares launch a war against the international community." ¹²
May 28, 2002	Pakistan India	Aircraft deployments near international border	Terrorist attack on Indian troops and their families in Kashmir	Pakistan deploys Mirage and A5 attack aircraft near the international border. Both variants are capable of delivering nuclear weapons. ¹³
May 26, 2002	India Pakistan	Prime Minister A. B. Vajpayee	Terrorist attack on Indian troops and their families in Kashmir	Vajpayee, in a speech to Indian troops, calls for the army to prepare for a "decisive fight." ¹⁴
May 25-28, 2002	Pakistan India	Ballistic missile flight tests	Terrorist attack on Indian troops and their families in Kashmir	Pakistan carries out a series of flight tests involving nuclear-capable ballistic missiles, including the Ghauri, Ghaznavi, and Hatf-2. ¹⁵
May 21, 2002	India-Pakistan Pakistan-India	Troop deployments near international border and ballistic missile flight test	Terrorist attack on Indian troops and their families in Kashmir	India deploys elements of its Army and Navy closer to Pakistan. Pakistan flight tests a nuclear-capable Shaheen ballistic missile. ¹⁶

Date	Threatmaker Target	Speaker/ Action	Crisis Trigger	Quote/Description
May 16, 2002	Pakistan India	Alert level increase	Terrorist attack on Indian troops and their families in Kashmir	Pakistan increases the alert level of its armed forces. ¹⁷
April 6, 2002	Pakistan India	President Pervez Musharraf	Terrorist attack on India's Parliament	In an interview with Germany's Der Spiegel magazine, Musharraf says that "as a last resort the atom bomb is also possible." ¹⁸
March 23, 2002	Pakistan India	President Pervez Musharraf	Terrorist attack on India's Parliament	In a speech on Pakistan's National Day, Musharraf promises that if India challenges Pakistan, it will be taught an "unforgettable lesson." ¹⁹
March 20, 2002	UK Iraq	Secretary of State for Defence Geoff Hoon	Iraq's resistance to full cooperation with IAEA inspectors and presumed possession of weapons of mass destruction	States of concern "can be absolutely confident that in the right conditions we would be willing to use our nuclear weapons." ²⁰
March 13, 2002	US Iraq	President George W. Bush	Iraq's resistance to full cooperation with IAEA inspectors and presumed possession of weapons of mass destruction	"Again, all options are on the table. But one thing I will not allow is a nation such as Iraq to threaten our very future by developing weapons of mass destruction." ²¹
January 25, 2002	India Pakistan	Ballistic missile flight test	Terrorist attack on India's Parliament	India successfully tests a nuclear-capable Agni-II ballistic missile. ²²
December 30, 2001	India Pakistan	Defence Minister George Fernandes	Terrorist attack on India's Parliament	"We could take a strike, survive and then hit back. Pakistan would be finished." ²³
December 29, 2001	India Pakistan	Military exercise	Terrorist attack on India's Parliament	A major Indian newspaper reports that the Indian military is planning a massive military exercise to test its readiness to defend against a military attack. It notifies Pakistan of this impending exercise, as required by a bilateral agreement signed in 1991. ²⁴
December 27, 2001	Pakistan India	Alert level increase	Terrorist attack on India's Parliament	Pakistan takes a number of steps to improve its ability to defend against a possible Indian attack, including increasing the alert level of its armed forces. ²⁵
December 24, 2001	India Pakistan	Nuclear missile deployments	Terrorist attack on India's Parliament	India reportedly moves its Prithvi missiles within range of Islamabad. ²⁶
December 20, 2001	Pakistan India	Nuclear missile deployments	Terrorist attack on India's Parliament	Pakistan reportedly moves its Hatf-1 and Hatf-2 ballistic missiles closer to the international border (and, by extension, Indian cities). ²⁷
December 18, 2001	India-Pakistan Pakistan-India	Troop deployments near international border and alert level increases	Terrorist attack on India's Parliament	India moves hundreds of thousands of troops to its border with Pakistan under the aegis of Operation Parakram. The alert levels of both the Indian and Pakistani armed forces are increased. ²⁸
December 17, 2001	India Pakistan	Home Minister L.K. Advani	Terrorist attack on India's Parliament	"Anyone who challenges our security will have to face the consequences." ²⁹
June-July 1999	Pakistan India	Activation of nuclear weapons	Kargil conflict	U.S. intelligence services receive information indicating that Pakistan has activated its nuclear weapons, preparing them for use in some unspecified way. ³⁰
May 31, 1999	Pakistan India	Foreign Secretary Shamshad Ahmad	Kargil conflict	"We will not hesitate to use any weapon in our arsenal to defend our territorial integrity." ³¹
May 28, 1999	Pakistan India	Prime Minister Nawaz Sharif	Kargil conflict	Pakistanis "are confident for the first time in their history that in the eventuality of an armed attack they will be able to meet it on equal terms." (On the one-year anniversary of Pakistan's nuclear tests). ³²

Date	Threatmaker Target	Speaker/ Action	Crisis Trigger	Quote/Description
May 27, 1999	Pakistan India	Military spokesman Brig. Rashid Quereshi	Kargil conflict	"The Pakistan armed forces reserve the right to retaliate by whatever means are considered appropriate." ³³
April 10, 1999	Russia US/Germany	President Boris Yeltsin	NATO bombing of Serbia	"I told NATO, the Americans, the Germans: Don't push us towards military action. Otherwise, there will be a European war for sure and possibly world war." ³⁴
May 28, 1998	Pakistan India	Foreign Ministry meeting with Indian High Commissioner	Indian and Pakistani nuclear weapon tests	"Any such attack [on Pakistan's nuclear installations] would warrant a swift and massive retaliation with unforeseen consequences." ³⁵
February 17, 1998	UK Iraq	Foreign Secretary Robin Cook	Iraq's resistance to full cooperation with IAEA inspectors and presumed possession of weapons of mass destruction	Saddam Hussein "should be in no doubt that if he were to [use chemical weapons] there would be a proportionate response." ³⁶
February 4, 1998	US Iraq	Nuclear bomber deployments	Iraq's resistance to full cooperation with IAEA inspectors and presumed possession of weapons of mass destruction	The US begins deploying a number of nuclear-capable aircraft, including 6 B-52s, 1 B-1, and 6 F-117s, to bases within range of Iraq. ³⁷
January 28, 1998	US Iraq	Pentagon spokesman Kevin Bacon	Iraq's resistance to full cooperation with IAEA inspectors and presumed possession of weapons of mass destruction	Bacon states that with regard to the use of nuclear weapons in a possible US strike on Iraqi nuclear facilities, "I don't think we've ruled anything in or out in this regard." ³⁸
November 14, 1997	US/UK Iraq	US/UK aircraft carriers	Iraq's resistance to full cooperation with IAEA inspectors and presumed possession of weapons of mass destruction	The US and UK announce that the U.S.S. Independence and H.M.S. Invincible, accompanied by other ships, will be deployed to the Persian Gulf. ³⁹ A number of land-based nuclear-capable bombers are also deployed to the region in this time period. ⁴⁰
March 10-11, 1996	US China	US aircraft carrier Independence	First-ever direct Presidential election in Taiwan	The US moves the carrier Independence to a position approximately 230 miles southeast of Taiwan in response to heightened China-Taiwan tensions. A sailor tells the Los Angeles Times that US fighter aircraft based on the Independence can reach the Taiwan Strait in 30 minutes. ⁴¹
March 7-13, 1996	China Taiwan	Nuclear missile tests	First-ever direct Presidential election in Taiwan	China test launches four nuclear-capable missiles which land in the ocean just north of Taiwan. ⁴²
January 1996	China US	An unnamed Chinese government official	First-ever direct Presidential election in Taiwan	A Chinese official tells former Assistant Secretary of Defense Charles Freeman that China can act militarily against Taiwan without fear of U.S. intervention because U.S. leaders "care more about Los Angeles than they do about Taiwan." This is conveyed by Freeman to U.S. National Security Advisor Anthony Lake. Freeman's impression is that "some in Beijing may be prepared to engage in nuclear blackmail against the U.S. to insure that Americans do no [sic] obstruct" China's efforts "to defend the principles of Chinese sovereignty over Taiwan and Chinese national unity." ⁴³
December 21, 1995	China Taiwan	Nuclear missile tests	First-ever direct Presidential election in Taiwan	China test launches three nuclear-capable missiles, which pass over Taiwan before landing in the ocean east of the island. ⁴⁴

Date	Threatmaker Target	Speaker/ Action	Crisis Trigger	Quote/Description
December 19, 1995	US China	US aircraft carrier Nimitz	Chinese nuclear missile tests in the vicinity of Taiwan	The U.S.S. Nimitz and its escort ships pass through the Taiwan Strait, the first such transit since the normalization of US-China relations in 1979. The passage wasn't publicly acknowledged until January 26, 1996. ⁴⁵
August 15-25, 1995	China Taiwan	Nuclear missile tests	Taiwanese President Lee Teng-hui's visit to the U.S. and pro-independence stance	In the context of broader military exercises, China test launches a number of nuclear-capable missiles into the East China Sea. ⁴⁶
July 21-28, 1995	China Taiwan	Nuclear missile tests	Taiwanese President Lee Teng-hui's visit to the U.S. and pro-independence stance	In the context of broader military exercises, China test launches six nuclear-capable missiles in an area of the East China Sea close to Taiwan. ⁴⁷
March 25-June 13, 1995	US DPRK	Private message to DPRK government	Implementation of 1994 Agreed Framework, and specifically regarding the provision to the DPRK of light water nuclear reactors	In 1997, Gen. Eugene Habiger, while testifying before Congress, was asked what role nuclear weapons had had in preventing the use of WMDs by rogue states. He stated that "...it plays a very large role. Not only was that message passed in 1990 by the President [to Iraq], that same message was passed to the North Koreans back in 1995, when the North Koreans were not coming off their reactor approach..." ⁴⁸ This threat was likely passed after March 25, when North Korea announced that it would resume nuclear activities if a contract for the provision of light water reactors (under the terms of the recently-signed Agreed Framework) was not concluded by April 21. The threat was likely passed before June 13, when the US and DPRK issued a joint statement which temporarily resolved the dispute. ⁴⁹
October 7, 1994	US Iraq	US aircraft carrier George Washington	The deployment of 40,000-50,000 Iraqi troops along the Kuwaiti border	President Bill Clinton orders the U.S.S. George Washington to move to the Persian Gulf. ⁵⁰
July 22, 1993	US DPRK	President Bill Clinton	DPRK's resistance to IAEA inspections and NPT membership	If North Korea developed and used nuclear weapons, "we would quickly and overwhelmingly retaliate. It would mean the end of their country as they know it." ⁵¹
January 9, 1991	US Iraq	President George H.W. Bush	Iraqi invasion of Kuwait	President Bush wrote a letter to Iraqi President Saddam Hussain (read by Foreign Minister Tariq Aziz at his meeting with Secretary of State James Baker) that included the following passage: "Let me state, too, that the United States will not tolerate the use of chemical or biological weapons or the destruction of Kuwait's oil fields and installations. ... The American people would demand the strongest possible response. You and your country will pay a terrible price if you order unconscionable acts of this sort." ⁵²
April 14, 1990	Pakistan-India India-Pakistan	Unnamed senior military officer; alert level increases	1990 India-Pakistan crisis	A Pakistani parliamentary committee of is informed that Pakistan's armed forces are in a "high state of preparedness and vigilance." Indian air force bases close to the international border are put on a higher alert level. ⁵³
April 10, 1990	India Pakistan	Prime Minister V. P. Singh	1990 India-Pakistan crisis	"I warn them [that] those who talk about a thousand years of war should examine whether they will last a thousand hours of war." ⁵⁴

Date	Threatmaker Target	Speaker/ Action	Crisis Trigger	Quote/Description
December 1988-January 1989	US Libya	US aircraft carrier John F. Kennedy	Libya's construction of three chemical weapons plants and support for terrorists implicated in the destruction of Pan Am Flight 103	The U.S.S. John F. Kennedy conducts exercises in the Mediterranean Sea with French, Tunisian, and Moroccan forces. The deployment culminates in the destruction of two Libyan fighter aircraft by U.S. carrier-based F-14 fighters. ⁵⁵
June 1988	China Vietnam	Exercises simulating tactical nuclear attack	A crisis over ownership of the Spratly Islands which called to a battle between Chinese and Vietnamese naval vessels	Chinese forces conduct an exercise in the Spratly Islands which simulates a tactical nuclear attack. ⁵⁶
November 2-11, 1983	USSR US	Alert level increases	1983 NATO Able Archer exercise	During the NATO Able Archer-83 exercise, the Soviet Union fears a nuclear first strike. Its response includes raising alert levels at air bases host to nuclear-capable units in East Germany and Poland. ⁵⁷
March 18-26, 1983	US Libya	US aircraft carriers Enterprise and Nimitz	Libya's interventions in Chad and Sudan and threats against Egypt.	The U.S.S. Nimitz and U.S.S. Enterprise are deployed to an area of the Mediterranean Sea just north of Libya. Libyan leader Col. Qadhafi threatens to turn the Gulf of Syrte into a "red sea of blood" if U.S. vessels enter it. ⁵⁸
January 25, 1981	France Libya	Alert level increases	Chad's Civil War, in which France and Libya support the two major opposing factions. The crisis escalates in January 1981 when Libya and its Chadian client announced plans to merge Libya and Chad.	In December 1980, France had described the situation in Chad as being of "grave concern." A month later France places its Mediterranean Fleet on alert. ⁵⁹
November 18-21, 1979	US Iran	US aircraft carriers Midway and Kitty Hawk	Iranian hostage crisis	The aircraft carriers U.S.S. Midway and U.S.S. Kitty Hawk both arrive in the northern Arabian Sea, within striking distance of Iran. ⁶⁰
Late February 1979	US USSR	US aircraft carrier Constellation	Sino-Vietnamese War	The USS Constellation carries out operations in the South China Sea, warning the Soviets not to intervene in the Sino-Vietnamese war. ⁶¹
February 18, 1979	USSR China	Government Statement via TASS news agency	Sino-Vietnamese War	The Chinese government should halt its attack on Vietnam "before it is too late." The Soviet Defense Minister describes this several days later as a "serious warning." ⁶²
Early 1979	USSR China	Forward deployments of nuclear capable aircraft and missiles	Sino-Soviet Border Conflict	The Soviet Union begins deploying SS-20 ballistic missiles and Backfire bombers close to the Soviet-Chinese border. ⁶³
July 1977	UK Guatemala	Forward deployment of strike aircraft and aircraft carrier Achilles	Guatemalan assertions of sovereignty over and deployment of troops near the border with British Honduras	During a crisis with Guatemala over British Honduras (Belize), the U.K. deploys the H.M.S. Achilles, its associated air wings, and an additional six Royal Air Force Harrier jets near the border with Guatemala. ⁶⁴
August 17-September 16, 1976	US DPRK	Deployments of strike aircraft and the US aircraft carrier Midway	The "Poplar Tree incident" in the Demilitarized Zone that divides North and South Korea in which two U.S. military officers are killed	The U.S. deploys a number of forces to South Korea, including nuclear-capable F-4s, F-111s, and B-52s, as well as the U.S.S. Midway. U.S. forces in Korea are brought to DEFCON 3, an alert status half way between peacetime and war. ⁶⁵

Date	Threatmaker Target	Speaker/ Action	Crisis Trigger	Quote/Description
October 25, 1973	US USSR	Deployments of nuclear capable bombers	October (Yom Kippur) War	60 B-52 strategic bombers are moved from their base in Guam to the continental US, where they join other Strategic Air Command forces on alert status. ⁶⁶
October 24, 1973	US USSR	Alert level increase; Letter from President Richard Nixon	October (Yom Kippur) War	In response to a letter from the Soviet leader Brezhnev threatening to unilaterally intervene in the October (Yom Kippur) War, U.S. forces worldwide, including nuclear ones, are placed on DEFCON 3. ⁶⁷ In a letter addressed to General Secretary Brezhnev, Nixon states that “we must view your suggestion of unilateral action as a matter of the gravest concern, involving incalculable consequences.” ⁶⁸
October 22-25, 1973	USSR US	Nuclear weapon deployment	October (Yom Kippur) War	A Soviet freighter travels from the Bosphorus Strait to Alexandria, Egypt. Its cargo emits neutrons, indicating that it is carrying nuclear weapons. ⁶⁹
October 7-14, 1973	Israel Egypt/Syria	Nuclear missile deployments and alert level increases	October (Yom Kippur) War	After the beginning of a surprise two-pronged assault by Egypt and Syria, Israel deploys Jericho missiles with nuclear warheads and places them on high alert. ⁷⁰
December 13, 1971	US India/Russia	US aircraft carrier Enterprise	1971 India-Pakistan War	The U.S.S. Enterprise, supported by elements of the Seventh Fleet, moves into the Indian Ocean. ⁷¹ Nixon later describes the action as “a display of old-fashioned gunboat diplomacy aimed at India and Russia” designed to “give emphasis to warnings not to attack West Pakistan.” ⁷²
September 17, 1970	US Iraq/Syria	US Sixth Fleet	September 1970 Jordanian crisis	The bulk of the US Sixth Fleet, including two aircraft carriers, moves into the eastern Mediterranean Sea. President Richard Nixon says, in a private telephone conversation, that if Iraq or Syria intervenes on behalf of the Palestinian fedayeen, “my strong feeling at this time is that we should use American air and knock the bejesus out of them.” ⁷³
April-July, 1970	USSR Israel	Forward deployment of strike aircraft	“War of Attrition” between Israel and Egypt, 1967-1970	Soviet Mig-21 aircraft are deployed near the Suez Canal during a series of clashes between Israeli and Egyptian forces. Some Mig-21 variants are capable of delivering nuclear weapons. ⁷⁴

¹ Korean Central News Agency, “US-S. Korean Moves to Bring down System in DPRK Warned,” March 26, 2010, <http://www.kcna.co.jp/item/2010/201003/news26/20100326-04ee.html>.

² Richard A. Oppel Jr. and Salman Masood, “Pakistan Moves Troops Amid Tension With India,” New York Times, December 26, 2008, <http://www.nytimes.com/2008/12/27/world/asia/27pstan.html>.

³ Rama Lakshmi, “Pakistani Jets Scramble as India Hardens Tone,” Washington Post, December 23, 2008, <http://www.washingtonpost.com/wp-dyn/content/article/2008/12/22/AR2008122202024.html>.

⁴ Candace Rondeaux, “Pakistan Cites Airspace Breach,” Washington Post, December 14, 2008, <http://www.washingtonpost.com/wp-dyn/content/article/2008/12/13/AR2008121301311.html>.

⁵ Harry de Quetteville and Andrew Pierce, “Russia threatens nuclear attack on Poland over US missile shield deal,” The Telegraph (UK), August 15, 2008, <http://www.telegraph.co.uk/news/worldnews/europe/russia/2566005/Russia-threatens-nuclear-attack-on-Poland-over-US-missile-shield-deal.html>.

⁶ Doug Saunders, “Putin threatens to target Europe,” Globe and Mail (Toronto), June 4, 2007, <http://www.theglobeandmail.com/news/world/article763092.ece>.

⁷ Joint Statement of the U.S.-Japan Security Consultative Committee, May 1, 2007, <http://www.mofa.go.jp/region/n-america/us/security/scc/joint0705.html>.

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The background is a complex, abstract composition. It features a dense, textured pattern of small, irregular shapes in shades of yellow, orange, and brown. Overlaid on this are several large, semi-transparent geometric shapes, including triangles, circles, and trapezoids, which create a layered, architectural effect. The overall color palette is warm and monochromatic, ranging from light yellow to deep brown.

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