Conclusion

The world has lived with nuclear weapons for more than seventy years. There is still much that we do not know about nuclear politics and strategy, though. For some, nuclear weapons are the absolute weapon and cast a large shadow over international politics. This claim errs by ascribing too large a role to nuclear weapons. The frequency with which nonnuclear weapon states challenge and resist nuclear-armed states demonstrates the limits of the nuclear shadow. For others, the effects of force structure, norms, and extended deterrence offer evidence that nuclear weapons play a marginal role in many (most) situations. While these factors help explain conflict in nuclear monopoly, many such arguments go too far by assigning little if any role to nuclear weapons. Nuclear weapons cast a definite but limited shadow in nuclear monopoly. The shadow shifts in scope and shape based on a number of factors, yet it looms in the background of any dispute.

The framework developed in chapter 1 received support from four detailed case studies. The analysis allowed for an examination of the strategies and processes by which conflict in nuclear monopoly occurred. In this chapter I briefly explore two key sources of danger that the nonnuclear weapon state (NNWS) can pose to the nuclear weapon state (NWS) across additional cases. I find support for my argument that the danger to the NWS will be low. I first demonstrate that wars in nuclear monopoly are more likely to be fought when there are large power imbalances in favor of the NWS. This observation holds even when comparing wars in nuclear monopoly to wars between nonnuclear weapon states. Next, I examine all wars in nuclear monopoly to show that during the actual fighting there is typically little danger to the NWS.

I conclude with broader implications for nuclear politics. In the introductory chapter, I argued that conflict in nuclear monopoly posed a puzzle for many traditional deterrence and compellence explanations. Moreover, much of what we know about nuclear weapons and conflict focuses on

situations when both sides have nuclear weapons. This book joins a small but growing literature on conflict in nuclear monopoly. It incorporates insights on the costs of nuclear use, force structures, and nuclear nonuse norms to help understand the patterns of conflict when only one side has nuclear weapons.[1] I return to these theoretical and policy issues here.

Power and War in Nuclear Monopoly

My argument expects war in nuclear monopoly to be unlikely when the nonnuclear weapon state is powerful relative to its nuclear-armed opponent. The reason is that the benefits of nuclear use are larger for the NWS against a conventionally capable NNWS than a conventionally weak nonnuclear opponent. This is not to claim that it is great to be weak in international politics. A weak NNWS faces all sorts of challenges and may avoid war if it believes it lacks a conventional strategy for success. The NNWS has the option, though, of fighting if it finds such a strategy. A powerful NNWS must worry much more intently that nuclear weapons will be used in any war and thus is less likely to escalate a dispute. Such wars are essentially "selected out," leaving only those wars between powerful nuclear-weapon states and weak NNWS opponents. This dynamic should be absent when two or more nonnuclear weapon states confront one another. Indeed, in those cases wars between conventionally similar opponents are likely to be fairly common because both sides can reasonably believe that they would win.

This leads to the basic observable implication assessed in this section: wars in nuclear monopoly are more likely to be fought when there are large power imbalances in favor of the NWS, and the typical power imbalance between opponents will be larger than when no participant to a political dispute has nuclear weapons. In the rest of this section I first briefly discuss the data. I then show that the historical record generally supports my argument.

POWER AND WAR

The case study chapters relied on multiple indicators for power. In this chapter I use two of those indicators: per capita GDP and military spending per soldier. Both are widely available across cases and capture core parts of my argument. Military spending per soldier accounts for the possibility that a state with a larger military may nevertheless be overmatched by a smaller but better trained and equipped opponent.[2] Moreover, some forces critical to power projection, such as naval and air forces, are more capital intensive than large numbers of ground troops. The lower the offensive capabilities of the NNWS, the less danger it poses to the nuclear-armed

opponent.[3] I use economic development as an additional indicator of military power for the post–World War II period. As Michael Beckley demonstrates, economic development is one of the best predictors of military effectiveness.[4] Most basically, "economic development improves a state's ability to produce high-quality military equipment and skillful military personnel."[5] Moreover, developed economies can maintain advanced equipment and modern force employment techniques.[6] Less developed states may be able to purchase weapon platforms from abroad, but they will be ineffective at integrating those with supporting infrastructure or operating them on the battlefield. I follow Beckley and use per capita gross domestic product to measure economic development.[7]

I include the widely used Composite Indicator of National Capabilities (CINC) for comparison and transparency but do not rely on it. First, CINC conflates long-term and immediate military power by including measures such as total population, iron and steel production, and energy consumption, alongside military personnel and military spending.[8] My argument centers on whether the NNWS poses a large immediate danger that requires nuclear weapons to offset. Even if the NWS has more latent power, that advantage may not have time to manifest itself before the NNWS is able to defeat the NWS's conventional forces. Second, CINC is problematic in the post–World War II period. It overvalues certain indicators, such as domestic steel production, that do not take into account changing sources of conventional power or qualitative advantages.[9] For instance, CINC codes the Soviet Union as surpassing the United States in 1971 and holding a superior position until 1988. Yet this was precisely the period during which the Soviet Union fell hopelessly behind the United States economically and militarily.[10]

I use the ratio of NWS to NNWS capabilities in each category to assess relative power. When neither state has nuclear weapons, I use the ratio of the more powerful state's capabilities to the less powerful state's capabilities. It is important to note the subtle difference in ratios. In nuclear monopoly it is possible for the ratio to be less than 1 if the NWS is less powerful conventionally than the NNWS. By contrast, the lowest value that the ratio can take when neither side has nuclear weapons is 1, indicating perfectly balanced capabilities.

I code nuclear monopoly when only one side has nuclear weapons and the other side does not. When neither state has a nuclear weapon, I code the pair as nonnuclear.[11] I use the Correlates of War (COW) list of wars, which defines war as hostilities between states involving a minimum of one thousand battlefield deaths per year.[12] A number of conflicts coded as war seem to be borderline cases (see table C.1, below), but including all wars identified by external coding criteria increases confidence that I did not simply select conflicts that would accord with my argument. Indeed, excluding many of the borderline cases (such as South Africa versus Cuba in 1987 or

the Soviet Union versus Hungary in 1956) would strengthen my argument. In wars with multiple participants I compare the power ratios for each NWS-NNWS pairing. I use pairs of states—dyads—because that is the standard in quantitative conflict studies, and it is difficult to aggregate measures such as per capita GDP across several actors fighting on the same side. Several wars in nuclear monopoly—such as the Korean, Vietnam, and Gulf Wars—involve large US-led coalitions that include states without nuclear weapons on both sides. Including all these dyads as examples of NNWS-NNWS interactions would be problematic, because many of the NNWS participants would not have fought in the absence of US leadership. Moreover, the additional states fought on the side of the nuclear power, further enhancing NWS capabilities against the nonnuclear opponent. I therefore count only two nonnuclear weapon states at war when no participant had nuclear weapons or when both sides were major independent participants in a larger conflict in nuclear monopoly, such as North and South Korea in the Korean War.[13] Appendix A provides additional discussion of the coding.

ANALYSIS

The data conform to my argument's expectations. Table C.1 lists all wars in nuclear monopoly. The NWS almost always had a large power asymmetry in its favor. In several wars the NWS was part of a multistate coalition that further shifted the power imbalance in its favor. Chinese capabilities relative to Vietnam were similar in 1979 and 1987, but in both cases the sheer preponderance of material capabilities allowed the NWS to overcome this gap.

Table C.1 Wars in nuclear monopoly

Year	*War*	*Nuclear state(s)*	*Nonnuclear state(s)*	*GDP per capita ratio*	*Military spending per soldier ratio*	*CINC ratio*
1950	Korean War	United States	China	20.6	15.6	2.4
			North Korea	10.8	missing data	106.5
1956	Suez War	United Kingdom	Egypt	16.8	2.3	9.4
1956	Soviet vs. Hungary	Soviet Union	Hungary	1.2	5.3	33.9
1965	Vietnam War	United States	Vietnam (North)	19.9	13.3	50.5
1967	Six Day War*	Israel	Egypt	7.4	2.5	0.2

Year	*War*	*Nuclear state(s)*	*Nonnuclear state(s)*	*GDP per capita ratio*	*Military spending per soldier ratio*	*CINC ratio*
			Iraq	1.0	2.4	0.7
			Jordan	1.8	3.9	2.1
			Syria	2.0	5.5	1.1
1969	War of Attrition	Israel	Egypt	11.0	1.6	0.3
1973	October War	Israel	Egypt	11.9	2.9	0.4
			Iraq	3.0	3.8	1.2
			Jordan	5.5	11.6	3.8
			Saudi Arabia	0.1	1.4	1.2
			Syria	3.2	7.1	1.8
1979	China-Vietnam I	China	Vietnam	1.3	missing data	13.4
1982	Falklands War	United Kingdom	Argentina	5.0	3.0	3.5
1982	Lebanon	Israel	Syria	7.2	4.7	1.1
1987	Angola**	South Africa	Angola	1.9	2.9	7.1
			Cuba	1.5	5.8	2.5
1987	China-Vietnam II	China	Vietnam	2.0	0.8	8.6
1991	Gulf War	France	Iraq	12.7	2.5	2.6
		United Kingdom		12.1	4.9	3.1
		United States		17.9	4.6	16.4
1999	Kosovo	United States	Serbia	6.2	12.4	69.9
2001	Afghanistan	United Kingdom	Afghanistan	43.8	151.1	17.6
		United States		56.7	216.4	116.4
2003	Iraq	United Kingdom	Iraq	12.7	57.7	2.9
		United States		16.7	80.5	22.9

Note: * Israel likely produced a nuclear weapon during or immediately prior to the war.
** May 2018 Correlates of War, Interstate War Dataset lists a discrete start date for this phase of the war over Angola.

Sources: Zeev Maoz, Paul L. Johnson, Jasper Kaplan, Fiona Ogunkoya, and Aaron Shreve, "The Dyadic Militarized Interstate Disputes (MIDs) Dataset Version 3.0: Logic, Characteristics, and Comparisons to Alternative Datasets," *Journal of Conflict Resolution* 63, no. 3 (March 2019): 811–35; National Material Capabilities, Version 5.0; Kristian Skrede Gleditsch, Expanded Trade and GDP Data, Version 6.

The major outlier is Israel. It frequently fought wars by itself against multistate coalitions. It is also the only NWS in the data to face an opponent with a higher GDP per capita: Saudi Arabia in 1973. Yet in that case Saudi Arabia was only minimally involved in the actual fighting; it did not enter the war for several days after the war began.[14] The CINC ratio of capabilities, again with the notable exception of Israel, also favors the NWS by large margins. I addressed the Israeli qualitative superiority in chapter 3, arguing that in actuality Israel had a sizable military advantage.

While the list of wars is informative, it lacks a comparison to fights involving only nonnuclear weapon states. I next compare the various power ratios between two states in wars in nuclear monopoly to wars between nonnuclear armed states. I use the median rather than average ratio to ensure that outliers—such as the United States versus Afghanistan—do not drive the results. Figure C.1 shows the ratio for, first, all warring dyads in nuclear monopoly (*Monopoly*); second, excluding the Suez, Hungary, Kosovo, and Iraq 2003 wars, where the NWS demand centered on pre-dispute territorial or regime change (*Monopoly—demand*); and third, dyads in wars in which the COW dataset codes the NNWS as the initiator of the overall war (*Monopoly—initiation*). It then displays the power ratio for NNWS-NNWS warring dyads (*Nonnuclear*).

The results show that wars in nuclear monopoly tend to be fought with a larger power asymmetry—favoring the NWS in monopoly—than NNWS wars. When using GDP per capita the ratio is three to five times greater in nuclear monopoly than between nonnuclear weapon states. Military spending per soldier allows a comparison with wars fought prior to the

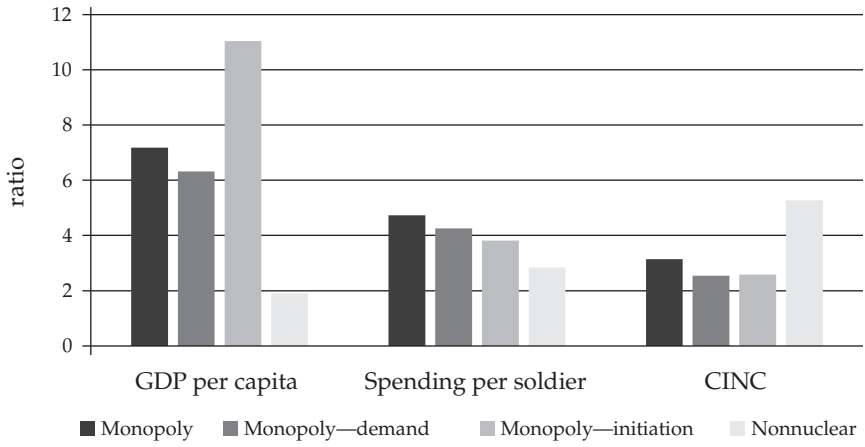

Figure C.1 Median capability ratios by nuclear balance, GDP per capita data, 1950–2010; spending and CINC, 1816–2010

nuclear era. The results are similar; the median ratio is nearly twice as large in nuclear monopoly than nonnuclear relationships. The gap narrows when including only NNWS initiators, but there is still a noticeable difference. The small number of cases when applying the initiator condition—there are only nine dyads fighting wars in nuclear monopoly using GDP per capita and only eight using the spending per soldier measure—cautions against making strong inferences. The CINC score is the exception, though this is driven by Israel. Excluding Israel, the median ratio in nuclear monopoly is generally higher than dyads in wars that had no nuclear-armed states.[15]

Finally, I examine the percentage of disputes in different balances of power that escalate to war. Many nuclear weapon states are also conventionally powerful. There are notable exceptions, but if there are few disputes between actors with similar capabilities, there would be few opportunities for war. The fact that so many weak nonnuclear weapon states still end up in fights against nuclear opponents suggests that they are willing to discount nuclear arsenals and so does not necessarily contradict my argument, but it would qualify the results. I operationalize political disputes by examining militarized interstate disputes (MIDs): "united historical cases of conflict in which the threat, display or use of military force short of war by one member state is explicitly directed towards the government, official representatives, official forces, property, or territory of another state."[16]

I divided all disputes and wars into two sets of balanced and unbalanced categories. There is little guidance for the cutoff between balanced and unbalanced pairings in international politics. I first considered cases where the NWS was up to three times as powerful relative to its nonnuclear opponent to be a NNWS advantage or roughly balanced pairing. I coded ratios where the NWS is three times as powerful or greater as unbalanced. The 3:1 threshold has primarily been used (and critiqued) to identify imbalances at the operational and tactical levels, but it has also been used at the strategic level.[17] I also used a 2:1 threshold, so that an NWS twice as powerful as its opponent is considered to have a large advantage.

In nuclear monopoly, the percentage of disputes that escalate to war is generally higher when the NWS has a large advantage. The basic relationship between power and war therefore holds when accounting for the greater number of asymmetric disputes in nuclear monopoly. As figure C.2 shows, as per capita GDP becomes more favorable to the NWS, the percentage of disputes that become wars increases substantially. This is true for both a 3:1 and 2:1 threshold for NWS advantage. By contrast, in disputes between two nonnuclear armed states, a slightly smaller percentage escalate to wars when per capita GDP is unbalanced. The relationship for the spending-per-soldier metric offers mixed support for my argument. There is only a small increase in the percentage of wars when

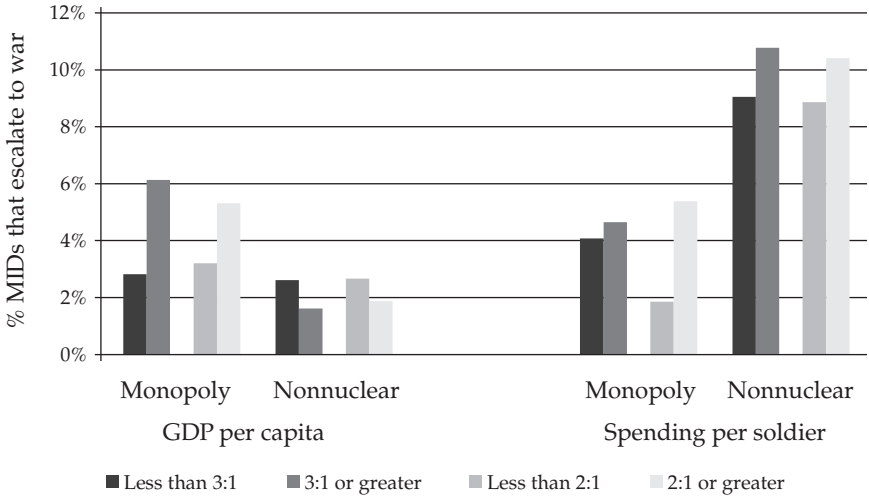

Figure C.2 Percentage of disputes that escalate to war, GDP per capita data, 1950–2010; spending and CINC, 1816–2010

the NWS has at least a 3:1 advantage compared to when it does not. Indeed, there is a slightly larger shift using this measure in nonnuclear relationships.[18] When shifting to a 2:1 advantage, the results show a major change in the direction my argument predicts. The percentage of disputes that become wars when the NWS has a large advantage is nearly triple the percentage of disputes that do so when the NWS does not. The basic reason for this is that there are a number of wars where the NWS enjoys only slightly less than a 3:1 advantage. At the same time, there are very few wars, but a sizable number of disputes, where the NWS approaches a 2:1 or less advantage. There is little change for wars between nonnuclear weapon states.

In sum, across a wide variety of measures, evidence suggests that war in nuclear monopoly tends to be fought when the NWS has a large conventional military advantage. The median power imbalance is larger in nuclear monopoly than in wars involving only nonnuclear weapon states. Israel is an outlier, though it enjoyed a strong qualitative advantage over its opponents that aggregate material indicators can mask. With one exception, a larger percentage of disputes become wars in nuclear monopoly when the NWS has a large advantage. There is also a noticeable difference with NNWS wars, where the influence of power was more modest. Each metric has limitations, the results do not control for a variety of factors, and some qualify the strength of the overall arguments. Nevertheless, the general consistency of the findings increases confidence that the logic accounts for additional cases.

War Conduct in Nuclear Monopoly

This section reviews the conduct of the wars in nuclear monopoly. Chapters 2, 3, and 4 discussed five wars involving the United States (Korea, Gulf War, Iraq 2003) or Israel (War of Attrition, October War). This chapter considers those along with eleven others: the 1956 Sinai War; the 1956 Soviet-Hungary War; the 1965 Vietnam War; the 1967 Six Day War; the 1979 and 1987 China–Vietnam wars; the 1982 Falklands War; the 1982 war over Lebanon; the 1987 war over Angola; the 1999 Kosovo War; and the 2001 Afghanistan War. Appendix B contains a discussion for each of the eleven additional wars. In this section I summarize the main results. In doing so, I establish a basic congruence between nuclear monopoly and the conduct of wars. Unlike in the case study chapters, however, I do not investigate the NNWS internal decision making to ascertain the degree to which the nonnuclear weapon states discussed nuclear weapons.[19]

My argument predicts that the conduct of military operations during wars in nuclear monopoly will generate little danger to the NWS. As long as the danger to the NWS is low, the benefits of nuclear use will also be low. This allows any costs associated with nuclear use to loom large. My claim is not that the NNWS will necessarily alter its behavior; in many cases it lacks the capabilities to deploy more threatening forces or pursue more ambitious objectives. That is precisely the point, though. A state that cannot do more will pose little danger to the NWS; wars that pose more danger should be unlikely to occur in the first place.

I look for several indicators that there is limited danger to the NWS during the war. First, the war should pose little threat to the NWS's homeland or nuclear arsenal. As such, the bulk of the fighting will be away from the NWS, on or near NNWS territory. The evidence strongly supports this expectation. I found no evidence in any of the sixteen wars that the NNWS threatened the NWS's survival or nuclear arsenal.[20] In ten of the wars, the fighting took place entirely outside the NWS territory.

In the six cases where part of the fighting did take place on NWS territory, it was isolated and posed little threat of a large invasion. Vietnam launched occasional minor incursions into China during their decade-long fight. Argentina invaded isolated British territory when it took the Falkland Islands, but there was no danger that Argentina would advance farther. Israel endured the most attacks on territory that it controlled.[21] There was some limited fighting on Israeli territory in 1967, largely involving Jordan. In 1970, the Egyptian military conducted raids and artillery attacks on Israeli territory, but there were no major operations. The notable exception was the 1973 October War. I discussed the limited nature of the Egyptian and Syrian offensives in chapter 3.

Second, my argument expects the NNWS to use either a defensive strategy or a limited aims offensive strategy. Again, the conduct of the wars corresponds to these expectations. Argentina used a limited aims offensive, quickly shifting to the defensive and seeking negotiations after capturing the Falklands. The North Vietnamese pursued offensive operations in South Vietnam, but these posed no threat to expand beyond that territory. As noted, the Vietnamese launched minor incursions into China during their fighting, but otherwise relied on a defensive strategy. Egypt relied on artillery barrages in 1970, and Egypt and Syria pursued limited aims offensives in 1973. China's attack in Korea in 1950 is the possible exception. While Chinese leaders initially considered adopting a defensive posture in Korea, they switched to a more expansive attack plan. The Chinese sought external support prior to their assault, though, and could not project power beyond the Korean Peninsula. In every other war the NNWS used defensive or guerrilla strategies. To be sure, these states may have launched offensives on their territory, such as Angola and Cuba against South Africa, but they did not conduct operations on the opponent's territory.

Third, the NNWS should generally impose only modest losses on the NWS. This necessarily involves killing NWS soldiers and destroying equipment, which may lead to a political defeat for the NWS. Importantly, though, the conduct of the war should not threaten the wholesale destruction of the NWS military or leave the NWS defenseless. Battlefield deaths provide one grim indicator for relative losses. In most of the wars, the fighting was very lopsided in favor of the NWS (table C.2). In others, the NNWS fought tenaciously and inflicted significant losses on the NWS. Yet in no case did the NWS losses risk military collapse or present the NWS with the possibility of being unable to defend its regime and territory. This is not to trivialize the losses of either side, and estimating battlefield deaths is a difficult endeavor. The results are nevertheless consistent with the argument's expectations.

Table C.2 Estimated battlefield deaths in nuclear monopoly wars, 1945–2010

Year	*War*	*Nuclear state(s)*	*Battlefield deaths*	*Nonnuclear state(s)*	*Battlefield deaths*
1950	Korean War	United States	54,487	China	422,612
				North Korea	316,579
1956	Suez War	United Kingdom	22	Egypt	3,000

Year	*War*	*Nuclear state(s)*	*Battlefield deaths*	*Nonnuclear state(s)*	*Battlefield deaths*
1956	Soviet vs. Hungary	Soviet Union	720	Hungary	926
1965	Vietnam War	United States	58,153	Vietnam (North)	700,000
1967	Six Day War	Israel	1,000	Egypt	10,000
				Iraq	30
				Jordan	6,100
				Syria	2,500
1969	War of Attrition	Israel	368	Egypt	5,000
1973	October War	Israel	2,838	Egypt	7,700
				Iraq	278
				Jordan	23
				Saudi Arabia	100
				Syria	3,500
1979	China-Vietnam I	China	13,000	Vietnam	8,000
1982	Falklands War	United Kingdom	255	Argentina	746
1982	Lebanon	Israel	455	Syria	1,200
1987	Angola	South Africa	missing data	Angola	missing data
				Cuba	missing data
1987	China-Vietnam II	China	1,800	Vietnam	2,200
1991	Gulf War	France	2	Iraq	40,000
		United Kingdom	24		
		United States	376		
1999	Kosovo	United States	2	Serbia	5,000
2001	Afghanistan	United Kingdom	0	Afghanistan	4,000
		United States	2		
2003	Iraq	United Kingdom	33	Iraq	7,000
		United States	140		

Sources: Meredith Reid Sarkees and Frank Wayman, *Resort to War: 1816–2007* (Washington, DC: CQ Press, 2010), chap. 3; Stephen L. Weigert, *Angola: A Modern Military History, 1961–2002* (New York: Palgrave Macmillan, 2011), 88; Michael Clodfelter, *Warfare and Armed Conflicts*, 3rd ed. (Jefferson, NC: McFarland, 2008), 604.

Note: Battlefield deaths are for the interstate war portion of conflicts only. Official reports for the Angola War from 1975 to 1989 list Cuba, 2,100 killed; South Africa, 715 killed. Estimates for Angolan killed in the 1987–1988 Mavinga campaign are 4,700.

Implications for Nuclear Politics

States without nuclear weapons have pursued a variety of means when challenging or resisting a nuclear-armed opponent during intense political disputes that seemed to be worsening. The most direct way to reduce conflict in nuclear monopoly, then, is to address the underlying political disputes. Yet when political disputes occurred (and they are likely to continue to occur), nonnuclear weapon states devised strategies around nuclear monopoly. These strategies took advantage of the costs and benefits associated with nuclear use for the nuclear-armed state. The NNWS leaders discounted the likelihood of nuclear use when they perceived the costs of use as outweighing the benefits for their opponent. They tempted fate, pursuing strategies that they believed would fall short of their opponent's red line for nuclear use.

There were several common elements across the cases as the NNWS probed the limits of the nuclear shadow. Islands were often the center of conflicts. China in 1954 and 1958, as well as Argentina, sought to use military force around islands and limit the danger to the NWS. The Soviets put pressure on the isolated position of Berlin—essentially a Western island in a sea of Soviet-occupied territory. Even with the expansive Chinese intervention in 1950, there was a natural stopping point at the end of the Korean Peninsula, beyond which the Chinese could not go. Additionally, the Soviets, Chinese, and Iraqis all undertook various civil defense measures to reduce the damage of a nuclear strike. This could both minimize the benefits of a strike but also served to hedge in case the conflict escalated. Leaders often downplayed the danger of nuclear weapons to minimize any efforts at nuclear coercion.

The NNWS also pursued various means to raise the costs of a nuclear strike. Egyptian and Iraqi leaders at times hoped that chemical or biological weapons could serve as a deterrent by harming the nuclear opponent or its allies. At the same time, they avoided using those weapons first. The Egyptians and Chinese both attained external support they hoped would restrain nuclear escalation. Interestingly, the Egyptian attack in 1973 and Chinese intervention in 1950 were the two largest offensives against a nuclear opponent. It is perhaps not surprising that the leaders in both countries then went to such lengths to ensure outside assistance. Finally, the Soviet, Chinese, and Egyptian leaders all sought to leverage global public opinion against large-scale war in general and nuclear weapons in particular.

More generally, weak nonnuclear weapon states were more likely than powerful nonnuclear weapon states to fight a war against a nuclear-armed opponent. The Soviet Union sought to push the United States during a period of nuclear monopoly. In contrast to weaker actors, though, the Soviets behaved much more cautiously and ultimately conceded rather

than fight. Examination of all wars found that wars in nuclear monopoly are in fact fought only when there is a large power imbalance in favor of the nuclear-weapon state. Moreover, those wars in nuclear monopoly that did occur posed little danger to the nuclear weapon state. This reduced the benefits of nuclear use and allowed any costs to loom large.

I conclude with some broader implications for nuclear strategy and politics. To begin with, it became fashionable after the Cold War to argue that the world had entered a "second nuclear age" that replaced the (allegedly simpler) bipolar superpower nuclear standoff.[22] Others have pushed back against this narrative of bifurcating the nuclear era.[23] This book reinforces the latter; there is more continuity in the nuclear era than often appreciated. To the extent that the "first nuclear age" is taken to mean the Cold War era, nuclear strategy and politics were not limited even then to the US-Soviet standoff or bilateral arms control. To be sure, the bulk of the attention focused on the superpower confrontation. This was quite reasonable and expected, given the scope of the arsenals and intensity of the dispute. Yet throughout the nuclear era, states have struggled to manage nuclear proliferation involving new actors, and newly nuclear-armed states have developed force postures and doctrines quite different from those of the superpowers.[24] Similarly, nuclear-armed states found themselves embroiled in conflicts with nonnuclear-armed opponents during and after the Cold War. The United States has never fought a war against a nuclear-armed state (at least at the time of this writing). At the same time, the United States found itself in disputes and at war with numerous nonnuclear opponents throughout the Cold War and beyond.

Scholars have long debated how many nuclear weapons and what delivery capabilities are enough to be a credible threat and influence adversary calculations. These debates have focused exclusively on situations when both sides have nuclear weapons.[25] This book shifts the focus to nuclear monopoly and finds small arsenals can have an effect. Chinese, Egyptian, and Soviet leaders all took the prospect of nuclear use very seriously even when the opponent possessed relatively limited or unsophisticated nuclear arsenals. For their part, Iraqi leaders did not consider the size and sophistication of the US arsenal in their deliberations. Rather, Saddam Hussein and his lieutenants spoke of the destruction of two or three cities and twenty-kiloton yields. To paraphrase Kenneth Waltz, when nuclear weapons are involved, there is less necessity for fine-grained calculations; the possibility of even a few nuclear strikes focuses the mind.[26] Studies that focus exclusively on whether conflict occurred or not and code such outcomes as a nuclear deterrence or compellence failure may therefore erroneously conclude that nuclear weapons do not influence conflict.

Indeed, one of the central findings in this book is the problem of equating deterrence or compellence success with nuclear weapon influence. The presence of conflict or failure does not mean that nuclear weapons had no

influence on decision making. Binary outcomes of conflict / no conflict or victory / defeat can certainly inform assessments of the role that nuclear weapons play.[27] Analysts are right to note that nuclear weapons did not deter the Soviets from blockading Berlin, they did not deter the Egyptians or Chinese from launching military assaults, and they did not compel the Iraqis to abandon Kuwait. A fine-grained analysis of decision making among NNWS leaders that goes beyond aggregate outcomes shows that in each case decision makers clearly recognized the danger of nuclear strikes. They were able to pursue strategies that they believed would not invite nuclear retaliation. Moreover, certain types of conflict are less likely to occur. The influence of nuclear weapons is often subtle, shaping the specific policies that NNWS leaders pursue to avoid nuclear strikes even when they decide to confront a nuclear-armed opponent.

Moreover, as noted above, the evidence in this book highlights that there are similar dynamics at play across diverse situations. Regardless of the nuclear force posture adopted, powerful nonnuclear-armed states have avoided war with nuclear-armed opponents. Norms were referenced or used instrumentally by very different leaders operating in diverse domestic environments. In situations of both extended and direct deterrence, NNWS leaders sought to probe the costs and benefits of nuclear use for their nuclear-armed opponents. States without nuclear weapons have also relied on extended deterrence of their own to raise the costs of nuclear use for their opponent. At times these were alliances with a nuclear-armed state, such as China seeking Soviet commitments prior to intervention in the Korean War. But the state need not be an ally or friend. Egypt sought to leverage US influence over Israel to rein in the latter's nuclear program and even restrain Israel during the October War. Iraqi leaders sought (though failed to receive) Soviet and French support to slow the US march to war, and if there was no war there would be no danger of nuclear strikes.

The limits of the nuclear arsenal should be apparent as well. Many fear that nuclear monopoly will allow a nuclear-armed state to dominate its nonnuclear opponents. For instance, Merrill and Peleg argue that "when the compeller enjoys a monopoly over nuclear weapons, he can virtually dictate conditions to the compellee."[28] Former Israeli ambassador to the United States Michael Oren writes that "Iran with military nuclear capabilities will dominate the Persian Gulf and its vast oil deposits, driving oil prices to extortionary highs."[29] In 1995 the *New York Times* reported that American and Israeli officials feared that with "a nuclear arsenal . . . Iran could also try to dominate its neighbors on the Persian Gulf, including Iraq. . . . Such domination, they say, could lead to Iranian control of the flow and price of oil to the West."[30] If nuclear weapons allow states to dictate to nonnuclear opponents, then the benefits of preventive military strikes to arrest proliferation increase substantially.[31]

This book joins other studies that suggest a state with a nuclear weapon cannot simply dominate nonnuclear opponents.[32] In political disputes, an NNWS has a number of strategies available to it to offset an opponent's nuclear advantage. Nonnuclear states have resisted in the past; they will find ways to do so in the future. To be sure, the international community has a general interest in nonproliferation and working to avoid wars involving any nuclear-armed states. Yet calls for military action to rein in nascent nuclear programs may invite more problems than they solve. Nuclear weapons offer some political leverage and influence to nonnuclear-armed states, but they are not a panacea.

Indeed, there are definite limits to overt attempts at nuclear coercion. In the cases examined, the NNWS leadership factored nuclear weapons into their decision making based on the existence of a nuclear capability and general force posture. Efforts during crises or wars to threaten nuclear use often had little effect, because the NNWS had already taken the nuclear issue into consideration. For instance, Secretary of State James Baker's veiled threat in January 1991 may have not mattered much, because the Iraqis had already considered the possibility that chemical weapons could invite nuclear retaliation.[33] Likewise, even had the B-29s dispatched to Britain in 1948 been nuclear capable, they would not have revealed any new information to the Soviet Union. The Soviets believed that the Americans were unlikely to deliberately start a war but very likely to use nuclear weapons during a war. If the Egyptians were aware of the Israeli "operational check" in 1973, potentially through the Soviets, it would not have altered their basic view that as long as the conflict remained limited, the use of nuclear weapons would be unlikely. To the extent the alert alarmed the United States, it would be fulfilling the Egyptian goal of more directly involving the Americans in the dispute.

The analysis nevertheless points to several factors that can influence the political utility nuclear weapons offer their possessors. For instance, during a period of unipolarity, the options for nonnuclear-armed states to turn to other great powers to restrain a nuclear opponent should decrease. This would reduce one cost of nuclear use and therefore increase the likelihood that the benefits of use outweigh the costs, enhancing the utility of nuclear weapons for regional actors. States are unlikely to be able to control polarity, though. A more manipulable policy lever is a state's conventional military. A state may gain greater political utility from its nuclear arsenal if it reduces its conventional capabilities. In those cases, the lack of conventional alternatives expands the military missions that only the nuclear arsenal can accomplish. This enhances the benefits of nuclear weapons and makes it more likely that the benefits will exceed the cost. Despite this potential benefit, it is not likely to be an attractive policy option. Some of the reasons will be familiar to students of American nuclear strategic history. One of the critiques of the Eisenhower administration's massive retaliation policy and

underinvestment in conventional arms (from the critics' perspective) was that it left the president with only the option of nuclear use or retreat in a crisis. The flexible-response alternative faced its own shortcomings, of course, and was only partially implemented by the United States.[34] The basic drawback of tying one's own hands remains, however. It does nothing to reduce the costs of nuclear use. Rather, it increases the benefits by removing any alternatives, making it more likely that benefits will outweigh costs. Any additional leverage comes at the expense of being forced to endure the costs of nuclear use or capitulation if a nonnuclear adversary miscalculates and elects to fight. Particularly for countries such as the United States, flexibility is probably more valuable against nonnuclear opponents than any additional leverage from the nuclear arsenal.

There are a number of limitations and challenges to the analysis. These limit the strength and scope of the conclusions in a number of ways. To begin with, I bracketed factors such as polarity, regime type, civil-military relations, and leader personality that may systematically influence conflict in nuclear monopoly. Nor did I consider how nuclear latency—the possession of enrichment and reprocessing facilities that can be used to acquire, sometimes very quickly, a nuclear weapon—might influence conflict in nuclear monopoly.[35] Next, the case studies traced the origins of each dispute, but the basic framework introduced in chapter 1 and tested throughout the book did not evaluate how disputes over diverse issues may lead to variation in NNWS behavior. I also focused exclusively on nuclear monopoly in an effort to isolate its effects. As a result, it is unclear how the insights in this book travel to cases of extreme nuclear asymmetry when both sides possess nuclear weapons, such as the dispute between the United States and North Korea today. On the one hand, it is possible that North Korea may discount the US nuclear arsenal owing to the overwhelming American conventional advantage. On the other hand, the fact that North Korea has even a small number of nuclear weapons and is developing more-capable delivery platforms may mean that the benefits of US nuclear strikes to offset that threat are very high, making nuclear use more likely and inducing additional North Korean caution. Future research can usefully incorporate these additional factors and examine different strategic dynamics to better understand the role of nuclear weapons in international conflict.

At the time of this writing, no nuclear weapons have been used since 1945. This should be cause for celebration, but not for complacency. It is easy to draw the wrong lesson from the many conflicts in nuclear monopoly. One should not conclude that nuclear weapons provide no utility in nuclear monopoly. Nuclear weapon states have not been able to avoid all fights, but in political disputes they have avoided having to fight against major offensives that threaten their survival or against more conventionally capable nonnuclear opponents. These benefits of nuclear possession will continue

to pose obstacles to nonproliferation and global zero efforts. Proponents of these agendas must directly address these incentives to continue to make progress.

At the same time, one should not abandon efforts to manage nuclear proliferation and conflict. There have been a number of political disputes and even wars in nuclear monopoly. So far none have resulted in nuclear strikes. That does not mean that there is no danger of nuclear use in similar disputes in the future and that therefore such conflicts are little cause for concern. After all, the only use of nuclear weapons to date has occurred in nuclear monopoly. In nuclear monopoly after 1945, leaders in states without nuclear weapons have generally acted in a restrained manner, sought to leverage the strategic environment to minimize the likelihood of nuclear use, or pursued strategies that posed little danger to the nuclear-armed state. If those conditions change in the future—if a powerful state without nuclear weapons escalates to a war against a nuclear-armed opponent or pursues expansive aims, for instance—then this book cautions that the world could witness the first nuclear strikes since August 1945.