General Nuclear Compellence: The State, Allies, and Adversaries

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Abstract

The study of compellence has focused on crisis situations. However, compellence may work without crises. If a state possesses the capability to compel a target, the target may choose to make concessions to avoid a crisis and dampen the risk of conflict. This constitutes a form of "general compellence." As with general deterrence, failures in general compellence will result in crises. We discuss this notion of general compellence in the context of nuclear proliferation. Nuclearization may give a state greater ability to compel others by threatening nuclear escalation. This ability yields general compellence leverage vis-à-vis its allies and adversaries. Facing the risk of nuclear escalation, the state's adversaries may offer political concessions, leading to improved relations and détente. The state's allies may offer additional security commitments to diminish the risk that the new nuclear state will use its weapons, leading to tighter alliance relationships. We illustrate our arguments with case studies of France, China, Israel, and South Africa in the aftermath of their nuclear acquisition.

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Much of the research on the consequences of nuclear acquisition has examined nuclear deterrence. While early work on the topic had an almost exclusive focus on "immediate" or "crisis deterrence," over time scholars developed an appreciation for the selection problems inherent in this approach.[1] As a result, the study of deterrence expanded beyond crises, leading to the notion of "general deterrence," the ability of states to deter the initiation of crises.[2] A relatively smaller proportion of the literature on the consequences of nuclear acquisition examines nuclear compellence. Here scholars have primarily focused on the role of nuclear weapons in interstate crises.[3] Using mostly quantitative methods, recent scholarship

has focused on crisis dyads and examined whether nuclear possession—and superiority—shapes the outcomes of such crises.[4] While consensus on these questions remains elusive, in one prominent contribution to this debate, scholars Todd Sechser and Matthew Fuhrmann argue that "nuclear weapons have far less utility for coercive diplomacy than many people believe."[5]

Although a valuable contribution to our understanding of the effects of nuclear acquisition, this debate has two limitations. First, it focuses exclusively on the effects of nuclear acquisition in the course and outcome of crises. Such an approach poses methodological problems because—much like with nuclear deterrence—participation in interstate crises is subject to a process of strategic selection.[6] If a state succeeds in acquiring nuclear weapons, its allies and adversaries may adjust their foreign policies and make concessions to prevent crises from erupting in the first place. Therefore, the states that choose to enter into crises against nuclear-weapons states may be particularly obdurate and strongly resolved, unlikely to compromise under any circumstances.[7] Focusing only on crises may also overstate the extent to which compellence is more difficult than deterrence. Specifically, by focusing only on crisis contexts, we risk understating the ability of states to compel their allies and adversaries more generally in noncrisis settings. For these reasons, the incidence and outcome of nuclear crises may not be representative of the overall compellent effects of nuclear weapons.

A second limitation in the existing nuclear compellence debate is its exclusive focus on interstate dyads. This approach may be justifiable for the study of crisis compellence, but we argue that understanding the dynamics of general compellence requires going beyond adversarial dyads and analyzing the interactions of the nuclear state in its broader strategic environment. This broader but nevertheless structured focus allows us to distill the basic dynamics of general nuclear compellence.

While there is abundant and varied scholarship on the causes of nuclear proliferation, the literature on its consequences is comparatively narrowly focused.[8] The classic distinction regarding the consequences of nuclear acquisition is between negative and positive coercion, or deterrence and compellence.[9] Nuclear deterrence refers to the use of nuclear threats to discourage an adversary from carrying out an unfavorable action. Nuclear compellence is the use of nuclear threats to persuade an adversary to carry out a favorable action.[10] Just as the deterrence literature moved from "crisis deterrence" to "general deterrence," we likewise advocate moving beyond the study of "crisis compellence"—the threat or use of nuclear force to elicit favorable behavior from adversaries or allies during crises. Instead,

we support moving toward "general compellence," defined as the ability of a new nuclear state to elicit favorable ally and adversary behavior in general noncrisis contexts as a result of its possession of a nuclear arsenal. It is important to clarify that general compellence need not be a deliberate strategy. Just as states manage to generally deter adversaries on a day-to-day basis without issuing threats to that purpose, states may similarly generally compel favorable outcomes without issuing specific threats.

Our theory thus makes two contributions. First, it establishes the possibility of nuclear weapons possessing compellent effects outside of crisis settings. In fact, we argue that, given the strategic selection process through which states enter crises, these general compellence effects of nuclear acquisition will likely outweigh the hypothetical compellent value of nuclear weapons in crisis settings. Second, we lay out conditions under which the general compellent effect of nuclear acquisition is likely to be greater or smaller both against adversaries and vis-à-vis allies. The general compellent benefits of nuclear weapons are maximized when a relatively weak state that has a low level of allied commitment nuclearizes. These are the conditions under which nuclear escalation is most likely and, therefore, the conditions under which adversaries and allies will be compelled to offer greater concessions and commitments to reduce escalation risk. Furthermore, rather than seeing nuclear compellence as a dyadic phenomenon, we examine general compellence in its broader strategic environment. Our analysis aims at capturing these dynamics of general compellence by centering on the strategic interaction of three parties: a new nuclear-weapons state, its major ally, and its primary adversary.

The acquisition of nuclear weapons gives a state a greater ability to deter threats and inflict costs should deterrence fail.[11] With these increased capabilities, however, comes a risk of nuclear escalation. This potential inherent in nuclear possession provides the new nuclear-weapons state with compellent leverage vis-à-vis its adversaries and allies. If the risk of nuclear use is greater than an adversary deems acceptable, it will offer political concessions in the hope of improved relations and détente. Likewise, if the risk of nuclear use is greater than an ally is willing to countenance, it will face a choice: either offer additional security commitments to dampen the possibility that its protégé will use nuclear weapons, leading to a tighter alliance relationship, or distance itself from the protégé. Each of these outcomes result from what we label "general nuclear compellence." Understanding how nuclear weapons produce these outcomes is a critical—and still unanswered—question.

This article begins by presenting the strategic logic of general nuclear compellence. Then it illustrates our theory with four cases of general nuclear compellence: France, China, Israel, and South Africa. We conclude with implications for international relations theory and foreign policy.

The Strategic Logic of General Nuclear Compellence

The unique destructive power of nuclear weapons makes them particularly useful resources for states in times of crisis and useful tools of last resort for states "gambling for resurrection."[12] Our argument begins with the simple assumption that introducing nuclear weapons into a strategic situation raises the potential for conflict to escalate to a greater level of destruction.[13] The primary source of the compellent effects of nuclear weapons acquisition lies in this potential for escalation. Nuclear acquisition yields a benefit for general compellence because in a crisis nuclear weapons might be useful. Facing the possibility of nuclear escalation, a state's allies and adversaries internalize this risk and may be compelled to take action to ameliorate it. The potential for nuclear escalation, when sufficiently great, will lead adversaries to offer concessions to a new nuclear state to keep the conflict manageable. Similarly, a new nuclear state's allies, when they have a vital interest in the security of their protégé and the stability of its region, will be driven to provide stronger security commitments to the new nuclear state to mitigate escalation risk. When interest in the security of the protégé and the stability of its region is limited, a new nuclear state's allies may be driven to decrease commitments and protection to avoid entrapment in a conflict that may escalate to nuclear use. In short, the greater the degree to which a new nuclear state's adversaries and allies internalize the heightened risk of nuclear use and, in response, become willing to grant it concessions or commitments, the more effective nuclear weapons will be as tools of general compellence.

Nuclear weapons generally increase the military capabilities of any state that acquires them. When a state obtains nuclear weapons, therefore, we should see policy adjustments by its adversaries and allies as they internalize the greater risks posed by conflict involving a nuclear state. At the same time, certain strategic settings maximize the risk of nuclear escalation and, therefore, the general compellent potential of a nuclear arsenal from the perspective of the state's allies and adversaries. In our view, the potential for nuclear escalation, and therefore the general compellent effect of nuclear weapons acquisition, is conditioned by three variables: power, commitments, and interests.

State Power and Influence

The first, and foremost, variable conditioning the risk of nuclear escalation—and therefore the general compellent effect of nuclear acquisition—is the state's relative conventional power prior to nuclearization. A state's ex ante conventional power can, for analytical purposes, be considered higher or lower than that of its adversaries. A state that is conventionally stronger than its adversaries will be better able to deter threats and inflict costs without the aid of nuclear weapons. On one hand, a relatively strong state will be less likely to find itself in situations in which it needs to escalate to the nuclear level to achieve its security goals. This, in turn, means that adversaries and allies will perceive the risk of escalation to the nuclear level to be limited and will therefore be more measured in their offers of additional commitments (by allies) or concessions (by adversaries). On the other hand, the general compellent effect of nuclear weapons is likely to be greater for relatively weak states than for relatively strong states.

Preexisting Security Commitments

Among states conventionally weaker than their adversaries, the escalation risks brought about by nuclearization will be modulated by a second factor: the level of preexisting security commitments from their allies. As with conventional power, allied commitments to these weaker states can for analytical purposes be seen as relatively high or relatively low. When these allied commitments are relatively high, a weak state will see relatively smaller general compellent effects of nuclear acquisition vis-à-vis adversaries. Much of the effect of nuclear acquisition will manifest itself through increased strategic independence from the ally. While the new nuclear state will now be better able to deter threats and inflict costs independent of its ally, the prior presence of strong commitments means that the overall risk of nuclear use will not necessarily increase. After all, the ally was already committed to use nuclear weapons if necessary for the protégé's security. As a result, the state's adversaries will perceive the threat of escalation to be the same and will therefore be more limited in their concessions to forestall escalation. The ally, however, will be compelled to accept increased strategic autonomy on the part of its protégé.

In contrast, when allied commitments are relatively low, a weak state will tend to enjoy maximum general compellent effects from nuclear acquisition. A weak state for whom allied commitments are relatively low will be more likely to find itself facing circumstances that may lead it to escalate to the nuclear level. This being the case, its adversaries and allies

will perceive the risks of escalation as being substantial and will be compelled to offer considerable commitments and concessions to dampen these risks. In sum, the general compellent effects of nuclear weapons are likely to be most potent in weaker states with low levels of allied commitment.

Level of Interest

Two questions arise on what form general compellence will take. First, when should we expect to see allies making greater or lesser commitments as a result of protégé nuclear acquisition? Second, how will the ally's decision influence the compellent effect toward the protégé's adversaries? When a relatively weak state with a low level of allied commitments acquires nuclear weapons, its general compellent ability is conditioned by a third and final independent factor: the level of interest the ally has in the state's security and the stability of its region. This interest will condition the ally's willingness to incur additional costs on behalf of the new nuclear state. Conceptually, it is worth noting that the level of interest an ally has in the security of its protégé and the stability of its region is distinct from the ally's present level of commitment. Whereas it is unlikely that an ally would make significant commitments to a state in which it has a low level of interest, it is possible, indeed common, for an ally to make relatively low material commitments to protégés in which it has a high level of interest. This happens because allies will often commit what they see as the minimum level of protection needed to deter the state's adversaries.

Analytically, the ally's willingness to incur costs on behalf of the protégé can be seen as either high or low. When the ally's willingness to incur costs on behalf of the state is relatively high, the ally will respond to the state's nuclearization—and to the new escalation risks it brings—by doubling down and making additional material commitments to its security in an attempt to obviate the new nuclear state's need to escalate to the nuclear level. The state's adversaries, for their part, will also react to this greater potential risk/cost of war resulting from the state's nuclearization and the additional commitments to the state's security made by its allies. This means that new nuclear states in these circumstances are also likely to gain concession from adversaries, eager to prevent escalation. Thus, the general compellent effects of nuclear acquisition in these circumstances will be greater commitments from allies and concessions from adversaries.

Finally, when the ally's willingness to incur costs on behalf of the new nuclear state is relatively low, the ally will respond to the state's nuclearization and its newfound escalation potential by distancing itself from the protégé to avoid entrapment in a nuclear conflict over an issue it perceives

as relatively unimportant. This distancing, in turn, leaves the new nuclear-armed state on its own, increasing the likelihood that it will find itself in situations where it needs to resort to nuclear escalation to advance its security interests. Reacting to this heightened risk of nuclear escalation, the state's adversaries will be compelled to grant it political concessions to ameliorate these escalation risks. Therefore, in these strategic circumstances the general compellent effects of nuclear acquisition will be most apparent in the state's relations with its adversaries, leading them to make greater concessions to the new nuclear state. We now turn to historical cases to illustrate our argument.

Historical Cases

In this section, we deploy historical cases from the nuclear age to illustrate the general compellent effects of nuclear weapons. While doing so, we acknowledge the complexity of the historical process and the possibility that numerous other factors beyond nuclear acquisition may have led to changes in the strategic relations between the states discussed in each case. Nevertheless, we believe the historical record is consistent with our claims.

France

Our theory predicts that a relatively weak state with a high level of security commitments from its allies will be able to enjoy greater strategic autonomy from its security sponsor. This expectation is borne out in the case of France. The French acquired their nuclear deterrent in 1960 as an insurance policy against the Soviet threat on the other side of the Iron Curtain in case Paris needed to act independently from the United States.[14] Once Paris possessed the bomb, it no longer depended on the United States for its nuclear deterrent, and therefore it could thenceforth act with greater autonomy from its patron. As a result, French nuclear acquisition gave Paris not only prestige but general compellent benefits in its relationship with the United States. This led Washington to accept increased independence from France, as manifested in reduced French adherence to NATO policy, the withdrawal of French forces from the NATO structure, and the ejection of US forces from French territory. Moreover, French nuclearization allowed rapprochement between France and the USSR while improving French influence in Europe. Finally, as part of its greater strategic autonomy, nuclearization also contributed to providing France with the confidence needed to recognize the People's Republic of China (PRC) in 1964.

France tested its first nuclear device in February of 1960. Facing a massive Soviet threat to the east—and having a variety of foreign policy goals not shared by its main ally, the United States—France was driven toward nuclearization. France's nuclear acquisition was at least partially motivated by important changes to its security environment during the 1950s, such as Washington's "New Look" policy,[15] France's bitter loss at Dien Bien Phu,[16] and the US thwarting of France along with Israel and Britain during the Suez Crisis.[17] French leader Charles de Gaulle would come to the conclusion that "Europe had to develop an independent nuclear deterrent."[18] As he told West German chancellor Konrad Adenauer just months before the French test, "the cause of the United States is not necessarily always our cause. . . . We need the Americans as allies and not as masters."[19]

France was a relatively weak state vis-à-vis its primary adversary, the Soviet Union. In the years running up to its nuclear acquisition, France's military expenditure was approximately one-tenth that of the Soviet Union, with the Soviets having over five times the latent capabilities.[20] By the time France tested its first nuclear device, the Soviet Union possessed an arsenal with 1,605 nuclear warheads.[21] Given France's relative weakness, it is imaginable that it would resort to nuclear escalation in a conflict with the Soviet Union.

But the escalation potential in any conflict between France and the Soviet Union was already expected to be high, prior to France's nuclearization, given the presence of France's most important ally, the United States. Between 1956 and 1960, the United States stationed 340,000 to 440,000 troops in Europe and between 40,000 and 70,000 in France alone.[22] Furthermore, while France rebuffed Washington on its offer for forward-deployed nuclear weapons on French territory, the United States had sizeable nuclear deployments in several neighboring allies.[23] Finally, France had an Article V guarantee through its membership in NATO assuring that "an armed attack against one or more of [the signatories] in Europe or North America shall be considered an attack against them all."[24] These commitments meant that France would be less likely to feel the need to independently resort to nuclear weapons in a security crisis.

Taken together, these factors meant that the general compellent benefits of French nuclearization would manifest themselves in two ways: greater strategic independence from its sponsor, the United States, and greater leverage vis-à-vis its adversary, the Soviet Union, which now had a greater interest in positive relations with France so as to avoid the risk of nuclear escalation. (The Soviets also benefited from introducing a wedge in the Western alliance by encouraging France to distance itself from the United

States, something Paris could now accomplish since it had an independent nuclear capability.)

After acquiring nuclear weapons, France grew increasingly autonomous from the United States, which was forced to accept important foreign policy concessions to the French. For de Gaulle, a nuclear deterrent was necessary for France to reassert itself as an independent power in world affairs. As he argued in late 1961, a "great State which does not possess [nuclear weapons], while others have them, does not command its own destiny."[25] Controlling a French nuclear arsenal, de Gaulle intended to build "a new equilibrium from the Atlantic to the Urals."[26] In this redrawn geopolitical map, France was to possess "a first degree international role, in line with her genius, responding to her interest, proportional to her means."[27]

De Gaulle's strong desire for French autonomy is clear in his two foreign policy guidelines for this period: *mains nettes* (clean hands) and *parole libre* (free words). Taken together, these guidelines required that France not commit itself to joint operations unless it had taken part in the decision-making process and determined that France should not need to consult other world powers when setting its strategy.[28] In practice, de Gaulle steered France away from NATO and engaged in détente with the Soviet Union.

In implementing this foreign policy vision of greater autonomy, de Gaulle quickly began to distance France from NATO and the United States.[29] Just months after France's test, he sent a note to West German chancellor Konrad Adenauer, proposing an end to US direction of NATO as a new basis for the alliance.[30] This was followed by the withdrawal of select French aerial units from NATO's command structure in September of 1960. When French troops returned from Algeria in 1961, they were not integrated into NATO but instead formed a new "First Corps" independent of the Atlantic alliance.[31] That same year, when Britain, the Soviet Union, and the United States approached France over the Partial Test Ban Treaty, Paris quickly turned them down. De Gaulle's concern was that the treaty was a ploy on the part of the superpowers to maintain their nuclear advantage, preventing France from technologically advancing its *force de frappe* (strike force).[32] In 1962 France was offered access to US Polaris missile technology so long as it would integrate it with NATO war plans.[33] De Gaulle summarily rejected Washington's offer, for as he saw it, accepting it "would be the end of any possibility of independent or autonomous atomic action," placing the French arsenal "under the absolute command of the Americans."[34] Furthermore, in 1963 France and West Germany signed the Élysée Treaty of friendship, the text of which, to Washington's consternation, did not so much as even mention the United States, Britain,

or the NATO alliance.[35] In January 1964, de Gaulle distanced his country further from the Western alliance, withdrawing all marine units from NATO command.[36] That same month, France became the first Western power to recognize the PRC diplomatically, against the wishes of the United States and reportedly giving Washington mere hours' notice.[37] Finally, less than a year after its first Mirage IV bombers—and, with them, the French deterrent—became fully operational in October 1964, France announced in September of 1965 its intention to fully withdraw from the command structure of NATO.[38] De Gaulle further requested that NATO dismantle all of its bases and installations on French territory, including its general headquarters in Paris.[39] In making these announcements, de Gaulle pointed out that France would "remain allied with its allies," but that he would be ending the "qualified subordination of 'integration' . . . which places once more [France's] destiny in the hands of a foreign authority."[40]

Also in 1965, less than a year before its airborne nuclear deterrent became fully operational, France inaugurated its "politique à l'Est," an effort to reduce tensions and improve relations with the Soviet Union and the Eastern bloc. De Gaulle saw this move as an "antidote to US hegemony."[41] By this point, the search for a new relationship with the Soviet Union had become a central component of Gaullist France's grand strategy.[42] In the years that followed, the French shifted toward "détente, entente et coopération" with the Soviets.[43] In 1966, the same month France had fully withdrawn from NATO's command, de Gaulle visited Moscow and made reference to "a new alliance between Russia and France."[44] In December 1967—the year when the first French nuclear-armed submarine, the *Redoutable*, became operational—Charles Ailleret, chief of staff of the French armed forces, published an article referencing a strategy of using French nuclear forces to target "tous azimuts" or "all points of the compass."[45] Washington interpreted his views as meaning that France had essentially abandoned the West in the Cold War confrontation. As a preeminent French historian notes, by 1968 "de Gaulle's foreign policy had turned into an all-out crusade against US preponderance and against the established global order."[46]

France's rapprochement with the Soviet Union would be short-lived, however. With the Soviet invasion of Czechoslovakia in August 1968, it became clear to France where its true threats lay, and it began to move back toward reconciliation with the United States and with NATO in short order.[47]

In sum, while French proliferation in the long term did not result in a marked rearrangement of France's overall strategic position, it did allow Paris to attempt to position itself more autonomously from the United

States, on whom it now depended less. Such were the general compellent benefits of French nuclear acquisition.

China

By the time it acquired nuclear weapons, China was a relatively weak state with an ally, the Soviet Union, which was only minimally committed to it and unwilling to incur additional costs on its behalf. In these circumstances, our argument predicts that Chinese nuclearization would result in two significant political developments. First, China's ally would distance itself by reducing its commitments to avoid entrapment. Second, China's adversaries, foremost the United States, would make political concessions to avoid the risk of nuclear escalation. As we will see, these arguments are supported by the PRC's history.

During its nuclear development, China was a relatively weak state compared to its key adversary, the United States. Furthermore, the Soviet Union's commitments to the defense of China were vanishing when Beijing acquired nuclear weapons in 1964 and were all but nonexistent in its aftermath. Lacking a high level of interest in China and East Asia in these years, the Soviet Union was not making additional commitments in the wake of Chinese nuclearization. Consequently, the general compellent effects of China's nuclearization were vast, with the Soviets' distancing opening up serious escalation potential in China's relations with the United States. This potential, to an important extent, encouraged the United States to grant Beijing crucial concessions on Taiwan, making room for the US-China rapprochement of the early 1970s. (Other factors that contributed to US-China rapprochement include US determination to draw down its commitments in the Vietnam War, as well as Washington's willingness to raise China's status vis-à-vis the USSR.)

China conducted its first nuclear test in October 1964. During China's nuclear development period, Washington enjoyed a considerable advantage in conventional forces over the PRC. The United States also averaged nearly twice the Chinese latent capabilities between 1962 and 1964 and outspent Beijing militarily fivefold in these years.[48] Washington also had an arsenal of almost 30,000 nuclear warheads by the time the Chinese acquired the bomb, compounding Beijing's relative weakness.[49] Moreover, the Sino-Soviet alliance was undergoing severe strain and would soon degenerate into open conflict.[50] During the 1950s, Mao accused Khrushchev of "revisionism," which sapped the spirit of revolutionary communism, and Moscow feared what it perceived to be Beijing's cavalier attitude toward US nuclear threats. As the Soviet Union's willingness to incur

costs on behalf of Beijing was relatively low, it distanced itself from its communist comrades in these years. Between October 1964 and March 1969, Beijing claimed that a total of 4,189 incidents occurred on the Sino-Soviet border.[51] In March 1969, the dispute erupted into a full-scale conflict that lasted until September that year.

The relative conventional weakness of the PRC and the distancing of its Soviet ally worked together to magnify the general compellent effects of Chinese nuclear acquisition. Of course, China's nuclear capability meant that Beijing could now guarantee its survival independently from Moscow, and its arsenal also served as a check on Soviet power. Additionally, with its nuclear arsenal, China could substantially increase the potential costs of Washington's support for Taiwan were war to break out.

Taiwan's status had long been the central disagreement between Washington and Beijing. PRC leaders demanded the resolution of the Taiwan question as a precondition for normalization of US-China relations while refusing to renounce the use of force as a matter of national sovereignty.[52] As Mao stated in January 1964, "After we solve the Taiwan problem, we will resume diplomatic relations with America."[53] Taipei, for its part, rejected either a "two Chinas" or a "one China, one Taiwan" solution, aiming instead at eventually reconquering the mainland. Up until the moment when China nuclearized, US officials remained obdurate in their support for Taiwan, even if that meant forfeiting improved relations with China. In December 1963, Assistant Secretary for Far Eastern Affairs Roger Hilsman declared that "so long as Peiping [sic] insists on the destruction of this relationship [between Washington and Taipei] as the sine qua non for any basic improvement in relations between ourselves and Communist China, there can be no prospect for such an improvement."[54]

Once China acquired nuclear weapons, however, the increased military risks of protecting Taiwan from the PRC led Washington to reevaluate its position. As long as the PRC was nonnuclear, the cost of defending Taiwan was fairly low for Washington. It was clear that the Soviet Union did not want to risk a global conflict for the sake of Taiwan. When Mao asked the Soviet Union during the 1958 Taiwan Straits crisis to respond to a US attack with "everything you've got," Gromyko was "flabbergasted" at the suggestion.[55] However, with a nuclear China, the costs that Washington could face in defending Taiwan increased dramatically. Since Taiwan was not a vital interest for the United States, Washington made important concessions on its status, beginning the process of normalizing relations with Beijing.[56]

In a televised address in July 1966, President Lyndon Johnson called for improved relations with the PRC.[57] With the Cultural Revolution in full swing, however, prospects of a peaceful resolution to the Taiwanese question remained slim.[58] It was only by the time President Nixon took office in 1969 that conditions were ripe for a rapprochement. Nixon had long understood the risks of confrontation with a nuclear China. While visiting Taipei a few months after the PRC's nuclear test, he told US diplomats that it was time for Washington to improve relations with the PRC.[59] Two years later, Nixon published an article in *Foreign Affairs* warning of the risks of a nuclear confrontation with China and arguing for bringing the Chinese back into the family of nations.[60]

For the Chinese, Taiwan was the key issue preventing better US-China relations. When inviting US national security adviser Henry Kissinger to visit China in January 1971, Prime Minister Zhou Enlai stated, "There is only one outstanding issue between us—the US occupation of Taiwan."[61] Kissinger accepted the invitation, and upon arriving in Beijing the following July was told by Zhou that "if this crucial question [Taiwan] is not solved, then the whole question [of US-China relations] will be difficult to resolve."[62] Kissinger promptly offered military concessions on Taiwan. The United States would remove two-thirds of the military personnel in Taiwan shortly after the end of the Vietnam War, with the remaining third to be reduced over time.[63] Furthermore, Kissinger indicated that the United States no longer advocated a "two Chinas" or a "one China, one Taiwan" solution, hinting that the political evolution of the situation was likely to favor the PRC.[64]

In his visit the following February, Nixon reaffirmed Kissinger's concessions. Washington would no longer adhere to the position that the status of Taiwan was undetermined: "Principle one. There is one China, and Taiwan is a part of China." Besides drawing down US forces in Taiwan, Nixon pledged that he would "not support any military attempts by the Government of Taiwan to resort to a military return to the Mainland."[65] Conspicuously, Washington did not require the peaceful resolution of the Taiwan question as a precondition for the improvement in US-China relations.

In fact, as he prepared for the conversations, Nixon saw himself as proposing a quid pro quo with Beijing, offering concessions on Taiwan so as to reduce tensions and the potential for nuclear confrontation with the PRC. While in Hawaii on 18 February en route to China, Nixon wrote the following in his diary:

What they want:
1. Build up their world credentials.
2. *Taiwan* [emphasis added].
3. Get U.S. out of Asia.

What we want:
1. Indochina (?)
2. Communists—to restrain Chicom [PRC] expansion in Asia.
3. *In Future—Reduce threat of a confrontation by Chinese Super Power* [emphasis added].

What we both want:
1. *Reduce danger of confrontation and conflict* [emphasis added].
2. A more stable Asia.
3. A restraint on U.S.S.R.[66]

Reviewing the memoranda of conversations of the Nixon-Kissinger visits, which became available in the late 1990s, scholars and policy makers alike agree that US concessions on the status of Taiwan provided the foundation for the rapprochement with the PRC.[67] In 1977, while reviewing the records of these high-level discussions, a National Security Council (NSC) staffer noted that if a common interest in containing the Soviet Union was "the precipitant" of the US-China rapprochement, "the American accommodation vis-à-vis Taiwan was the enabling factor."[68] Without Chinese nuclearization, we argue, this accommodation would have been less likely.

Clearly, several forces led to the US-China rapprochement, such as Washington's desire to undermine the Soviet bloc, policy processes in the United States, and a desire to enlist Chinese support in ending the Vietnam War.[69] China's newfound nuclear status was, we argue, particularly important among these forces. The costs of fractious relations with China increased dramatically with its nuclearization. Given China's relative weakness and the low level of allied support from the Soviets, Chinese nuclear proliferation greatly increased the risk of nuclear escalation. These escalation risks encouraged the Soviets to back off from their ally and consequently compelled the United States to offer important concessions on Taiwan, paving the way for a rapprochement.

Israel

As a relatively weak state in conventional terms, which only enjoyed a low level of security commitment from its allies, Israel derived substantial general compellent benefits from its nuclear acquisition. In such circum-

stances, our argument predicted that the political benefits of nuclear proliferation depend upon the ally's willingness to incur additional costs on behalf of the new nuclear state. When the ally considers the security of the new nuclear state and the stability of its region to be an important interest, and is therefore willing to incur significant costs in its pursuit, the ally will double down and increase its material commitments to the security of the new nuclear-weapons state. With its adversaries similarly perceiving the potential for escalation, the state will also gain concessions from its adversaries to dampen these risks. These arguments are supported in the case of Israeli nuclear acquisition.

Since its establishment in 1948, Israel faced an adverse conventional balance of power vis-à-vis its adversaries, neighboring Arab states. Furthermore, Israel received little support from its security patron, the United States. Consequently, Israeli nuclearization considerably raised the risks of nuclear escalation in the Middle East if Washington maintained its standoffish position and Israel were left on its own. At the same time, Washington was deeply interested in the security of Israel and the maintenance of a stable, US-friendly Middle East. Aware that Israel might be forced to use its nuclear weapons if it were not to enjoy greater protection, the once determinedly "equidistant" United States rapidly increased its material commitments to Israeli security. Peace with Egypt also followed, with Nasser himself reportedly alluding to the importance of nuclear weapons in his decision to improve relations with Israel.

While the Israeli nuclear program is shrouded in a great deal of secrecy, there is little doubt that by May 1967, Israel was a nuclear-weapons state.[70] In the years running up to Israeli nuclearization, the balance of power appeared to favor its adversaries.[71] Israel had approximately one-fifth of Egypt's latent capabilities and typically averaged only 80 percent of its military expenditure. If Jordan, Iraq, and Syria are also considered, this imbalance becomes even more obvious, with the Arab states exceeding Israeli capabilities nearly tenfold and more than doubling Israel's military spending.[72] As an Israeli official told his State Department counterparts in May 1961, Israel faced a truly "grim security situation."[73]

Furthermore, the level of US material commitment to the security of Israel was relatively low. From the late 1950s, the Israelis repeatedly asked Washington for formal security guarantees akin to those extended to NATO allies, but were regularly turned down.[74] Israel did receive some assurances in private from John Foster Dulles, President Kennedy, and President Johnson, and President Kennedy even publicly stated in a 1963 press conference that the United States had "a deep commitment to the

security of Israel."[75] But being mostly private or informal, these assurances did little to calm Israeli fears. What this amounted to, as Prime Minister Levi Eshkol reported to the US ambassador, was that "the Israeli Government could not foreswear nuclear weapon development in the absence of binding [US] security guarantees."[76]

This combination of relative conventional weakness and a low level of security commitments from the United States meant that Israel's nuclear acquisition had maximal general compellent effects. As the sole nuclear power in the region, Israel was seen as likely to resort to nuclear escalation in the event of a serious security crisis precisely because it was conventionally weak, and therefore ran the risk of being overrun by its adversaries. This escalation potential brought about by Israeli nuclear acquisition did give it important leverage in its relations with the United States. In fact, the Israeli program had begun to influence US policy before Israel even had a working nuclear device.[77] Already in early 1965, Prime Minister Eshkol and NSC official Robert Komer signed a memorandum of understanding, through which Washington "reaffirmed its concern for the maintenance of Israel's security" and "renewed its assurance" that it was "committed to the independence and integrity of Israel"; in return, Israel pledged "not [to] be the first to introduce nuclear weapons into the Arab-Israeli area."[78] Over the next few years, this pledge was gradually reinterpreted from meaning that Israel would remain nonnuclear to meaning that Israel would keep its nuclear arsenal under wraps. Therefore, from 1969 onward, the United States' main objective on this matter was "to keep secret Israeli nuclear weapons."[79] As Henry Kissinger wrote to President Nixon, it would be enough "just to keep Israeli possession from becoming an established international fact" since "the international implications of an Israeli program are not triggered until it becomes public knowledge."[80] Chief among these implications was the potential for war with the Soviets, the avoidance of which was the administration's "Number One priority."[81] As Kissinger put it in a memo to Nixon, "public knowledge [of an Israeli program] is almost as dangerous as possession itself," as it "could substantially increase the danger of Soviet-American confrontation in the Middle East."[82]

Keeping the Israeli program secret required that Israel never issue nuclear threats, which in turn required that Israeli forces be able to deal with any security threat using conventional means. This was the reasoning behind Washington's pledge that, in return for Israel's nuclear "ambiguity," the United States would meet all of its conventional weaponry needs.[83] In fact, this reasoning—that a nuclear arsenal would be useful to extract further

security commitments from Washington—was also part and parcel of Israeli strategic thinking. Besides serving as a weapon of last resort in truly extreme military contingencies, Israeli strategists reasoned, Israel's nuclear arsenal would serve as an insurance policy against US abandonment, providing Washington with powerful incentives to keep Israel well-armed. This strategy became "a central aspect of Israel's national security strategy."[84]

It worked. Between 1960 and 1967, US arms sales to Israel were fairly modest, averaging about $80 million per year. Yet in the years that followed, arms sales would grow dramatically, averaging $1.1 billion annually between 1969 and 1973.[85] A similar trend is seen in US loans and military aid. Between 1959 and 1965, these averaged a paltry $6.5 million per year. Yet from 1966 onward, military loans averaged $174 million annually, peaking at $545 million in 1971.[86]

While many factors drove these military aid decisions, the nuclear quid pro quo was a highly significant one. Historian Avner Cohen considers Israeli nuclear acquisition "perhaps the single most important cause for the change in US security commitment to Israel."[87] This view is also confirmed by US policy makers. Former NSC staffer William Quandt, for example, pointed out in 1991 that "there has long been a sense among American policy makers that providing Israel with conventional weapons was justified, in part, by the concern that Israel would otherwise feel compelled to rely exclusively on nuclear deterrence. This widespread view is rarely mentioned in policy deliberations, but I am convinced that it has had an impact on decisions."[88]

The United States would clearly side with Israel during the War of Attrition in 1969–70, and in the aftermath of the civil war in Jordan in 1970–1971, "US-Israeli relations were stronger than ever."[89] US concerns over the possibility that Israel might use nuclear weapons, and Washington's commitment to Israel's security, were on even bolder display during the Yom Kippur War of 1973. There is a great deal of controversy over exactly what transpired during the 20-day conflict, with some claiming that the Israelis explicitly "blackmailed" the United States by threatening to use its nuclear arsenal and that this threat was "critical to the American decision to initiate the airlift to Israel."[90] Others argued that the threat was implicit but nonetheless influential in US decision-making, with still others contending that Israel's nuclear arsenal played no role in US policy decisions.[91] What we do know is that after a disastrous first few days for Israel's armed forces, the United States agreed to provide substantial material support for Israel's war effort.[92] On 9 October, Israel's nuclear-

capable Jericho missiles were put on high alert—reportedly being lubricated, cleaned, and fueled and having their hatches opened; this fact was made known to Washington, possibly on purpose.[93] The same day, and responding to a Soviet airlift to the Arab belligerents, the US administration approved an arms airlift to Israel that, encompassing the delivery of 25,000 tons of supplies over 28 days, was larger than the Berlin airlift of 1948. Washington was firmly on the Israeli side for the remainder of the war and through the years that followed.[94]

Eventually, there was rapprochement between Israel and Egypt as well, with Sadat visiting Jerusalem in November 1977 and the two countries entering a peace treaty less than a year later. While Sadat had many motivations for seeking peace with Israel, there is evidence that Israel's nuclear possession played an important role. For instance, during his historic visit, Sadat himself reportedly implied this in discussions with then-Israeli defense minister Ezer Weizman and Israeli deputy prime minister Yigael Yadin.[95] On Weizman's own account, the importance of Israeli nuclear weapons in motivating the peace negotiations was also mentioned in conversations with three other Egyptian officials, including Prime Minister Mustafa Khalil, Foreign Minister Butros Ghali, and Defense Minister Mohamed Gamasy.[96] As Weizman notes in his memoirs, "Some of the leaders were beginning to realize that they must not force us into a corner where we might—albeit reluctantly—have no recourse but to use nuclear weapons."[97] It is also notable that US concern over nuclear escalation remained. As Kissinger remarked in early 1977, "Israel could use [its nuclear arsenal] . . . if survival is at stake—Israel cannot imagine life under the Arabs."[98] In sum, Israel's conventional weakness and the relatively low level of US allied support meant that its nuclear acquisition brought significant escalation risks to the region. Internalizing these risks, the United States doubled down and increased its material commitments, dramatically altering its relations with the Jewish state. Israel's neighbors also sought to improve relations with the Jewish state.

South Africa

Our theory claims that states that are relatively conventionally powerful in relation to their adversaries will enjoy limited general compellent effects from nuclear acquisition. The case of South Africa is consistent with this argument. South Africa acquired nuclear weapons in 1979, anticipating the possibility that communist forces would take over neighboring Angola and turn it into a safe haven for black nationalist movements. Enjoying a significant conventional advantage over its main adversary, Angola, Pretoria

was seen as unlikely to use nuclear weapons on the battlefield. The nuclear escalation potential in South Africa was therefore seen by its allies and adversaries as being relatively small. Furthermore, given US opposition to the apartheid regime in South Africa, Washington had limited interest in the protection of its ally. Consequently, Pretoria was unable to elicit greater support from the United States. Despite South Africa's entreaties, Washington kept its distance, imposing economic sanctions against the apartheid regime. At the same time, South Africa was able to achieve only modest improvements in relations with its neighbors. While Angola did not appreciably alter its policies regarding its neighbor in the aftermath of Pretoria's nuclearization, South Africa managed to sign nonaggression pacts with Mozambique and Swaziland. Overall, the South African bomb had little to no general compellent effect.

South Africa's primary motivation in developing nuclear weapons stemmed from the communist threat to its regime.[99] Balthazar Johannes ("John") Vorster, prime minister from 1966 to 1978, worried that black liberation movements, such as the African National Congress (ANC) and the South-West African People's Organization (SWAPO), might become a serious threat if supported by neighboring communist powers.[100] Along with his defense minister P. W. Botha, Vorster pursued the development of a nuclear capability as part of an aggressive foreign policy to protect South Africa from this communist threat.[101] When the Carnation Revolution swept Lisbon in April 1974, Portugal withdrew from its African colonies. Mozambique fell to the pro-Soviet Front for the Liberation of Mozambique (FRELIMO), and Angola descended into civil war, with South African–backed forces facing the communist People's Movement for the Liberation of Angola (MPLA).[102] The conflict escalated, with South Africa sending in troops in October 1975 and the MPLA drawing support from Cuba and the Soviet Union.[103] In the process, South Africa accelerated its efforts to develop nuclear weapons.[104] Pretoria constructed its first nuclear device by November 1979 and completed a second one in 1982.[105]

Though obtaining a nuclear deterrent was a priority for the apartheid regime, the military uses of this newfound capability were not readily apparent. By 1977 there was widespread belief that the main objective of South Africa's nuclear program was to elicit US assistance as a "catalytic deterrent."[106] According to this strategy, in a crisis situation Pretoria would inform the United States of its intention to use nuclear weapons, expecting that Washington would boost its conventional support to prevent nuclear escalation. Botha later explained this logic in vivid terms: "Once we set this thing off, the Yanks will come running."[107]

Such a strategy faced two challenges. First, South Africa's advantage in conventional capabilities reduced the likelihood that Pretoria might need to resort to nuclear escalation. South Africa already enjoyed an appreciable advantage in conventional forces over its neighboring adversary, Angola, outspending it militarily by a factor of five in the three years running up to its nuclearization and having seven times its latent capabilities.[108] Given the balance of conventional forces, both South Africa's enemies and its allies fundamentally doubted that Pretoria would ever use its nuclear weapons. Years after the end of the Angolan civil war, Fidel Castro boasted about the heroic achievement of Cuban troops in the conflict: "The right of the matter was whether they would decide to drop it [a nuclear weapon] or not. Who were they going to use the weapon against? Against us? Inside South Africa?"[109] A CIA assessment of April 1981 similarly concluded, "It is difficult to see a near term military usefulness to nuclear weapons except in the most extreme, and unlikely, circumstances. The principal threat to South Africa is likely to remain black urban insurrection and guerillas operating in border areas, for which nuclear explosives would be useless."[110] Overall, South African nuclearization introduced little risk of escalation.

Second, while Washington was keen on stopping the spread of communism in Southern Africa, it also had a limited interest in supporting apartheid South Africa, which explains in part why there was no formal alliance between the two countries. Combined with the meager escalation potential resulting from South Africa's conventional advantages, this limited US interest undermined Pretoria's efforts to extract significant general compellent leverage. While many US officials saw South Africa as an important geostrategic partner in an unstable region, opposition to the apartheid regime was strong in the United States. When US assistance to South Africa in the Angolan Civil War was uncovered in December 1975, Congress passed the Clark Amendment to suspend all aid to Pretoria in the conflict. This abrupt end to US support was seen in Pretoria as an act of betrayal, with Botha later claiming that South Africa had been "ruthlessly left in the lurch" in Angola.[111] And although President Reagan and his assistant secretary of state for African affairs, Chester Crocker, pursued a policy of "constructive engagement" with the apartheid regime, a broad-based sanctions package was passed over a presidential veto in 1986.[112]

Limited US interest combined with South Africa's high relative power to create somewhat distant relations between the two countries. Given South Africa's strength vis-à-vis its adversaries, there was no strict security imperative for Washington to support Pretoria, a partner in the fight

against communism. Analyzing the arc of Pretoria's attempts to use nuclear weapons as a diplomatic tool, Mitchell Reiss, a special assistant to the national security advisor as a White House Fellow in 1988–89, concluded that "it is almost impossible to believe that any American administration would have rushed to extricate the white regime from imminent extinction—and relations only worsened during the 1980s."[113] Yielding to domestic pressure, in October 1983 Washington allowed the UN Security Council to pass a resolution condemning South Africa's role in Angola.[114] In 1986 Congress passed the Comprehensive Anti-Apartheid Act, overturning a presidential veto and once again shutting off nuclear trade with Pretoria.

While relations with Angola would remain hostile through the duration of the apartheid regime, South Africa would sign nonaggression pacts with Swaziland in 1982 and neighboring rival Mozambique in 1984 (the Nkomati Accord). These agreements present a modest improvement in Pretoria's strategic situation, though it must be acknowledged that the pact with Mozambique was driven by the ongoing civil war in that country and a desire by both governments to prevent interventions into each other's territory.[115] The South African bomb appears to have played no obvious direct role in producing these agreements.

Overall, and as our theory predicts for states that were already strong before their nuclearization, the general compellent effects of Pretoria's nuclear acquisition were quite limited. With its nuclear arsenal, South Africa was unable to extract significant new commitments from the United States because, given its relative conventional strength, nuclear escalation was seen as highly unlikely. Its relations with adversaries and neighbors improved only marginally.

Conclusion

Nuclear acquisition increases the ability of a state to deter threats and to inflict costs on its adversaries. Yet these capabilities also introduce the risk of nuclear use in conflict. The potential for escalation brought about by nuclear acquisition has general compellent effects—providing new nuclear states with sources of leverage over allies and adversaries they previously had not possessed. Facing these risks of nuclear escalation, allies may double down and offer nuclear states additional commitments in the interest of dampening such risks; adversaries may offer concessions out of similar motivations. As we have shown, these dynamics of general compellence achieve their greater effect when the new nuclear state is relatively weak vis-à-vis its adversaries and has a relatively low level of commitment from its primary allies. The extent to which allies are willing to incur costs

on behalf of the new nuclear state further conditions the form these compellent effects take. These arguments were illustrated with case studies of French, Chinese, Israeli, and South African acquisition of nuclear weapons. In short, general compellence is an important, and hitherto unrecognized, source of change in relations among nuclear powers and world politics more generally.

These general compellent effects of nuclear proliferation have implications for both theory and policy. Theoretically, highlighting the general compellent consequences of proliferation is a first step toward analyzing how proliferation alters strategic interactions during peacetime. Nuclear acquisition can lead to adjustments in foreign policy by the nuclear state's adversaries and allies that will, in the end, make the military effect of nuclear acquisition less evident. In practice, it is even possible that a new nuclear state will rarely, if ever, need to threaten to use its nuclear arsenal because nuclear acquisition will have led to the political transformation of its strategic environment through general compellence. The greater the general compellent effects of nuclear proliferation, the greater the commitments and concessions the new nuclear state will extract from allies and adversaries, and the less visible the role of nuclear weapons will be as tools of explicit coercion in a crisis context. These are the kinds of effects that the dyadic study of nuclear crises will be much less likely to detect.

In terms of policy, our argument highlights the political costs major powers pay when their adversaries or allies nuclearize. Looking ahead, the effects of nuclear acquisition by a US adversary such as Iran would be more nuanced than an analysis limited to the deterrent effects of nuclearization and its effects on crisis outcomes might suggest. Iran's most important regional adversaries are Israel and Saudi Arabia; its most important global adversary is the United States. And while it is loosely aligned with both Russia and China, it lacks a reliable and powerful security patron. Iran is conventionally outmatched by its regional and global rivals, having just four-fifths of Israel's military expenditure, one-fifth of Saudi Arabia's, and roughly one-fiftieth of the United States' in 2018.[116] Nuclear acquisition by Iran would not only allow it to better deter US military action by increasing the potential costs of conflict, it could also compel Washington to make political concessions to dampen the risks of nuclear escalation. These concessions might include the US distancing itself from allies and partners that share Iran as an adversary but do not represent vital US interests. Conversely, Washington would have to increase its material commitments to allies and partners that *do* share the new Iran as an adversary and that *do* represent a vital US interest. Yet despite these costs,

one potential benefit could be more stable relations with Iran. With a nuclear deterrent capability and with Washington having made important concessions to it, there would be fewer reasons for friction in the relationship, and many crises that would otherwise have emerged would be far less likely.[117]

Likewise, nuclear acquisition by a US ally such as Taiwan would also entail important political costs for Washington. Taiwan is conventionally weak compared with its most important rival, the PRC, which outspent it militarily twenty-three-fold in 2018.[118] While Taiwan is not currently considered a proliferation risk, it has pursued nuclear weapons in the past, and a future nuclear Taipei would force Washington to reconcile its material commitments with US interests in Taiwan's security.[119] Given the greater potential costs of entrapment in a conflict involving Taiwan and China, it would be difficult for Washington to maintain its commitments if the security of Taiwan was not seen as a vital US interest. Nevertheless, if the United States did then see Taiwan as a vital security partner, it would be led to double down and boost its material commitments to Taipei to moderate the risk of nuclear escalation. Understanding these political consequences of nuclear acquisition is essential to formulating adequate policies to deal with both aspiring and new nuclear adversaries and allies. SSQ

Notes

1. For a review of the early literature, see Jack S. Levy, "When Do Deterrent Threats Work?," *British Journal of Political Science* 18, no. 4 (1988): 485–512. On selection problems, see James D. Fearon, "Signaling versus the Balance of Power and Interests: An Empirical Test of a Crisis Bargaining Model," *Journal of Conflict Resolution* 38, no. 2 (1994): 236–69; and James D. Fearon, "Selection Effects and Deterrence," *International Interactions* 28, no. 1 (2002): 5–29.

2. Patrick M. Morgan, *Deterrence: A Conceptual Analysis* (Beverly Hills: Sage, 1994), 42–44; and Paul K. Huth and Bruce Russett, "General Deterrence between Enduring Rivals: Testing Three Competing Models," *American Political Science Review* 87, no. 1 (1993): 61–73.

3. Schelling, *Arms and Influence* (New Haven: Yale University Press, 2008); Erik Gartzke and Dong-Joon Jo, "Bargaining, Nuclear Proliferation, and Interstate Disputes," *Journal of Conflict Resolution* 53, no. 2 (2009): 209–33; Matthew Kroenig, "Nuclear Superiority and the Balance of Resolve: Explaining Nuclear Crisis Outcomes," *International Organization* 67, no. 1 (2013): 141–71; Mark S. Bell and Nicholas L. Miller, "Questioning the Effect of Nuclear Weapons on Conflict," *Journal of Conflict Resolution* 59, no. 1 (2015): 74–92; Todd S. Sechser and Matthew Fuhrmann, *Nuclear Weapons and Coercive Diplomacy* (New York: Cambridge University Press, 2017); and Matthew Kroenig, *The Logic of American Nuclear Strategy: Why Strategic Superiority Matters* (New York: Oxford University Press, 2018).

4. A recent exception is Tristan A. Volpe, "Atomic Leverage: Compellence with Nuclear Latency," *Security Studies* 26, no. 3 (2017): 514–44.

5. Sechser and Fuhrmann, *Nuclear Weapons and Coercive Diplomacy*, 5. See also "What We Talk about When We Talk about Nuclear Weapons," *H-Diplo/ISSF Forum*, no. 2 (2014), https://issforum.org/ISSF/PDF/ISSF-Forum-2.pdf.

6. A process of strategic selection or "selection effects" refer to situations in which "factors that influence the choices that produce cases also influence the outcome," thereby introducing bias and

making the cases nonrepresentative (Fearon, "Selection Effects and Deterrence," 7). Put differently, participation in a crisis results from states' choices, themselves influenced by their expectations over the likely outcomes. See also Fearon, "Signaling versus Balance of Power and Interests," 86n34.

7. Sechser and Fuhrmann, *Nuclear Weapons and Coercive Diplomacy*, 88–92; and Vipin Narang, "The Use and Abuse of Large-n Methods in Nuclear Studies," *H-Diplo/ISSS Forum*, no. 2 (2014): 91–97.

8. For reviews, see Scott D. Sagan, "The Causes of Nuclear Weapons Proliferation," *Annual Review of Political Science* 14 (2011): 225–44; and Nuno P. Monteiro and Alexandre Debs, "Conflict and Cooperation on Nuclear Proliferation," *Annual Review of Political Science* 20 (2017): 331–49.

9. Schelling, *Arms and Influence*, 69–91.

10. Schelling refers to deterrence as "a threat intended to keep [an adversary] from starting something" and compellence as "a threat intended to make an adversary do something" (Schelling, *Arms and Influence*, 69).

11. Throughout the article we use the terms "new nuclear weapons state," "nuclear acquisition," and "nuclearization" to mean a state acquiring nuclear weapons. In practice, acquisition consists of a successful test or the construction of a nuclear explosive. The development of latent nuclear capabilities in and of itself does not qualify as nuclearization. Latent capabilities may provide some benefits for a state, but we see the acquisition of nuclear weapons as a more dramatic improvement in a state's military power. For work on latent nuclear capabilities, see, for example, Matthew Fuhrmann and Benjamin Tkach, "Almost Nuclear: Introducing the Nuclear Latency Dataset," *Conflict Management and Peace Science* 32, no. 4 (2015): 443–61; and Rupal N. Mehta and Rachel Whitlark, "The Benefits and Burdens of Nuclear Latency," *International Studies Quarterly* 61, no. 3 (2017): 517–28.

12. Keir A. Lieber and Daryl G. Press, "The Nukes We Need: Preserving the American Deterrent," *Foreign Affairs* 88, no. 6 (2009): 39–51; and Keir A. Lieber and Daryl G. Press, "Conventional War and Nuclear Escalation," unpublished manuscript, 2016.

13. Schelling, *Arms and Influence*, 20; Robert Jervis, *The Meaning of the Nuclear Revolution: Statecraft and the Prospect of Armageddon* (Ithaca: Cornell University Press, 1989), 6; Barry R. Posen, *Inadvertent Escalation: Conventional War and Nuclear Risks* (Ithaca: Cornell University Press, 1992); Robert Powell, *Nuclear Deterrence Theory: The Search for Credibility* (Princeton: Princeton University Press, 1990); and Robert Powell, "Nuclear Brinkmanship, Limited War, and Military Power," *International Organization* 69, no. 3 (2015): 589–626.

14. For other perspectives on the causes of France's nuclearization, and the role of the psychology of leaders and prestige motivations, see Jacques E. C. Hymans, *The Psychology of Nuclear Proliferation: Identity, Emotions, and Foreign Policy* (New York: Cambridge University Press, 2006), chap. 4.

15. Georges-Henri Soutou, "La Politique Nucléaire de [The nuclear policy of] Pierre Mendès France," *Relations Internationales* 59 (1989): 319; and Dominique Mongin, *La Bombe Atomique Française, 1945–1958* (Bruxelles: Bruylant, 1997), 310.

16. Fredrik Logevall, *Embers of War: The Fall of an Empire and the Making of America's Vietnam* (New York: Random House, 2012).

17. Diane B. Kunz, *The Economic Diplomacy of the Suez Crisis* (Chapel Hill: The University of North Carolina Press, 1991).

18. De Gaulle quoted in Phillip H. Gordon, *A Certain Idea of France: French Security Policy and the Gaullist Legacy* (Princeton: Princeton University Press, 1993), 48.

19. De Gaulle quoted in Maurice Vaïsse, "Indépendance et solidarité 1958–1963," in *La France et l'OTAN* [France and NATO], eds. Maurice Vaïsse, Pierre Melandri, and Frederic Bozo (Bruxelles: André Versailles, 2012), 236.

20. Latent capabilities throughout the article refer to Composite Index of National Capabilities (CINC) scores from the Correlates of War (COW) National Military Capabilities (NMC) data (v.5.0). Military expenditure figures are also from the NMC data. These figures are reported throughout for three years preceding nuclear acquisition. J. David Singer, "Reconstructing the Cor-

relates of War Dataset on Material Capabilities of States, 1816–1985," *International Interactions* 14, no. 2 (1988): 115–32.

21. Robert Norris and Hans M. Kristensen, "Global Nuclear Weapons Inventories, 1945–2010," *Bulletin of the Atomic Scientists* 66, no. 44 (2010): 81.

22. Dan Reiter, "Security Commitments and Nuclear Proliferation," *Foreign Policy Analysis* 10, no. 1 (2014): 61–80.

23. Memorandum from Secretary of Defense Gates to President Eisenhower, 17 December 1959, *Foreign Relations of the United States* [hereafter *FRUS*], *1958–1960*, vol. VII, pt. 2, *Western Europe* (Washington, DC: Government Printing Office, 1993), doc. 149, https://history.state.gov/historicaldocuments/frus1958-60v07p2/d149; and Matthew Fuhrmann and Todd S. Sechser, "Nuclear Strategy, Nonproliferation, and the Causes of Foreign Nuclear Deployments," *Journal of Conflict Resolution* 58, no. 3 (2014): 466.

24. North Atlantic Treaty, art. 5, Apr. 4, 1949, 63 Stat. 2241, 34 U.N.T.S. 243, http://www.nato.int/cps/en/natohq/official_texts_17120.htm.

25. André Passeron, *De Gaulle parle* [speaks], vol. 1 (Paris: Plon, 1962), 357.

26. Andrew J. Pierre, "Visions conflictuelles: La defense, les armes nucléaires et le contrôle des armament dans les relations franco-américaines à l'époque De Gaulle" [Conflicting visions: Defense, nuclear weapons and arms control in Franco-American relations at the time of de Gaulle], in *De Gaulle en son siècle* [De Gaulle in his century], Tome IV, *La Sécurité et l'Indépendance de la France* [Security and independence of France], ed. Institut Charles de Gaulle (Paris: Plon, 1990), 319.

27. De Gaulle quoted in Etienne Burin des Roziers, "L'indépendance nationale selon de Gaulle: fondement et pratique d'une politique" [National independence according to de Gaulle: Foundation and practice of a policy], in *De Gaulle en son siècle*, 227.

28. Burin des Roziers, 231–32.

29. Even before the French test, de Gaulle had asked for a reform of NATO's structure in 1958, suggesting that the United States and Great Britain join France in creating a new body responsible for global security policy. (See Letter from President de Gaulle to President Eisenhower, 17 September 1958, *FRUS*, *1958–1960,* vol. VII, pt. 2, doc. 45, https://history.state.gov/historicaldocuments/frus1958-60v07p2/d45.) Eisenhower rejected this proposal, however. (See Letter from President Eisenhower to President de Gaulle, 20 October 1958, *FRUS, 1958–60*, vol. VII, pt. 2, doc. 63.) Later, de Gaulle admitted to expecting this refusal, saying that he was simply looking for an excuse to withdraw from NATO. (See Alain Peyrefitte, *C'était de Gaulle* [It was de Gaulle] [Paris: Gallimard, 2002]).

30. See Reiner Pommerin, "La France, l'Allemagne et l'OTAN" [France, Germany and NATO], in *La France et l'OTAN*, 267–84, 268–69.

31. Gordon, *A Certain Idea of France*, 54.

32. Pierre, "Visions conflictuelles," 317.

33. Avery Goldstein, *Deterrence and Security in the 21st Century: China, Britain, France, and the Enduring Legacy of the Nuclear Revolution* (Stanford: Stanford University Press, 2000), 196.

34. Colette Barbier, "La France et la force multilaterale (MLF)," in Vaïsse et al., *La France et l'OTAN*, 294.

35. Pommerin, "La France, l'Allemagne et l'OTAN," 269.

36. Pommerin, 281.

37. See Frank Costigliola, *France and the United States: The Cold Alliance since World War II* (New York: Twayne Publishers, 1992), 139; and Garret Martin, "Playing the China Card? Revisiting France's Recognition of Communist China, 1963–64," *Journal of Cold War Studies* 10, no. 1 (2008): 52–80.

38. See Wang Naicheng, "La politique de dissuasion nucléaire indépendante de De Gaulle et la force nucléaire chinoise," in Institut Charles de Gaulle, *De Gaulle en son siècle*, 413; and Benoit Pelopidas, "The Nuclear Straitjacket: American Extended Deterrence and Nonproliferation," in Stéfanie von Hlatky and Andreas Wenger, eds., *The Future of Extended Deterrence in Europe: The United States, NATO, and Beyond* (Washington, DC: Georgetown University Press, 2015).

39. Pierre, "Visions conflictuelles," 317.

40. De Gaulle quoted in Burin des Roziers, "L'indépendance nationale selon de Gaulle," 233.

41. Frederic Bozo, "France, Gaullism, and the Cold War," in Melvyn P. Leffler and Odd Arne Westad, eds., *Cambridge History of the Cold War*, vol. 2, *Crises and Détente* (Cambridge: Cambridge University Press, 2010), 170.

42. See Bozo, 168.

43. Georges-Henri Soutou, "La problématique de la Détente et le testament stratégique de Georges Pompidou," *Cahiers du Centre d'études d'histoire de la défense*, no. 22 (2004): 80. See also Beatrice Heuser, *Nuclear Mentalities? Strategies and Beliefs in Britain, France, and the FRG* (London: Macmillan, 1998), 123.

44. Heuser, 124.

45. Heuser, 127–28; Goldstein, *Deterrence and Security in the 21st Century*, 148; and Sten Rynning, *Changing Military Doctrine: Presidents and Military Power in Fifth Republic France, 1958–2000* (London: Praeger, 2002), 57.

46. Bozo, "France, Gaullism, and the Cold War," 172.

47. Heuser, *Nuclear Mentalities?*, 122; and Goldstein, *Deterrence and Security in the 21st Century*, 149.

48. Singer, "Reconstructing the Correlates of War."

49. Norris and Kristensen, 81.

50. Sergey Radchenko, "The Sino-Soviet Split," in *Cambridge History of the Cold War*, vol. 2, *Crises and Détente*, eds. Melvyn Leffler and Odd Arne Westad (Cambridge: Cambridge University Press, 2010), 349–72.

51. Thomas W. Robinson, "The Sino-Soviet Border Conflict," in *Diplomacy of Power: Soviet Armed Forces as a Political Instrument*, ed. Stephen S. Kaplan (Washington, DC: Brookings Institution, 1981), 268.

52. Gong Li, "Chinese Decision Making and the Thawing of US-China Relations," in *Re-examining the Cold War: US-China Diplomacy, 1954–1973*, eds. Robert S. Ross and Jiang Changbin (Cambridge: Harvard University Press, 2001), 142.

53. Mao quoted in Jie Li, "Changes in China's Domestic Situation in the 1960s and Sino-US Relations," in Ross and Changbin, *Re-examining the Cold War*, 306.

54. Roger Hilsman, "United States Policy toward Communist China, Address Made before the Commonwealth Club at San Francisco, California, on Dec. 13, 1963," *The Department of State Bulletin*, vol. L, no. 1280 (6 January 1964), 15–17.

55. Andrei Gromyko, *Memories*, translated by Harold Shukman (London: Hutchinson, 1989), 251.

56. Note by the Executive Secretary of the National Security Council (Souers) to the Council, 11 February 1949, *FRUS, 1949*, vol. IX, *The Far East: China* (Washington, DC: Government Printing Office, 1974), doc. 314, https://history.state.gov/historicaldocuments/frus1949v09.

57. Lyndon Johnson, Speech on US Foreign Policy in Asia, 12 July 1966, University of Virginia (UVA) Miller Center, https://millercenter.org/.

58. Nancy B. Tucker, *Strait Talk: United States-Taiwan Relations and the Crisis with China* (Cambridge: Harvard University Press, 2009), 24.

59. Tucker, 35.

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