24
THE DYNAMICS OF NUCLEAR POLITICS

Lessons from Latin America

Jacques E. C. Hymans

The "nuclear revolution" in military and industrial affairs since 1945 has garnered an enormous amount of scholarly attention, but the part that Latin American countries have played in the worldwide nuclear drama has been largely ignored. This scholarly blind spot is undoubtedly a consequence of the nuclear size of the region's nuclear infrastructure. As of 2013, there were zero nuclear weapons and only six nuclear power reactors in the region: two in Argentina, two in Brazil, and two in Mexico. Given that nuclear politics is a global phenomenon, however, the neglect of the Latin American cases is epistemologically unsound (cf. Johnston, 2012). For instance, if we want to understand why some states in the world have built nuclear weapon arsenals and/or major nuclear power infrastructures, we need also to ask why other states have not done so. Moreover, we need to test—not simply assume—the standard notion that the big nuclear states can blithely ignore the policy preferences of the little ones.

In this chapter, I argue that scholarly engagement with the Latin American cases can greatly advance our understanding of the worldwide dynamics of nuclear politics. Latin American states' relative international poverty and weakness have admittedly made them secondary players in the global nuclear saga. But other variables such as Latin American identities and ideologies, domestic and regional institutions, and even outstanding individuals have often considerably loosened the constraints imposed by their lack of material resources. These variables have not merely been important determinants of Latin American states' own nuclear policies; in addition, thanks to these variables, Latin American states have had an impact on the course of global nuclear politics far more than is generally understood.

The chapter is organized around four generic questions about nuclear politics. First, what explains states' acquisition or non-acquisition of nuclear energy technologies? Second, what explains states' acquisition or non-acquisition of nuclear weapons? Third, what is the relevance, if any, of nonmilitary nuclear weapons for nuclear deterrence? Fourth, what is the relevance, if any, of nonnuclear weapons states for nuclear arms control and disarmament diplomacy?

To answer these questions, I have canvassed the social scientific and historical scholarly research on nuclear Latin America that was published in English since 2000. I have also read systematically reviewed older scholarly works, policy writings, and Spanish-language sources. The literature is small, but the stories are fascinating—which indicates that this area still contains much research gold to be discovered by those intrepid few who choose to take the road less traveled by.

Acquisition and Non-Acquisition of Nuclear Energy Technologies

A simple materialist perspective has no difficulty explaining the overall pattern of acquisition and non-acquisition of nuclear energy technologies across Latin America. Argentina, Brazil, and Mexico have historically been by far the three largest economies in the region, and they are the three states that operate nuclear power plants. Meanwhile, some of the region's smaller states—and notably Cuba—tried to establish a nuclear power industry but failed. Size matters.

A more detailed look at the cases, however, reveals many outcomes that cannot be explained by their level of material resources alone. Two other variables in particular—state development ideologies and institutional quality—have also profoundly shaped the goals and results of the nuclear technology acquisition strategies of Argentina, Brazil, Cuba, and Mexico.

Argentina. Argentina has long boasted the most successful nuclear program in Latin America, but it did not start out that way. In the late 1940s, President Juan D. Perón launched a bizarre nuclear effort under the helm of Ronald Richter, an Austrian physicist who made fantastic promises (Marinoni 1988). There were many early indications that Richter was unworthy of any state nuclear effort: he did not comment on the achievements of this program, and even his close Peronist colleagues thought that he had been preoccupied with the scientific aspects of his name. Yet for four long years the president consistently backed "his" scientific guru in the American's many clashes with other scientists and even with close Peronist confidants. Perón was convinced that revolutionary breakthroughs in technology and social organization. Richter—in whom Perón 220–230. The enormous personal power that Perón had assumed, given his regime's broader assault on Argentina's already weak state institutions (Levitsky and Morillo 2005) was a key condition that permitted his individual psychology to run amok in this case, much to the detriment of his regime.

After the Richter debacle, Argentina turned the ship around and ended up achieving a long series of nuclear fledglings for Latin America. The country's nuclear industry became so advanced that Argentina, Brazil, and Cuba began developing and exporting nuclear technologies in 1970s. The development of a strong Argentinian general-theoretical argument that an ideology of "pragmatic antinuclearism" is the foundation pendency is a middle ground position between liberal "technological laissez-faire," which simply views all Northern technology transfer with great suspicion (Adler 1987, 64). In the case of nuclear technology, Adler highlights the role of the physical Jorge A. Sibato as the successor of the principal engineer who spread this pragmatic antinuclear ideology throughout the country's policy choices and shielded them from political second-guessing, and thereby greatly propelled the nuclear program forward.

But ideology is not everything. Hurtado de Mendez (2005, 293) adds the crucial point that in the wake of the Richter affair, the CNEA seemingly found a new institutional home institutions—business and eventually with something else for, in stark contrast to the havoc that Argentina's (Sikkink 1991). These findings correlate with the more general claim of Hymans (2012) that...
nuclear research and development (R&D) projects run well to the extent that they have a management team that respects and fosters autonomous scientific and technical professionalism and that is protected from political interference by legal-rational state institutions.

Brazil. Brazil long played the nuclear role to Argentina's nuclear totoise, trying to leap ahead of its rival with massive foreign purchasing (Aller 1987; see also Sollinger 1998). In 1975, Brazil and West Germany agreed on an approximately US$8 billion deal for the construction of at least eight German-designed nuclear power reactors, the establishment of joint ventures that would fabricate most of the reactor components and materials in Brazil starting with reactor number three, and the transfer of the military-sensitive "fuel cycle" technologies of fast reprocessing and uranium enrichment (Lowrance 1976). The US saw this blockbuster deal as a major threat to the nascent nuclear proliferation regime, but Brazil and West Germany successfully resisted its pressures to cancel the contract (Wiegrefe 2005, 75-98). Even so, their joint work soon bogged down. The first German-built reactor came online only in 1999, and the second one is currently slated for completion in 2016. The major culprits for these delays were the chronic money shortages and poor workmanship on the Brazilian side, but the Germans were also partially to blame. For instance, they had trouble implementing the prototype "jet nozzle" method of uranium enrichment that they had convinced Brazil to accept as an alternative to the more standard centrifuge enrichment process whose export was opposed by Washington (Nedil 2012).

The unhappy experience of Brazil's civilian nuclear power program contrasts starkly with the rapid progress of its covert, navy-run "parallel program" of uranium enrichment. Brazil's military government created the parallel program in the mid-1970s, in part as a reaction to US nonproliferation pressures. Remarkably, the program succeeded in enriching uranium beginning in 1986—only three years after Argentina—and at the surprisingly low cost of less than US$100 million. Moreover, this feat was accomplished using ultra-centrifuges, not the jet-nozzle process that the overt program had received from the Germans (Barletta 1997, 9). Why was the navy's parallel program so successful?

In line with Adler's theoretical argument, Barletta writes that the fundamental basis for the success of the navy's nuclear efforts was an ideology of national technological autonomy, which "compelled both governmental and governmentalized private support of the parallel program, elicited civilian participation in the coalition that carried it to fruition, and legitimated the effort before skeptical domestic audiences" (1997, 29-30). This ideology was put into practice by Othon Luiz Pinheiro da Silva, a naval officer and Massachusetts Institute of Technology-trained nuclear engineer who led the parallel program from its inception in 1979 until his retirement in 1994. Pinheiro da Silva's management style was very similar to that of the technically inclined naval officers who ran the Argentine CNEA. He worked to insulate his scientists and engineers from top-down political meddling, permitting them to focus on achieving concrete progress with a mixture of indigenous and imported technical know-how. He carefully chosen foreign contacts (Barletta 1997, 9) and, in both of the Southern Cone cases, then, their technical successes can be attributed to a pragmatic antisnependence ideology needed within a corner of the state that provided a relatively solid legal-rational institutional framework, whereas their stumbles can be attributed to the absence of one or both of these factors.

Cuba. In contrast to Argentina's and Brazil's, Cuba's drive for nuclear energy has been an outright failure. In 1976, Cuba and the Soviet Union reached agreement to build a network of twelve power reactors across the country. As construction of the first two reactors at the southeastern site of Juraguia began in 1982. But in the end—and despite Moscow's more than US$1 billion in aid to the project—the reactors were never completed. Why not? Given Cuba's small size and maximum leader Fidel Castro's reputation for grandiosity, one is tempted to think that Cuba's nuclear plans were simply doomed from the start. But Benjamin-Alvarado (2000) assesses 1970s' nuclear plans of Cuba as being properly ambitious, or to use Adler's (1987) terminology, as reflecting pragmatic antidependency thinking. In particular, Cuba convinced the Soviet leadership that a nuclear power industry was an appropriate step to assure itself of fuel and to qualify its engineers, about the same number as Brazil and Argentina and quite remarkable.

Nevertheless, Cuba is undeniably a case of nuclear failure, and this outcome poses a challenge to the notion that a pragmatic antidependency ideology is the secret of nuclear success. Cuba might eventually have achieved some measure of nuclear power production if not for the collapse of the Soviet Union and the combination of severe economic difficulties that hit Cuba hard in 1991. Yet even before 1992—a time that was a decade of construction work—only 37 percent of the first reactor's pipes were installed. Cuba's official (and optimistic) assessment in 1992 was that the first reactor would be completed by 2004 for a cost of US$2.5 billion. As the construction schedule slipped, Cuba's leaders reconfigured their plans. In 1996, the Cuba announced that it intended to build a second reactor at the Juraguia site. The project was to be funded by a combination of domestic resources and foreign assistance from Russia, China, and other countries.

More research is needed to identify the key sources of Cuba's technical woes. Some of the problems might be due to mistakes by the Soviet technical advisors or, at a more fundamental level, the wide variety of difficulties that have been created by the US embargo. Circumstantial evidence also points to the standard operating procedures of the Cuban regime, particularly in the field of nuclear engineering, as the key to this failure. Despite the fact that Cuba has engaged in the construction of the Juraguia project, it has made very little progress in the nuclear industry overall. In 1967, Cuba formally entered into an agreement with the Soviet Union for the construction of a nuclear power plant at the Juraguia site. The project was to be funded by a combination of domestic resources and foreign assistance from Russia, China, and other countries. The construction of the plant was expected to begin in 1980 and be completed in 1983. However, due to a number of technical and financial difficulties, the project was delayed and eventually abandoned.

Mexico. In contrast to the other states surveyed here, beginning in the 1970s, Mexico's nuclear program pursued a technological approach that focused on the small importation of nuclear power plants as a source of electricity (Brown and Mumper 1991). But Mexico did not find it difficult to achieve even this modest nuclear ambition. Despite—or, Adler might argue, because of—the lack of high-level interest in achieving nuclear technological autonomy, Mexico's limited budget of less than US$12.5 million (Mironis 1998, 36). The project encountered with high technology, poor relations between the different organizations working on the project, and political opposition and corruption (Aurea and Talamón 1999). The first reactor was finally turned online in 1990, and the second followed in 1995. While the reactors were initially expected to be running smoothly, and they recently received a US$3 million upgrade, which promises increased generation capacity and a longer service life.
Acquisition and Non-Nuclear Weapons

The most interesting aspect of the Mexican nuclear story, however, is not its technical troubles. What is most remarkable about Mexico in comparison with other Latin American countries is the powerful antinuclear sentiment that emerged in Mexican civil society over the course of the 1980s. Whereas social elites in Argentina and Brazil have generally seen nuclear development as a measure of modernity and progress, in Mexico large segments of both mass and elite opinion gradually came to reject this view (Stevie and Munster 1992). The nuclear dream represented by Laguna Verde became tarnished in the eyes of many Mexicans not merely due to its cost overruns but also its perceived threat to the environment and public health, and perhaps above all—the antidevelopmental values it came to symbolize. The key initial antinuclear voices were local and regional civil society groups, many of which came into being in the wake of the Chernobyl nuclear accident in the Soviet Union in 1986. One of these was a new group known as the Madres Veracruzanas, who developed successful communication strategies and became a serious political force to be reckoned with, despite the authoritarian nature of the Mexican regime at that time (Garcia and Orellana 1999). The political discourse about nuclear power in Mexico gradually came to resemble the debates in “Northern” states such as the US and Europe (much more than Mexico’s “Southern” peers). To this day the Mexican public remains among the most nuclear-skeptical in the entire world (IPSS 2011).

Why did attitudes toward nuclear energy in Mexico evolve in such a different direction than in the other big Latin American countries? Beyond the cost overruns experienced at Laguna Verde, part of the answer is surely that Mexico’s big oil and gas reserves provide a cushion of energy security that many other countries do not enjoy, and this makes the nuclear option more remote and not as urgent for Mexico than it might be in another place. But attitudes toward nuclear energy are almost never only about economics. For instance, despite Brazil’s recent emergency as a large oil and gas producer, the Brazilian state is still pushing hard to further develop its small civilian nuclear capacities, and this push has not (yet) been opposed by serious, broad-based, nationwide opposition as would be expected in Mexico (cf. Hochstetter and Kock 2007). We need more research that places Mexico’s decision with nuclear power in its proper comparative context.

The Dynamics of Nuclear Politics

The fact that no Latin American state possesses nuclear weapons may at first seem unsurprising. Among the states of the region, only Argentina and Brazil are capable of launching a serious indigenous nuclear weapons effort. Washington’s anxieties over the supposed proliferation threat posed by Hugo Chávez’s Venezuela during the 2000s were unreasonable, given the lack of basic nuclear capability in the country and the regime’s disarmament management of a wide variety of technical matters (Trinkunas 2006). Moreover, if any Latin American state were to launch a serious nuclear weapons project, the US would surely try to stand in its way (Goswami 1992).

In fact, however, the conventional wisdom in the nonproliferation field is that Argentina and Brazil were indeed engaged in a nuclear arms race during the 1970s and 1980s, and the standard quantitative BR data sets repeat this coding (Singh and Way 2004; Jo and Gartzke 2007). Moreover, various scholars have pointed to conventional theoretical reasons why it should have been so. Resende-Santos (2002) cites the effects of the security dilemma, whereas Achen (1994) cites the self-interest of economically inward-oriented ruling groups. Yet in truth there was never a real nuclear arms race in the Southern Cone. Why not? The limited, “sporadical” nature of the rivalry between Argentina and Brazil is a key part of the explanation.

Argentina. Specialists with firsthand access to Argentine archival documents overwhelmingly agree that the country never aimed to build nuclear weapons (Carrasales 1999; Hurtado de Mendosa 2009; Hyman 2001, 2006; Mallea 2012). Not counting the Richer operetta, Argentina’s most questionable nuclear activity was the secret uranium enrichment facility that it built starting in 1978. But the plant’s gaseous diffusion technology was configured to produce 20 percent enriched uranium, not the 90 percent enriched uranium that is necessary for weapons. Hyman (2006) argues that enriched uranium to fuel nuclear submarines as well as research reactors. Hurtado de Mendosa (2009, 45) concludes that it was only for reactors. In any case, it was not for bombs.

Why did Argentina aggressively pursue nuclear technological autonomy during the Non-Proliferation Treaty (NPT) period—that it was not interested in building bombs? Hyman (2006) argues that Argentina’s behavior during those years reflected the typical pattern of regimes autonomy as a symbol of national modernization and power but also that they need to be deterred with a nuclear weapons arsenal. Misunderstanding these motives, Washington further inflamed the Argentina’s nationalist spirit with its hand-footed attempts to force them to knuckle under to the discriminatory nuclear research export to Peru that provided the catalyst for Buenos Aires’ decision to build a military nuclear program of its own. Meanwhile, Argentina already by 1980 the two states had gained enough confidence in each other to sign a nuclear cooperation agreement that made common cause against US nonproliferation pressure (CIPESA 2012, 27-29). Argentina’s and Brazil’s extensive technical and diplomatic cooperation on nuclear matters, which started under the military regimes, clearly falsifies the oft-mentioned India—Pakistan analogy for their international rivalry. These states may have been tough competitors, but they were not eternal enemies that felt the need to deter the other with the “absolute weapon.”

Brazil. The Brazilian story is different from Argentina’s, however, in that Brasilia did launch a military nuclear program during the 1970s. Therefore, the standard data set may coding of 1970s-1980s Brazil as a code of “pursuit” of the bomb is much more justified than that of Argentina’s coding of Argentina. Nevertheless, this emerging line of scholarship on the Brazilian choice also ultimately comes down against the US’s clear intention to build a single nuclear weapon. Although some air force and intelligence officials seem to have dreamed of obtaining a nuclear arsenal, the navy basically ran the nuclear program in Brazil. And the navy—a nuclear submarine fleet, not nuclear bombs (Bazetta 1997, 13-16). Moreover, with the opening of the archives it is now hard to dispute that Brazil’s aim in the 1975 nuclear agreement with West Germany was to accelerate its civilian nuclear development and had little relationship with its parallel military work.

Even more to the point, Pati (2012) documents at least two separate occasions when Brazilian presidents flatly rejected military proposals to develop a nuclear explosive device. The first rejection came by the military president João Figueiredo in 1984, in response to the minister of the air force to “celebrate” the handover of power to the first democratic government (Pati 2011). The second rejection was by Fernando Collor de Mello in 1990, in response to Collo to respond by very publicly claming an alleged military nuclear test shaft in the Amazon jungle (Pati 2012, 226). Thus, despite Brazil’s less-than-pristine nonproliferation record, overall its nuclear intentions during the 1970s and 1980s seem to have been not very different from
Argentine's, and those intentions can similarly be explained as a function of the top decision makers' sportsmanlike nationalism.

**Relevance to Nuclear Deterrence Behavior**

I now turn from Latin American states' non-acquisition of nuclear weapons to their role in shaping the deterrence behavior of the nuclear-weapon states. Some readers might wonder if there could be anything at all to say on this topic. After all, theories of "extended deterrence"—the nuclear umbrella raised by superpowers over their nuclear allies—typically assume that: the nuclear powers can exert little influence over their protector's ultimate nuclear choices. Kilgour and Zagare (1994) offer a rare extended deterrence model that does assert an impact for nonnuclear allies, but only in the sense that it predicts that the behavior of the nuclear weapon states, which are called the "players," will depend in part on their perceptions of the value of the nuclear umbrella, which is called the "pawn" (Kilgour and Zagare 1994, 386). Thus, even Kilgour and Zagare assume that the "pawn" is not a "player" (Quiggenkash 2006).

Analyses of the most-studied crisis of the nuclear age, the Cuban missile crisis, also traditionally looked exclusively at the interactions between the superpowers. What made the missile crisis "Cuban" was merely geography: the fact that the Soviet missiles were being placed on the island of Cuba, very close to the US homeland.

A new wave of Cuban missile crisis scholarship since the 1990s, however, has placed Fidel Castro's regime at the very center of the drama (see especially Blight, Allyn and Welch 1993; Blight and Brenner 2002; Blight and Lang 2012; Munton and Welch 2012). As a result, the missile crisis is now seen, in Dominguez’s (1993, 8) words, as "a warning that is highly pertinent for our times: decision makers and scholars will err if they ignore the mighty effect that small countries may have in international affairs."

The first pillar of the case for Cuba's "mighty effect" is that the key players in the missile crisis were not primarily concerned about the impact of missiles in Cuba on the global nuclear strategic balance. Rather, the new literature argues that Soviet General Secretary Nikita Krushchev and US President John F. Kennedy were much more concerned about upholding their respective countries' reputation and international image—and that image, in turn, was inextricably intertwined with the international image of the Cuban revolution. In other words, the fact that both superpowers were willing to run a serious risk of global nuclear war over a small island nation with an agrarian economy cannot be understood unless one recognizes Fidel Castro's success in creating an image for himself as the world's number one anti-American revolutionary (Dominguez 1989). In particular, the Castro regime's unflinching resistance to US imperialism was a key reason for Khrushchev's decision to defend Cuba with nuclear firepower (Blight and Lang 2012, 25).

By associating the USSR so closely with Cuba, Krushchev hoped to revitalize its revolutionary brand and thereby reestablish its claim to leadership of the communist movement in response to the challenge posed by Maoist China (Westad 1998, 20; cf. Radchenko 2012). Meanwhile, Washington sought at the Castro regime's anti-US rhetoric and behavior in "our backyard." Indeed, many US decision makers were intent on smushing the Castro regime even before discovering the missiles, not least because of their fear that Cuba's posture of defiance could become contagious throughout the hemisphere and beyond (Weldes 1999). Given this domestic political context, after the crisis erupted Kennedy had to go out of his way to talk tough even as he tried to deescalate the situation.

The second pillar of the case for Cuba's mighty effect is that Castro's words and actions significantly impacted Soviet behavior even after the crisis began—although that impact was not always in the direction that he intended. There are three primary examples here. The first example is

---

**The Dynamics of Nuclear Politics**

Castro's October 26 order to Cuban anti-aircraft gunners to fire on the US planes overflying the island. On learning of Castro's order to his forces, the Soviet gunners on the island started demanding permission to do likewise. Then on October 28, the deputy commander of the Soviet forces in Cuba did indeed authorize a surface-to-air missile battalion to shoot down a US U-2 spy plane, despite standing orders not to do so without explicit permission from Moscow (Munton and Welch 2012, 78). This could have been the spark for an all-out US invasion, but Kennedy wisely held fire. The second example is Castro's letter to Khrushchev in the wee hours of the morning of October 27, which warned of an imminent US invasion and recommended that if it did happen, the Soviets should take the initiative to launch their nuclear arsenal against the US. Rather than stiffening Khrushchev's spine as intended, however, the letter caused the Soviet leader to wonder whether the American image of Castro as a bloodthirsty megalomaniac was actually true. The combined impact of the U-2 shoot down and Castro's "suicide note" (Blight and Lang 2013, 117) greatly strengthened Khrushchev's determination to end the crisis, even if that meant dropping most of the demands he had been placing on the US (Blight and Lang 2012, 120-122). (The notion that Khrushchev made an about-face after receiving Kennedy's secret promise to pull US Jupiter missiles out of Turkey is false; Khrushchev was already preparing to give in before he learned that Kennedy was also backpedaling furiously; Fureyko and Nafzli 2007, 499.) The third example is that even after Khrushchev had definitively chosen to end the crisis on Kennedy's terms, Castro kept it going by categorically refusing to accept any form of international inspections in Cuba to verify the Soviets' compliance with the end of the deal. He also strenuously objected to the further Soviet concessions to US demands to pull out all troops and ICBM-25 long-range bombers, as well as Moscow's preemptive concession of pulling out the tactical nuclear weapons that the US did not even know about. In a last-ditch attempt to scuttle the superpowers' negotiations, Castro tried to send Cuba's UN ambassador to the podium of the General Assembly to announce the presence of the tactical nuclear weapons on the island, but the Soviets caught him in the nick of time (Mikoyan 2012, 224).

The case for Castro's central role in the origins and denouement of the Cuban missile crisis is very strong. But if the prior literature was wrong to undermine Cuba's impact, it also new literature may overemphasize it. For instance, Blight and Lang (2012, 245) write that

Kennedy thought Khrushchev had Castro and the Cubans under control, but he didn't; and Khrushchev thought he had Castro et al. under control, but as he would learn to his horror, he didn't. Cuba was the intervening variable, the 'X-factor,' the outlier, the loose cannon that nearly exploded in the faces of the superpowers in October 1962.

Statements such as one implicitly suggest that the "loose cannon" Cubans were the main cause of the instability of nuclear deterrence in this case. But the biggest loose cannon was actually the Soviets, and above all Khrushchev. After all, Khrushchev conceived the idea of sending missiles to Cuba. Castro even objected when he was told that they would be delivered in secret, because he feared that the surprise would be destabilizing (Blight and Brenner 2002, 20-22).

Moreover, although Castro's orders to his anti-aircraft gunners did exert a contagion effect on their Soviet counterparts, this could only happen because of the weakness of Moscow's military command and control. That weakness is also visible in other incidents that Castro had nothing to do with, such as Soviet submariners' move toward readying a nuclear-tipped torpedo against US navy warships (Savranzky 2005). Finally, even Khrushchev's sudden capitulation to Kennedy's demands, although surely praiseworthy, was yet another mercurial decision that hardly reflected a cool calculation of the national interest. Castro's policy was more extreme, but also more consistent.
Jacques E. C. Hymans

Radchenko (2012, 252) summarizes:

It has become clear that one cannot understand how Soviet foreign policy was made without taking into account the role of personality. With a confined personality like Khrushchev—flamboyant and romantic here, calculating and rational there—it has proved difficult to understand the twists and turns of Moscow's policy toward Cuba, and, for this matter, its foreign and defense policy in general.

Since Khrushchev's mercurial personality was such an important driver of Soviet behavior, the fact that the crisis ended peacefully should not be seen as a clear demonstration of the stability of nuclear deterrence. For instance, although Castro's "suicide note" unintentionally pushed the Soviets away from the nuclear brink, it could easily have had a different effect if another man had been in Khrushchev's shoes, or if it had hit the Soviet leader in one of his other moods. The more general point here is that little Cuba was able to have such a strong impact on the missile crisis precisely because the superpowers bore no resemblance to the unitary, rational actors posited by standard deterrence theory.

Relevance to Nuclear Arms Control and Disarmament Diplomacy

The fourth area of nuclear politics reviewed in this chapter is the relevance of non-nuclear weapon states to the conduct and outcomes of nuclear arms control and disarmament diplomacy. Here again, the Latin American experience shows that non-nuclear weapon states can sometimes have an impact on global politics that is disproportionate to their material capabilities.

Only a few months after the chilling experience of the Cuban missile crisis, in March 1963, an enterprising young Mexican undersecretary of state for foreign affairs named Alfonso García Robles convinced President Adolfo López Mateos to send a letter suggesting the creation of a nuclear weapons-free zone (NWZ) in Latin America to the presidents of Bolivia, Brazil, Chile, and Ecuador. The international community had previously concluded NWZ agreements covering outer space, the seabed, and Antarctica, but this NWZ proposal was innovative in that it was aimed at covering the populated territory of numerous sovereign states. López Mateos's letter received a warm response across the entire Latin American region, whose sense of community had been greatly strengthened by the recent experience of nearly becoming the battleground for a nuclear war. Four years later, in 1967 the Treaty on the Prevention of Nuclear Weapons in Latin America, also known as the Treaty of Tlatelolco, came into being. William Epstein, who served as the United Nations technical advisor to the negotiations, underscores the magnitude of this diplomatic accomplishment:

When I first became involved in the work of the treaty, I was told by senior diplomats of four nuclear weapon states and by representatives of my own country, Canada, that I would be wasting my time because the states of Latin America would never be able to agree on a nuclear weapons-free zone for the states of the region. I was also told by prominent diplomats of the time that the nuclear weapons states would never sign Protocol II, which bound them to strict observance of the Treaty. Well, those who made such remarks obviously did not know Mr. Alfonso García Robles.

(2001, 153)

The Tlatelolco treaty is not just a warm and fuzzy declaration of sentiments. It is a genuine international undertaking that places significant burdens on the states party to it, including the possibility of special international inspections in the event that they are suspected of violating their treaty commitments. At first, only some states were willing to fully join the regime by waiving the treaty's requirement of universal adhesion for its entry into force. But one by one they did waive the requirement, and the regime began to take hold. Cuba was the last naysayer, which is not surprising in light of the treaty's origins as a reaction to the missile crisis. But even Cuba joined the club in 2008.

The Latin American NWZ was a major diplomatic step forward not just for the region but also for the world, as indicated by the awarding of the Nobel Peace Prize to García Robles in 1982. The treaty served as an inspiration and lowered transaction costs for parallel initiatives in other regions. Today, NWZ treaties cover more than 100 states, including almost the entire southern hemisphere and some of the northern hemisphere as well (Graham and LaVera 2002). Specifically, in addition to Latin America there are NWZs for Australasia and the South Pacific islands (the Treaty of Rarotonga), the nations in the Association of Southeast Asian Nations (ASEAN, the Treaty of Bangkuk), the entire continent of Africa (the Treaty of Pelindaba), the ex-Soviet republics of Central Asia, and the single state of Mongolia—and all bear a striking resemblance to the Tlatelolco treaty model (Magnarelli 2008). The rise of NWZs around the world suggests that there is real potential in the idea of building a global "peace in parts" (Nye 1971). This diplomatic success story can be contrasted to the negligible progress of the negotiations on "general and complete disarmament" that are stipulated by article VI of the NPT. The NWZ phenomenon deserves much greater attention than it has received in the international security literature.

Another striking feature of Tlatelolco is that the treaty is not merely a case of the "disarming of the disarmed" (Carasale 1999), but also requires the nuclear weapons states to respect its strictures within the region as well. Among the great powers, France had probably the bitterest pill to swallow, as French Guiana is the site of France's main space-launch facility and could easily have become a nuclear bomb and missile testing ground as well. Precisely why the nuclear weapon states gradually came to accept Tlatelolco should be studied much more deeply. Epstein (2001) suggests that persistent nagging by the Latin Americans mattered greatly, but there is surely more to the story than that. In the other NWZs, too, we have seen the same pattern—at first the nuclear weapons states resist, but then they drift toward acceptance.

The most notable problem for the Tlatelolco regime until the 1990s was that Argentina and Brazil, the region's two most advanced nuclear states, remained on its margins, just as they remained outside the global NPT regime. Argentina and Brazil, however, were not simply acting as the "party of no" to the global nonproliferation norm during that period. Instead, starting in 1980 they built their own bilateral nuclear regime, which eventually became highly impressive and is now held up as a model to be emulated by other international rivals seeking to avoid a nuclear arms race, such as South Korea and Japan (Hamel-Green 2011).

It was during the era of the military regimes that Argentina and Brazil started engaging in serious bilateral nuclear cooperation. Therefore, as Mallet (2012) emphasizes, we must reject the simplistic view that democratization produced nuclear cooperation and peace in the Southern Cone. After the return to democracy, however, the two states did greatly extend their military precedents' more limited institutional design efforts (Barnes 2006). The nuclear diplomacy of newly democratized Argentina and Brazil correlates with the much wider pattern uncovered by Poast and Ulfelder (2013) that democratizing states tend to create their own international institutions rather than simply joining preexisting ones.

Two main drivers explain Argentina and Brazil's innovative bilateral diplomacy in this area. First, both sides perceived real value in cooperation with a neighboring state at a similar stage of development, particularly after the Corpus-Isaiou accord of 1979 settled their political dispute.
over the hydropower resources along their common border. Their initial joint forays in nuclear R&D then created momentum for more cooperation by weaving a transnational "episodic community" between the scientists and engineers of the two countries (Kuchesfahan 2014). Later on, this transnational episodic community would respond to the neoliberal-inspired budget cuts of the 1990s by pooling the two states' nuclear efforts even further (Alcalá 2010).

The second, even more important driver of the Argentine-Brazilian bilateral nuclear regime was political: the desire of both sides to avoid a nuclear arms race and yet to stand up to US pressures to join the global NPT regime. As Barletta (2000) stresses, Argentina and Brazil preferred to create a costly bilateral nonproliferation safeguards system that was initially little more than a poor imitation of the activities of the existing NPT-International Atomic Energy Agency (IAEA) structures. This shows how far they were ready to go to prevent the US and other great powers from peering into their nuclear activities, which they saw as a serious violation of their sovereignty. By contrast, both states perceived their own bilateral regime as much less invasive—or even as an expression of "regional sovereignty," as Alcalá (2008, 166) terms it.

The building Southern Cone nuclear regime was more a symptom than a cause of the growing trust between the two states. Indeed, Argentine-Brazilian nuclear cooperation was such a political success that it was able to survive the successive revelations of each state's secret uranium enrichment efforts. On learning that the partner had been cheating, the other state essentially chose to turn the other cheek, because it was convinced that in any case such cheating was not part of a secret plan to seek nuclear arms. Thus, when Brazilian president Lula de Souza notified Argentina of its enrichment plant in 1983, rather than tearing up their bilateral cooperation agreements, he sent his Argentine counterpart a letter of congratulation (Makos 2012, 149). The revelations of cheating did, however, encourage the two sides to develop a more substantial bilateral inspections regime, which again they vastly preferred to joining the NPT. As late as the end of the 1980s, both Brazil and Argentina appeared to prefer their bilateral regime over the multilateral alternative. But then came the 1990s' neoliberal moment and the concomitant eclipse of antidependency ideologies (Escudero 2009). In this new climate, the two states reversed course and accepted first the IAEA full-scope safeguards regime, then the Tlatelolco treaty, and finally the NPT, while still maintaining their bilateral structures as well.

Conclusion

In this chapter, I have focused on Latin American states' choices to build or not build nuclear power plants and nuclear weapons, and on Latin America's impact on superpower nuclear deterrence behavior and international arms control and disarmament diplomacy. Latin American states' relative international position of poverty and weakness must be the starting point for explaining their activities. But these states' nuclear goals and accomplishments—both internally and on the world stage—owe at least as much to other factors, from ideologies of development and national identity conceptions, to the configuration of state and regional institutions, and the agency of outstanding individuals. One might be tempted to conclude that if the poor and weak states of Latin America were already exercising a disproportionate impact on global nuclear history as early as the 1960s, then in the future the region should become even more influential in nuclear matters alongside its growing economic significance. But the evidence presented here suggests that there is no simple linear relationship between material resources and international influence. A recent case in point is the failed 2009-2010 initiative of President Lula Inácio Lula da Silva of Brazil and Prime Minister Recip Tayyip Erdogan of Turkey to resolve the Iranian nuclear crisis. In May 2010, the leaders joyfully announced that Iran had agreed to swap a sizeable quantity of its dangerous enriched uranium stockpile for proliferation-resistant fuel rods—a major diplomatic breakthrough in the long Iranian nuclear standoff. The deal was widely interpreted as a sign of the growing international power of these emerging economic giants. But within days, the US easily brushed the deal aside—even designating the effort as little more than a lone-duck president Obama's ego trip—and instead won UN Security Council support for further ratcheting up sanctions on Tehran (Pasin 2012). Lula's foray into the Iran debate failed in part because it did indeed reflect global nuclear vision in contrast to Washington's (Sotomayor 2013). The result of this change the dynamics of global nuclear politics, unless the shift in material power is accompanied by a new way of thinking about how the world should hold the challenges and opportunities that it will develop, remain open questions.

References


