



Chapter Three: Why States Give up the Bomb

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Why States Give up the Bomb

Non-proliferation efforts have succeeded more often than they have failed. Over the years many more states have given up nuclear-weapons programmes than now possess or are developing them.¹ According to Joseph Cirincione, president of the Ploughshares Fund (a charitable foundation that focuses on nuclear-weapons policy), in the 1960s 23 states had nuclear programmes, were conducting weapons-related research or were actively discussing the pursuit of nuclear weapons. Today only ten states have or are believed to be seeking nuclear weapons and five of these are the declared nuclear-weapons states (NWS) of the NPT. Before the Treaty came into force, only six nations had abandoned nuclear-weapons programmes that were under way or being considered. Since then 16 countries have abandoned programmes. No nation has initiated a nuclear weapons programme since the end of the Cold War, the North Korean and Iranian programmes having begun in the 1980s.² The record shows a significant success rate for the NPT in stemming the spread of nuclear weapons.

The following table, drawn from Paul Davis's analysis for the International Commission on Non-proliferation and Nuclear Disarmament, depicts these developments:

States possessing or seeking nuclear weapons:	
<i>Currently known to have nuclear weapons:</i>	
Recognised by the NPT:	Not recognised by the NPT:
China	India
France	Israel
Russia	North Korea
United Kingdom	Pakistan
United States	
<i>Suspected programme:</i>	
	Iran
<i>Suspected aspiration:</i>	
	Syria
States formerly possessing or seeking nuclear weapons:	
<i>Own weapons given up:</i>	
	South Africa
<i>Inherited weapons given up:</i>	
	Belarus
	Kazakhstan
	Ukraine
<i>Consideration or weapons research voluntarily terminated:</i>	
Argentina	Romania
Australia	South Korea
Brazil	Spain
Canada	Sweden
Egypt	Switzerland
Italy	Taiwan
Indonesia	West Germany
Japan	Yugoslavia
Norway	
<i>Programme terminated through negotiation:</i>	
	Libya
<i>Programme terminated under coercive pressure:</i>	
	Iraq

Understanding the reasons for nuclear reversal is crucial to comprehending the conditions that will be necessary for creating a world without nuclear weapons. This is relevant because the countries relinquishing the bomb have created new political space in an international context that previously did not

favour nuclear abdication. If the process of nuclear disarmament moves ahead, decisions to forgo nuclear weapons in the future can take place in a more receptive environment.³

Determinants of denuclearisation

Studies by T.V. Paul, Etel Solingen, Ariel Levite, Mitchell Reiss, Harald Müller and others have examined the nuclear rollback phenomenon in detail. They have analysed why certain states have halted development programmes or dismantled weapons they either developed or inherited. These studies reveal a wide variety of motivations for decisions to give up the bomb, but they all identify a recurring set of primary factors that are common to cases of nuclear reversal.⁴ The first and most important is an improvement in the security situation so that nuclear weapons are no longer deemed necessary. The second is a shift in domestic political governance towards greater democracy, market liberalisation and global integration. The third is the presence of external incentives, often provided by the United States, that diminish the appeal of nuclear weapons.⁵ All of these factors work together to dissuade a government from going nuclear.

A recent quantitative analysis by Müller and Andreas Schmidt identifies the correlates of nuclear reversal.⁶ The authors reviewed all cases since 1945 in which states developed or considered nuclear-weapons programmes (37 in all). They examined the decisions to terminate or continue nuclear programmes according to a range of variables, including the political characteristics of a regime, technological imperatives, alliance guarantees and the role of non-proliferation norms. Their analysis concurred with other studies in identifying security issues as primary factors in determining nuclear decision-making. They also identified regime type and non-proliferation norms as important influences. Their findings

challenged the common assumption that alliance guarantees are important factors in shaping nuclear decision-making. Moreover, they found no evidence of an association between economic and technological capability and the decision to develop nuclear weapons.⁷

The lack of a strong correlation between non-proliferation and alliance guarantees is the most striking finding of Müller and Schmidt's analysis. This runs counter to the common assumption that security guarantees from nuclear-weapons states are essential in convincing states to refrain from weapons development. Many believe that the US policy of extended deterrence, the so-called nuclear umbrella, has been decisive in dissuading states in East Asia and Europe from going nuclear. To test this hypothesis Müller and Schmidt compared the behaviour of US allies in Europe, East and Southeast Asia and the Pacific with that of non-aligned countries in the same regions. In a sample of 31 states they found no statistically significant difference in the proliferation behaviour of allies and non-aligned states. Neither did they find any confirmation of the presumed linkage between alliance guarantees and decisions not to develop nuclear weapons.

This finding can be interpreted in several different ways. Either the allies did not consider security assurances based on nuclear deterrence credible, or non-aligned countries felt that the US nuclear umbrella protected them as well. Perhaps extended nuclear deterrence is essentially irrelevant to non-proliferation. In any case, the finding casts doubt on one of the pillars of deterrence theory and a principal justification for maintaining nuclear deployments to protect allies.

Solingen argues that the limits of deterrence assurance apply to hegemonic defence relationships generally. Neither the United States nor the Soviet Union was able to prevent allies (Israel, Iran under the Shah, Iraq or North Korea) from

seeking or acquiring nuclear-weapons capability. Most nuclear reversals are not due to the US nuclear umbrella.⁸ If alliance guarantees are so effective in restraining allies, sceptics ask, why did the United Kingdom and France develop nuclear weapons?

This analysis does not mean that alliance guarantees play no role whatsoever. It is undeniable, as Müller and Schmidt acknowledge, that Japan, Germany and other states have made decisions not to develop nuclear weapons based in part on alliances with and security guarantees from the United States. The causal relationship may not be as straightforward as commonly assumed, however. Perhaps it is not nuclear deterrence *per se* but the importance of the political alliance relationship that matters most in dissuading states from going nuclear, although of course the two are interrelated.

Müller and Schmidt also examined the relationship between denuclearisation and non-proliferation. They tested the hypothesis that great-power arsenals deter smaller states from proliferating – which implies that as the major states disarm, the marginal value of small arsenals will increase and incentives for proliferation will rise. Their analysis found little support for this hypothesis. During periods of arms control and *détente*, proliferation activities diminished, and the number of decisions to terminate nuclear weapons increased. In the most dangerous periods of the Cold War, the number of countries initiating nuclear-weapons programmes increased. During the ‘second Cold War’ of the early 1980s, when US and Soviet nuclear arsenals expanded, the rate of proliferation increased slightly. With the end of the Cold War and the deep nuclear reductions of the late 1980s and early 1990s, nuclear proliferation activities declined sharply. No new nuclear programme started after that date, but several were terminated.

Nuclear non-proliferation is also linked to reduced threats from chemical and biological weapons. The decline in the number of nuclear-weapons programmes globally has been accompanied by a drop in the number of programmes for the development of chemical and biological weapons and ballistic missiles. As Cirincione observes, 'the number of nuclear, biological, and chemical weapons and ballistic missiles [is] shrinking steadily. The number of states with programmes for these weapons is also contracting'.⁹ It is difficult to establish any causal relationship between these trends except to note the contextual influence. Changes in the international institutional and normative environment encourage reductions in military capabilities and discourage the acquisition of new weapons systems.¹⁰

Müller and Schmidt found support for the hypothesis that domestic regime characteristics are important in determining proliferation behaviour. The presence of democratic and democratising regimes is positively correlated with decisions not to develop or possess nuclear weapons. This confirms Solingen's pioneering research on the importance of domestic factors in accounting for proliferation and non-proliferation behaviour. Her research shows that the political and ideological characteristics of a ruling regime are significant predictive factors in determining whether a state will embrace or eschew nuclear-weapons capability. Nationalist, autocratic and autarkic regimes are more likely to develop nuclear weapons, while democratic regimes oriented towards market liberalisation tend to be less likely to develop such weapons. The change from one regime type to the other is associated in several important cases with the decision to abandon nuclear-weapons capability.

This does not mean that democracies are inherently non-nuclear, of course. Established democracies that have invested heavily in and maintained nuclear weapons for prolonged

periods – the United States, the United Kingdom, France, Israel and now India – obviously have not abandoned their programmes. As George Perkovich demonstrated in his analysis of the Indian nuclear programme, democracies can be susceptible to nationalist and patriotic political appeals to go nuclear.¹¹ The democratic peace phenomenon does not extend to questions of nuclear-weapons acquisition.

The non-proliferation norm

The international non-proliferation norms embodied in the NPT have had a positive impact in constraining nuclear-weapons development and persuading states to abandon nuclear programmes. Prior to the NPT entering into force in 1970, 40% of the states possessing the requisite economic and technical capacity embarked on programmes to develop nuclear weapons capability. After 1970, as international political opinion decisively embraced non-proliferation standards, most of the states that started nuclear weapons programmes terminated them, and few of the states with requisite capacity started nuclear weapons programmes. Some countries abandoned weapons programmes to fulfill obligations under the NPT, while others were less explicit in their declared motivations. In the former case the positive impact of the treaty was obvious, while in others it had to be inferred from the context.

Müller and Schmidt explain this phenomenon by arguing that democracies are more sensitive to norm formation. The emerging global norm of nuclear renunciation is more influential in states that are oriented towards democracy and open markets.¹² As the number of democratic states has increased, so has the receptivity to widely supported non-proliferation norms.

Mitchell Reiss argues the international non-proliferation regime played a role in the decisions of South Africa, Ukraine,

Belarus and Kazakhstan to forgo nuclear weapons. It also helped to motivate the decisions of Argentina and Brazil to abandon nuclear-weapons development. For these countries, 'joining the NPT was the non-proliferation equivalent of obtaining the Good Housekeeping seal of approval'. It was the gold standard for gaining diplomatic acceptance and achieving improved diplomatic and commercial relations with the international community.¹³ As noted below, acceptance of the NPT was the essential condition for these regimes to receive economic, diplomatic and security support.

In the cases of Ukraine, Belarus and Kazakhstan the decision to 'send home' Soviet missiles and warheads was connected with their quest for genuine sovereignty. Nuclear weapons were considered a Soviet legacy that was more of a nuisance than an asset in the international community they wanted to enter. Nuclear weapons were in the hands of the Soviet military and technical experts, reminding the local people of their imperial function. Moreover, the Russian Federation and the United States agreed that it was safer to move the weapons to Moscow's custody rather than risk them falling into other hands.

Tools of persuasion

The history of non-proliferation teaches that nations must be persuaded to give up nuclear weapons. Sustainable disarmament cannot be enforced through sheer coercion or physical denial. Political leaders must acquire an internalised belief that nuclear weapons are illegitimate and counterproductive. Positive inducements are likely to be more effective in this process than negative sanctions. Coercive disarmament worked only once, in the exceptional case of Iraq, which was defeated in war and subject to draconian multilateral sanctions. In other cases approaches that relied excessively on

pressure and threats of force usually failed. Nations give up nuclear weapons only when they feel they have more to gain in the process than they might lose. These are calculations that states must make for themselves; they cannot be imposed externally.¹⁴ The domestic calculus of the expected costs and benefits is decisive for the outcome of decision-making. Actors tend to change their behaviour on the basis of expected utilities and external inducements rather than penalties.

This does not mean that sanctions have no role to play in achieving non-proliferation and disarmament. Sanctions have helped in some cases in raising the price and slowing the progress of nuclear-weapons development. Sanctions contribute to the effectiveness of incentives by working in combination with them. The offer to lift sanctions can serve as a potent inducement for cooperation. Sanctions and incentives are often applied in combination as part of a diplomatic bargaining process designed to reach mutual agreement. The art of diplomacy lies in creatively blending pressures and inducements to exert persuasive influence and reward a state for adopting a desired change in policy.¹⁵

Studies confirm the advantages of inducement policies and the benefits of combining incentives with sanctions as tools of diplomatic persuasion. Virginia Foran and Leonard Spector found that incentives are not usually offered by themselves, but are part of a package of incentives and disincentives designed to affect a state's decision-making calculus. An incentives–disincentives package is 'a set of promised benefits and threatened sanctions' that seeks to discourage a state from developing or maintaining nuclear weapons.¹⁶

Analysts have observed a strong positive correlation between policy success and the utilisation of incentives in combination with sanctions. Empirical evidence shows that inducement policies are more successful than sanctions, and

that the combination of incentives and sanctions is more effective than the use of incentives alone.¹⁷ In practice incentives and disincentives are difficult to distinguish in a particular case. The offer to lift sanctions is an incentive, while the denial of economic or diplomatic inducements is a sanction.

In some cases non-proliferation incentives packages have resembled a modernised version of dollar diplomacy, with financial and commercial incentives used to restrain nuclear behaviour.¹⁸ The United States has been the primary practitioner of this form of diplomacy, but Japan, Germany, Russia and other countries have also used economic assistance to promote non-proliferation and security objectives. Incentives have been combined in some instances with denial strategies, which seek to prevent weapons-trafficking. Strict export controls on nuclear technologies and materials are now in place in many countries, especially the members of the Nuclear Suppliers Group (NSG). The use of sanctions can be helpful in stemming the flow of weapons-related materials and imposing costs on proliferators, but by themselves denial strategies are inadequate. Leon Sigal, a northeast Asia security expert, observes:

Denial can buy time and provide early warning, but it cannot succeed forever. The interdiction of supply has to be supplemented by efforts to reduce demand. Unlike a strategy of pure denial, which threatens proliferators with economic and political isolation, convincing countries not to build a bomb requires cooperating with them, however unsavory that may be. Countries that seek nuclear arms are insecure. Trying to isolate them or force them to forgo nuclear arming could well backfire. They need reassurance to ease their insecurity.¹⁹

The best approach, according to Sigal, is a 'strategy of diplomatic give-and-take that combines reassurance with conditional reciprocity, promising inducements on the condition that potential proliferators accept nuclear restraints'.

Lessons from Brazil and Argentina

The influence of domestic political factors in nuclear renunciation is clearly illustrated in the cases of Argentina and Brazil. Of decisive importance was the emergence in the 1980s of civilian governments in Argentina (1983) and Brazil (1985) determined to wrest control over nuclear programmes from their military establishments. The return to civilian rule ushered in a new political era that facilitated the establishment of more cooperative political relations, leading both countries to perceive the nuclear-weapons option as an impediment to regional stability and security. The development of mutual trust and transparency had started already during the military regimes, but accelerated with the return to democratic rule.²⁰

US restrictions on nuclear commerce also played a role in impeding the nuclear programmes of Brazil and Argentina in the 1980s, partly to counteract the deals they had made with Germany and France. In an attempt to slow the development of nuclear-weapons capability, Washington blocked Brazil's access to high-speed computers and other advanced technologies. Similar restrictions were imposed on Argentina. The United States also impeded Brazil's access to much-needed loans from international financial institutions.

Reiss contends that these measures 'increased the amount of time needed to complete projects and raised their costs ... The examples of Argentina and Brazil strongly suggest that export controls can make a significant difference in preventing countries from increasing their nuclear competence.'²¹ José Goldemberg, Brazil's former secretary of state for science and

technology, argues that external efforts to hold back the nuclear programmes of Argentina and Brazil ‘fell flat’, although he acknowledges that because of these restrictions the nuclear programmes moved ahead more slowly.²² Neither country was persuaded by sanctions to abandon nuclear-weapons development, but external restrictions made it more difficult to obtain the technologies and materials needed in their nascent programmes. As the costs increased in comparison to the expected benefits, political leaders decided to abandon weapons development. They did so more on the basis of domestic political considerations than in response to external pressures.

Newly elected civilian presidents were strongly nationalist but were also able to build momentum to improve bilateral political relations. Both governments realised the political and commercial benefits of joining the NPT. Similarly, civilian leaders recognised that military dreams of grandeur did not serve the national interest. Goldemberg writes that he and others convinced Brazilian President Fernando Collor de Mello that ‘the road to enter the First World is not the development of nuclear weapons but solving the problems of underdevelopment’.²³ Argentina was willing to join Brazil in this approach, and the two sides signed a series of agreements in 1991 that committed them to the renunciation of nuclear weapons, including the signing of the Treaty of Tlatelolco. They also established a joint organisation, the Brazilian–Argentine Agency for Accounting and Control of Nuclear Materials (ABACC), to conduct mutual inspections of nuclear facilities and reassure each other of good-faith compliance.

The example of Argentina and Brazil strongly suggests, according to Reiss, that ‘resolution, or at least amelioration, of outstanding political disagreements must precede cooperation in the nuclear sphere’.²⁴ This is an important but sobering lesson for addressing proliferation challenges elsewhere. It will

be necessary to resolve fundamental political disputes between India and Pakistan and between Israel and its Arab neighbours, for example, to eliminate nuclear weapons in these regions.

Lessons from South Africa

The end of the South African nuclear programme in 1990 resulted from a change in the country's security environment and a decisive shift in domestic political governance. The programme had been justified as a response to the presumed communist threat from Cuban troops and Marxist adversaries in neighbouring countries, all backed by the Soviet Union. It was also a response to growing isolation and international opposition to the regime's apartheid policies. When these internal and external conditions changed, induced in part through international pressure against apartheid, the justifications for retaining nuclear weapons disappeared. For many South African leaders, the removal of external dangers obviated the need for nuclear weapons.

South Africa's international isolation negatively influenced decisions about its nuclear programme. International ostracism intensified the government's siege mentality, which played a role in the initial decision to develop nuclear weapons. The government's isolation also reinforced the parochial world view of the Afrikaner leadership, which rarely travelled outside the country. These factors contributed to an air of unreality in the decision-making of top government officials. Their decision to build nuclear weapons as a means to bolster the regime's security was likened by one senior official to 'building castles in the air'.²⁵

The security situation changed abruptly with the fall of the Berlin Wall and global collapse of communism. Even more important was the tripartite agreement concluded in December 1989 between South Africa, Angola and Cuba for the withdrawal

of Cuban forces from Angola. In announcing the decision to dismantle the nuclear programme, South African President F.W. de Klerk emphasised the dramatic change in the country's security environment, especially the end of the Cold War and the removal of the presumed threat from regional communist forces. De Klerk specifically mentioned the withdrawal of Cuban forces from Angola and the independence of Namibia. It has also been noted that de Klerk also may have been motivated by a racially driven desire to keep nuclear weapons out of the hands of the leaders of the African National Congress.²⁶

The political environment shifted profoundly when the anti-apartheid resistance movement forced the regime to yield power. When the South African government freed Nelson Mandela and opened a dialogue for political transition, it also issued orders to terminate the nuclear programme and dismantle the country's six nuclear devices. This was followed in 1991 by the signing of a comprehensive safeguards agreement with the IAEA and South Africa's accession to the NPT.

The decision to end the nuclear programme was motivated primarily by political considerations. Powerful voices within the apartheid establishment had never favoured the development of nuclear weapons, believing correctly that they exacerbated tensions with the United States and European countries and frustrated long-term efforts to integrate with the West. The continued presence of nuclear weapons was a barrier to joining the NPT and thereby gaining valuable access to peaceful nuclear technology and international cooperation on nuclear-energy development. Close cooperation in nuclear matters with Israel did not help to improve the international reputation of the apartheid regime.

As de Klerk acknowledged: 'A nuclear deterrent had become not only superfluous but in fact an obstacle to the development of South Africa's international relations'.²⁷ The United States and

other Western governments were strenuously opposed to South Africa's nuclear programme. In the late 1970s they pressured Pretoria to abandon efforts to test a nuclear device in the Kalahari Desert after Soviet satellites detected preparation for the test.

South Africa's decision to empower the African majority and disavow nuclear weapons has burnished South Africa's image and stature regionally and internationally. As the only state to have dismantled indigenously produced nuclear weapons voluntarily, South Africa has unique moral authority in advocating global disarmament and criticising the remaining nuclear weapons states for their inaction in fulfilling nuclear-disarmament obligations under Article VI of the NPT.

Libya comes clean

In December 2003 Libyan leader Muammar Gadhafi surprised many observers by announcing his government's decision to disclose and dismantle its nuclear-, chemical- and biological-weapons programmes and to allow international inspectors to verify compliance. Gadhafi had started his quest for nuclear weapons soon after he came to power through a military coup in 1969. His government's ratification of the NPT in 1975 had no effect in restraining Libyan efforts to buy a bomb from one of the emerging NWS, and later to assemble technology and fissile material to construct an indigenous bomb. When Libya gave up its weapons programme in 2003 US officials claimed the decision was due to what one US congressman termed the 'pedagogic value' of the invasion of Iraq.²⁸ In reality, though, Libya's abandonment of its weapons programme had little to do with the war in Iraq. Its decision was rooted in a process of diplomatic engagement, facilitated by a deft combination of sanctions and incentives, dating back more than a decade to the successful US and UN diplomatic effort in the 1990s to dissuade Libya from supporting international terrorism.

In her recent book on non-proliferation norms, Maria Rost Rublee agrees that the fear of regime change was not the key reason for giving up the bomb. Neither were economic sanctions *per se*. By the end of the 1990s, with the lifting of UN sanctions, European countries started to relax their restrictions on trade with Libya, which made it easier for Tripoli to tolerate unilateral US sanctions that had been initiated in 1986. Rublee stresses that while sanctions mattered in the decision to renounce WMD, more important was Gadhafi's commitment, made under pressure from a domestic reformist and pragmatist constituency, to transform Libya into a growing modern country ready to reassert regional leadership. The quest for WMD capabilities and consequent economic sanctions stood in the way of this ambition.²⁹

Libya's decision to abandon weapons development grew also out of its choice to end its policy of state sponsorship of terrorism. In this case, the dismantlement of nuclear weapons is linked to the prevention of global terrorism. It highlights the deadly nexus of proliferation and terrorism at the top of the international security agenda, and shows that sanctions and incentives can be combined effectively as instruments of bargaining leverage to change the behaviour of a previously recalcitrant government. The immediate catalyst for Gadhafi's decision was the US- and British-led interdiction in 2003 of a German-registered ship heading for Libya, which was carrying equipment that could be used to develop centrifuges. This operation exemplified the US-led Proliferation Security Initiative (PSI) and was an important success in demonstrating the effectiveness of multilateral naval cooperation to prevent weapons trafficking.

In the years preceding the imposition of the UN sanctions in 1992, Libya was implicated in the bombings of Pan Am Flight 103 in 1988 and French flight UTA 772 in 1989. After sanctions

were imposed for terrorist support and activity, Libya ceased its attacks against international aviation, prompting the US State Department's 1996 report on global terrorism to note: 'Terrorism by Libya has been sharply reduced by UN sanctions'.³⁰

Targeted UN sanctions did not cause major economic disruption in Libya, but they isolated the regime and provided sufficient leverage to prompt a reconsideration of policy and a diplomatic settlement of the Pan Am bombing case. In 1998 Libya agreed to turn over suspects wanted in connection with the airline bombing to an international tribunal in The Hague. The Security Council responded by suspending and later lifting sanctions. The United States maintained its sanctions, however, demanding that Tripoli take further steps to compensate the victims of terrorist attacks and cooperate in counter-terrorism and non-proliferation efforts. Through a series of complex negotiations, US officials made clear that sanctions could be lifted and commercial relations with the West opened if Libya would agree to dismantle its weapons programmes. Libya had tried to start negotiations several times in the course of the 1990s, but Washington insisted it would not engage until Tripoli renounced its WMD plans.

Libya's decision to comply with Western demands was motivated primarily by its desire to escape isolation and gain access to Western markets and technology. According to Flynt Leverett, former senior director for Middle Eastern affairs at the US National Security Council: 'Libya was willing to deal because of credible diplomatic representations ... that doing so was critical to achieving their strategic and domestic goals'.³¹ Former Assistant Secretary of State Thomas E. McNamara, who was responsible for US policy towards Libya during the earlier years, attributed Gadhafi's turnaround to the long-term effects of sanctions, the successful interdiction of the

weapons shipment at sea, and the accumulated impact of years of diplomatic pressure and dialogue.³² Incentives were crucial factors in persuading Libya to abandon its nuclear-weapons programme.

Ukraine gives up the bomb

Economic incentives and security assurances also played a role in persuading Ukraine to give up the nuclear weapons on its soil that it inherited with the collapse of the Soviet Union. Faced with disastrous economic conditions and seeking economic and political independence from Russia, Ukrainian officials traded away the nuclear weapons for economic and security benefits. The result was the January 1994 Trilateral Statement, signed by the presidents of Ukraine, the United States and Russia, in which the United States promised substantial economic assistance and support for greater Ukrainian integration into Western financial and security institutions, while Russia, the United States and the United Kingdom offered assurances for Ukraine's security. The Ukrainian military supported the decision to remove nuclear weapons because their maintenance would have swallowed a major part of its military budget that could now be used to strengthen conventional forces.³³ In January 1996 Ukraine became a non-nuclear nation when the transfer of 4,400 warheads to Russia was completed.

The Trilateral Statement followed the 1992 Lisbon Protocol, in which Russia, Belarus, Kazakhstan and Ukraine agreed to become parties to the Strategic Arms Reduction Treaty (START) and the Nuclear Non-Proliferation Treaty. Before ratifying START, however, the Ukrainian Parliament announced in late 1993 a set of conditions for its approval. These stated that Ukraine would dismantle only 42% of its warheads, and only after receiving security assurances from the United States and Russia. Presidents Bill Clinton and Boris Yeltsin immedi-

ately engaged in further negotiations with Ukrainian President Leonid Kravchuk. In the resulting Trilateral Statement agreement the United States and other countries provided Ukraine substantial financial assistance in exchange for the removal of all nuclear warheads from missiles and their transference to Russia. Washington pledged more than \$900 million in Nunn–Lugar funds under the Cooperative Threat Reduction Programme and other assistance programmes. Russia offered to write off more than \$2 billion of Ukrainian oil and gas debts. Russia also pledged to blend down the highly enriched uranium extracted from returned nuclear warheads and return it to Ukraine as reactor fuel for nuclear power generation. The European Union and individual European states collectively contributed hundreds of millions of dollars in related nuclear assistance to the former Soviet republics.

All of these efforts combined to provide very substantial economic assistance and encouragement for denuclearisation. Similar offers of assistance were provided to Kazakhstan and Belarus to encourage these former Soviet states to give up the nuclear weapons on their soil as well. Because of financial and economic benefits ‘it literally became profitable’ for Ukraine, Kazakhstan and Belarus to renounce nuclear weapons.³⁴ The provision of financial assistance was intended to demonstrate a commitment to the political independence and economic viability of the former Soviet republics, based on sustained relationships of cooperation with the West and Russia.

In addition to financial assistance, the United States, Russia and other countries provided explicit security guarantees to Ukraine upon its accession to the NPT. In December 1994, at a summit of the Commission on Security and Cooperation in Europe (CSCE), the United States, Russia and the United Kingdom provided Ukraine with formal negative and positive security assurances, pledging not to use nuclear weapons

against it, to respect its political and economic sovereignty and to provide assistance should Ukraine fall victim to a nuclear attack. France gave its own formal assurances to Ukraine unilaterally at the summit.

Security assurances played an important role in the successful denuclearisation of Ukraine. These guarantees supported Ukraine as a sovereign and legitimate member of the international community. By possessing nuclear weapons it might have become a pariah state. For Ukraine's leaders the nuclear weapons on its soil were not means of security but high-value bargaining chips that were used to obtain what the newly independent country needed most: economic assistance and political cooperation from the West, and national autonomy and security assurances vis-à-vis Russia. Kiev traded 'essentially unusable nuclear weapons for a set of relationships, especially with Washington, that would help ensure the country's future'.³⁵

By giving up the nuclear weapons, Ukraine realised its most urgent national objectives: political recognition, territorial security and economic assistance. The United States and its allies achieved their objectives as well: preventing the emergence of a new nuclear-weapons state and the further proliferation of nuclear weapons.

Conclusion

These cases show that national decisions to forgo the nuclear option cannot be explained by any single factor. Democratic transitions obviously helped political leaders see the world with new eyes. This happened in Argentina and Brazil, which developed a new atmosphere of mutual trust and transparency, and in South Africa, which abandoned old prejudices and ended apartheid. For Pretoria the decision to dismantle nuclear weapons was facilitated by a drastic change in the security

environment. For Ukraine security guarantees were an important factor in encouraging denuclearisation. Incentives from the United States and other states encouraged this process.

Economic sanctions alone are not enough to alter a government's policies, even though they may have major negative impacts. More important, as both the Libyan and South African cases reaffirm, is the realisation by governments that ending political and economic isolation may bring positive long-term benefits. The calculation of future prospects finds nuclear weapons to be a liability rather than an asset. Skilful international responses that combine incentives and penalties can shape that judgement.

