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**The Origins of Nuclear Cooperation between  
Brazil and Argentina.**

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**ABSTRACT.**

This paper sets out to highlight the major findings of my latest research on the origins of nuclear cooperation between Brazil and Argentina. Besides archival work and interviews, my findings draw on a “critical oral history” exercise which I ran with Professor Nicholas Wheeler of Birmingham University: a three-day collective interview with the Brazilian and Argentine historical actors who negotiated and implemented nuclear cooperation in the late 1970s and early 1980s. The long interview was structured around recently declassified documents, giving us all an opportunity to confront personal memories with the written record.

Keywords: nuclear arms; nuclear power; bilateral relations; oral history; international cooperation; Brazil; Argentina

It is easy to forget the impact of nuclear power on the international relations of South America. Only thirty years ago the pursuit of uranium-enrichment and ballistic-missile technologies by authoritarian military regimes in Argentina and Brazil led many to fear the emergence of a security dilemma with serious geopolitical ramifications. The belief was widespread in the West and in the international community at large that both countries were trying to develop nuclear-weapons programmes of their own with a view to either equalising or surpassing each other's technological capabilities – the kind of dynamic that could spiral out of control.

Yet within roughly fifteen years, between the late 1970s and the early 1990s, the context of the Brazil-Argentina nuclear relationship changed fundamentally. A train of events in Brasília and Buenos Aires revolutionised South America's international politics and led both countries to rethink their national security doctrines; coordinate their foreign policies to deal with the global non-proliferation regime; impose new restraints on their own national nuclear programmes; and eventually co-sponsor a formal mechanism for mutual inspection of nuclear-related facilities. Some of these developments were driven by structural transformation – the implosion of authoritarian rule in both countries, financial decay and greater dependence on global finance, and the eroding legitimacy of national nuclear programmes in the eyes of public opinion; some of them, however, were driven by key individuals: statesmen and diplomats who made a difference through the contingent choices they made.

By the late 1980s the Argentina-Brazil relationship had taken on characteristics that would have been inconceivable to observers twenty years earlier. This transformation fostered an incipient security community in the wider South American region that moved that part of the world toward becoming a zone of international peace, democratic governance, and market economies, where there was little or no incentive for major investments in nuclear-weapons technologies.

Counterintuitively, Argentina and Brazil followed this path toward a stable peace while both were still military dictatorships. It was a case where political reconciliation did not follow social integration and economic interdependence, but the other way around. What ever happened?

The body of relevant literatures that seek to account for the absence of a spiralling nuclear-technology arms race between Brazil and Argentina in the late 1970s and early 1980s – and the origins of an unexpected pattern of cooperation instead – has evolved over the past twenty years. Existing accounts variously emphasise the geopolitical, economic, normative and domestic-political sides to the story. The resulting account is rich enough not to be easily contained in one single set of theories or concepts, or within a single overarching narrative.

For all the wealth of existing knowledge about the origins of nuclear cooperation between Brazil and Argentina, the opportune moment has now come to revert to that recent past in order to assess it anew, inasmuch as secret documents produced at the time in Argentina, Brazil and the United States have become available for research for the first time, whilst at long last key historical actors are sharing their recollections. These developments enable historians and social scientists to develop the first detailed, documented account of what exactly happened and why.

This working paper begins by establishing what has been known about the case previously, then moves on to specify what the new findings are. At the end it is assessed how sustainable Argentine-Brazilian nuclear cooperation is likely to be.

### **TWO SCHOOLS OF THOUGHT.**

All students of the nuclear relationship between Brazil and Argentina agree that bilateral tension peaked in the mid-1970s over major infrastructure works in the River Plate basin. To be sure, low-level geopolitical and diplomatic competition had been integral to the relationship since the colonial period two hundred years earlier, with mutual suspicion deeply seated. We also know that mistrust was recurrent on each side as the other began to develop nuclear technology from the 1950s onwards; although we do not know what effective role distrust had in creating an interest in nuclear technological development in the first place.

The drama of Argentina-Brazil relations in the late 1970s was all the more dangerous due to the scarcity of high-level contacts between the two sides; e.g. no visits Heads of State since World War II, no major bilateral committees and a political culture of distancing.

From a proliferation perspective too, the late 1970s and early 1980s were the most delicate period in the region's history, as both governments actively pursued uranium-enrichment and

reprocessing, plus mid- and long-range ballistic missile technologies. We now know that the CIA had estimated at the time that there were major incentives on both sides for nuclear weaponisation.

Working within this matrix, scholars developed two alternative schools of thought. The first saw a security dilemma in play, and is best represented by Resende-Santos (2002) and Kupchan (2010). According to this view, “each nation sought to develop the technological capability as an insurance policy against the other’s nuclear ambitions ... by 1976 strategists on both sides had concluded that the two rivals were nuclear-capable” (Resende-Santos, p. 95). On this view, whatever bilateral nuclear cooperation emerged in the 1980s was a function of changes both to the regional balance of power, with Argentina becoming ever less capable of competing economically, technologically or diplomatically with Brazil, at a time when military establishments in both countries were on the retreat, as democratically elected civilian leaders reached office.

The geopolitical side to this story can be summarised as follows. Argentina almost went to war with Chile in 1978 and then fought and lost a conventional war against the United Kingdom in 1982. The military junta running the country at the time came to be seen as a pariah in the field of human rights, becoming increasingly isolated. At the same time the national economy shrank and de-industrialised. In the process, Argentina’s nuclear sector was first paralysed due to lack of funding, and then progressively dismantled in the face of other, more pressing priorities. While Brazil also suffered dire economic straits and underwent a painful transition from authoritarian rule, it nevertheless managed in that period to consolidate and even improve its regional position in South America. Its nuclear sector faced enormous hurdles, yet Brazil worked tirelessly towards uranium-enrichment and the creation of a minuscule but established nuclear industrial complex. Faced with such a *fait accompli*, Argentina had little choice but to reach out and inch toward better relations with Brasília. On this account, nuclear rapprochement is to a large extent the result of a weakened Argentina’s attempt to institutionalise nuclear relations with a stronger Brazil that might otherwise move forward with its own nuclear plans without any commitments to its neighbour.

The domestic-political side of this version goes like this: nuclear rapprochement must be seen as part and parcel of the transition to civilian rule in both countries. President Raul Alfonsín of Argentina sought cooperation with Brazil soon after taking office in late 1983 in the belief that layers of international commitments in the field of non-proliferation would help him

reassert authority at home, tame an unruly military complex, and build up an image of statesmanship that was bound to be instrumental in the domestic struggles to come. For his part, Brazilian general João Figueiredo considered himself interested to move toward cooperation with Argentina as a way of signalling to his colleagues in uniform that Brazil was indeed to transition to civilian rule. Opening up internationally, to Argentina but to the rest of South America as well, would then feed back into the political liberalisation at home.

The second school of thought argues that, for all the mistrust characterising the bilateral relationship in the late 1970s, this was not a security dilemma. This version of events is best represented by Doyle (2008), Redick (1995), Reiss (1995), and Wrobel (1994). Yes, the military establishments on both sides viewed each other with suspicion and even planned, contingently, for war with one another, but there was more cooperation and convergence than meets the eye.

This account also has a geopolitical side to it. It argues that Brazil and Argentina actually share in common a view of the international non-proliferation regime as intrusive, discriminatory, and detrimental to their own quest for technology acquisition. The regime in general and US non-proliferation policy in particular – especially under Jimmy Carter – is what drove Argentina and Brazil together. The more their own relations with the regime and with the United States deteriorated, as they did throughout the mid-1970s, the more both countries found common ground for bilateral cooperation. This, the argument goes, was stronger than any fears of each other they may have harboured. Neither country faced an imminent threat from the other, nor from extra-regional actors. “Cooperation was possible because Argentine and Brazilian security concerns about each other were never overriding. This fact weakened national security arguments for the development of nuclear weapons.” (Doyle, p. 315)

And there is a domestic-political strand to this argument as well. In the case of Argentina, the nuclear programme should be presumed to be about acquiring and developing nuclear technology for civilian purposes which might spill over into Argentine industries more broadly, absent any evidence that any power-broker ever considered the possibility of a nuclear weapons programme. The upshot was an attitude of empathy toward Brazil rather than rivalry: Argentine personnel in the nuclear sector shared the same views as their counterparts in Brazil, a phenomenon that some have portrayed as an incipient cross-border epistemic community.

In Brazil things were never as straightforward, given the more prominent role of the armed forces in the nuclear sector. Among those in uniform were voices favouring the development of a nuclear-weapons programme some day in the future; these, however, were never dominant nor managed to gain political traction inside Brazil. The winner of the power struggle for resources and authority over Brazil's nuclear programme from the 1970s onwards was the Navy, the one force that actively argued against weaponisation, and offered a vision of nuclear technology centred instead around nuclear propulsion for submarines. The argument mirrored the debate in Argentina, being couched in terms of technological development and spillover.

Finances mattered as well for both sides: the major changes undertaken by Argentina and Brazil in the 1980s could not have occurred without the acquiescence of the military and the nuclear sector to the new economic realities in both countries. The high costs of maintaining nuclear programmes made little sense in a context of financial upheaval and budgetary scarcity.

The central question this paper raises is this: How do the newly declassified documents and interviews illumine the foregoing two rival pictures?

### **WHAT WE HAVE LEARNED.**

In this section I seek to systematise the core lessons to be learnt from the set of primary sources now available to researchers into the origins of Argentine-Brazil nuclear cooperation. The findings are presented in two parts: first, attention focusses on the role of domestic actors in shaping foreign nuclear policy; next, bilateral geopolitical dynamics is taken into account in the context of an evolving non-proliferation regime.

Domestic actors: the military, diplomats, scientists and politicians.

We know that the origins of cooperation lie in the late 1970s and early 1980s, at a time when both countries were run by authoritarian military governments. Greater levels of cooperation and transparency preceded both countries' transition to civilian rule. What we did not know before about the story of nuclear rapprochement was the relative weight of men in uniform, politicians, and diplomats in Argentina's and Brazil's domestic power struggle.

The military mattered on both sides because, for all the secrecy involved in their treatment of nuclear affairs, all parties realised that nuclear cooperation could operate as a common defensive shield against an intrusive international non-proliferation regime. In an attempt to preserve some place for their nuclear technology programmes at home – especially in face of the militant anti-nuclear policies of the Carter administration – they launched a bilateral programme of nuclear cooperation. In order to bring this off, they first had to resolve their energy and water disputes in the Parana River region, which had fuelled a great deal of mutual resentment throughout the 1970s. Many thought them a function of a military mentality in both Brasília and Buenos Aires; however, it was in fact the military on both sides who decided in 1979 to seal a deal on the water dispute. The 1979 Itaipu-Corpus Treaty of cooperation between Argentina and Brazil for the exchange of technical information, material, and products on all aspects of the nuclear fuel cycle, led to the first visit, in May 1980, by a Brazilian President to Argentina in more than four decades. After this treaty both countries engaged in active nuclear cooperation.

For their part, the foreign ministries of both countries contributed to the nuclear rapprochement in very specific ways. More than any other sector of government, they were sensitive to the diplomatic costs of remaining isolated from international non-proliferation regimes. The belief took hold on both sides that nuclear rapprochement between themselves would moderate the international pressures to adhere to international non-proliferation regimes like the NPT.

The foreign ministries also devised a way for political leaders to reveal to the public what their respective secret programmes had achieved by coordinating their announcements beforehand. They also forged a language of shared interest in nuclear affairs; after all, professional diplomats from both sides had been actively cooperating in the United Nations and other international fora since at least the 1950s. They knew full well that they could easily develop a common stance on most scores pertaining to the global non-proliferation regime. In the 1980s they pressed forward with a common way of framing nuclear issues in Vienna and New York. While this never produced a single joint non-proliferation policy between the two countries, it certainly did produce a veneer of commonality that had been lacking before. As the 1980s progressed, the two sides' diplomatic stances resembled each other more and more. This was critical in suspending disbelief abroad that Argentina and Brazil were not engaged in a nuclear arms race that could spiral out of control. If the basis for



nuclear competition could be seen to be fading, then global concern over proliferation in South America could begin to recede. This in turn served to accelerate and institutionalise bilateral nuclear cooperation and, at least to a degree, it transferred nuclear expertise from military to civilian control.

What about the scientists? In January 1977 the governments of Argentina and Brazil had issued a joint communiqué stressing the need for bilateral cooperation in the nuclear field and systematic exchanges of nuclear technology. The technical exchanges were central to the nuclear rapprochement, as the respective nuclear energy commission officials built up personal relationships with their counterparts from the other country. The scientific communities in both countries worried that the US and Western Europe would continue to deny technology transfers, and both saw closer Argentine-Brazilian cooperation as a tool to transcend an ever more restrictive global regime. These fears were proven well-founded in 1977, when US President Jimmy Carter convinced West Germany to deny uranium reprocessing and enrichment technologies to Brazil. These developments spurred Argentine-Brazilian nuclear cooperation as Argentina, too, was involved in a heated dispute with the US over the right to buy a third power reactor and heavy water production facility without accepting full-scope safeguards.

The feebleness of any security dilemma dynamic between Brazil and Argentina in the nuclear field seems to have been abetted by a transnational networks of scientists – an epistemic community of sorts which arose between the nuclear sectors of Brazil and Argentina, consisting of the interpersonal relationships between experts met in the course of technical training in the Europe or the United States, reinforced as they travelled the world to international conferences and other professional activities. For all of the mistrust between both sides' military and diplomatic corps, their nuclear scientific communities worked to dilute concern about each other's nuclear intentions. Trained together in Europe and the United States, regular contact was common in academic and professional settings. Anecdotal evidence suggests that a significant flow of information was maintained at a practical, unofficial level, and that scientists from neither country ever seriously considered that the other side might want to move toward weaponisation. Even when high-ranking officials in Brazil contemplated the possibility that Argentina might one day develop an explosive, they were not overcome by any sense of urgency or fear, according to historical documents.

The return to civilian rule in both countries in the 1980s was important in facilitating the nuclear rapprochement. Argentina hoped to end the diplomatic and economic isolation it endured in the wake of the Falklands War and in the process distance itself from the legacy of the previous military regime, while Brazil saw increased cooperation with Argentina as a chance to expand its economic influence in the region and to lessen its dependency on the U.S. Both Alfonsín and Sarney were eager to consolidate civilian rule and to end their relative isolation in international affairs. For Argentina this isolation resulted from the Falklands, the atrocities that the military regime had perpetrated against its own people, and financial collapse; while in Brazil public opinion pressurised the governing elites to liberalise the political system and to send the military back to the barracks. The domestic power-political reasons behind bilateral engagement were distinct yet complementary.

Presidential diplomacy was also critical to the process of rapprochement. In July 1987 the Presidential declarations began. At the invitation of President Alfonsín of Argentina, President Sarney of Brazil visited the Pilcaniyeu nuclear facility near Bariloche. Before then, Argentina had never made that facility accessible to the public, which rendered the nature of the visit even more historic. The Viedma Joint Statement on Nuclear Policy they signed on that occasion signalled a joint commitment to end the secrecy surrounding the countries' nuclear programmes and to deepen bilateral cooperation in the nuclear field. In April 1988 Sarney reciprocally invited Alfonsín to visit Brazil's hitherto secret nuclear installation in São Paulo, after which the Ipero Joint Statement on Nuclear Policy was issued announcing the decision to set up a permanent commission on nuclear cooperation. Again, in November 1988, Sarney visited Argentina's Ezeiza facility near Buenos Aires, where Sarney and Alfonsín issued the Ezeiza Joint Statement on Nuclear Policy reaffirming their earlier statements.

These Presidential statements served to restore civilian control over the two national nuclear programs and signal this decision to the international community. They set goals and timetables. It is important to highlight that both Alfonsín and Sarney took unilateral steps to bring about a nuclear rapprochement, as witness Argentina's announcement of its success in uranium enrichment in 1983 and its briefing of Brazilian authorities before the announcement was made public. Brazil reciprocated with its 1987 announcement of its capability of enriching uranium.

The civilian leadership also conceived of nuclear rapprochement as a way to cut costs. Facing a collapsing economy, hyper-inflation, and a hostile global financial environment, both

Alfonsín and Sarney were particularly sensitive to public expenditure on nuclear development. Given a political inability and indeed unwillingness to simply shut the programmes down, the leaders sought to frame them in ways that could lessen international pressures and sanctions. (In the early 1980s the U.S. Congress in particular seriously debated proposals to sanction both countries.) This was far from easy, insofar as the respective finance ministries of and certain corporate interests in both Argentina and Brazil had come to view the continuation of their nuclear programmes as a hindrance to domestic economic growth, in that it discouraged foreign investment.

The connexion between their domestic nuclear programmes and these countries' ability to cope in an ever more globalised financial system became even more of an issue in the late 1980s, when Carlos Menem of Argentina and Fernando Collor of Brazil won the vote on a promise of reining-in inflation. Both Menem and Collor were willing and able to limit the role of the military in nuclear decision-making, and both were more committed to financial liberalisation. Menem went so far as thinking through the privatisation of a big chunk of the Argentine nuclear programme, while Collor created incentives for the private sector to absorb at least a part of Brazil's nuclear industrial operations (Solingen, 1994).

None of the above is to say that the Argentine-Brazilian nuclear relationship evolved into a trusting one very easily. Plenty of evidence points to suspicions, misperception, mutual recrimination, and a recurring frustration at the lack of progress in bilateral nuclear cooperation. But nobody on either side ever seemed to have feared that the other side might achieve nuclear latency or weaponisation, in any way that would have created powerful incentives for rivalry.

#### *Geopolitics and the non-proliferation regime*

Joint Argentine-Brazilian opposition to the non-proliferation regime was to become a source of stability and confidence-building. Over time, the regime's evolution at the global level contributed to facilitate Argentine-Brazilian cooperation in the nuclear field. Consider the following.

Both nations resented the creation of the Nuclear Suppliers Group, first organised in secret by Henry Kissinger in London in 1974 and made public in 1977. The Group proceeded to restrict nuclear exports by nuclear states to non-nuclear ones. By the late 1970s both Brazil and Argentina were energetically trying to secure a seat for themselves in the Group or, alternatively, to weaken its ability to "lay down the law" to them. In the process, they were

obliged to exchange information and construct common positions on the core exports issues – a process that socialised to each other the diplomats, military men, scientists and politicians of both sides. Bilateral nuclear cooperation was to a large extent conceived-of as a strategy to avoid external pressures from US non-proliferation policy and from the non-proliferation regime itself.

The result of this process was that an incipient policy of mutual transparency arose between the two countries. For instance, when constructing its gaseous diffusion enrichment facility in 1983, Argentina notified Brazil before any public announcement was made; likewise, regarding its gas centrifuge facility Brazil reciprocated the courtesy in 1987 with a personal letter from President Sarney to President Alfonsín. The visit of President Sarney to the Argentine facility in July 1987 was an important moment in the nuclear confidence-building process between the two countries as it moved them closer to bilateral nuclear transparency. The gesture also served to affirm Presidential control of both nuclear programmes, over the objections of various military officials (for an interpretation, see Redick, p. 43)

Bilateral communication did, however, break down over the Brazilian military's "parallel programme" and its nuclear test facility at Cachimbo, which came to light in late 1986 and early 1987, but which was still being denied by the Brazilian government up until 1990. Even though it was never officially informed of the facility, Argentina had known of its existence. The Argentine authorities "chose not to allow it to derail nuclear rapprochement ... a testimony to [Argentina's] commitment to the process" (Redick, p. 23). The interesting question is, Why did they act thus?

Documents about Brazil's programme are scarce. The extant archival evidence together with the interviews we conducted suggest that the project sought to achieve low-level enrichment capability. Any talk of highly enriched uranium references a distant, indeterminate future. The "autonomous" or "parallel" programme, as it was soon dubbed in local parlance, was narrow in scope. Eschewing any ambition to develop a nuclear industrial complex, it ventured small-scale research facilities for enrichment technology, some of which were to remain secret. The system was largely decentralised, with the Army, Navy and Air Force each having their own laboratories, personnel and budgets, not out of any grand strategic plan, but out of rivalry between the armed services over tight budgets. We now know that the Argentines were well aware of this.

Argentine awareness of the context of Brazil's nuclear policy was crucial: the Argentine

decision to move forward with bilateral cooperation required an attitude that was accepting of exceptions on the part of Brazil and of a possibly slower pace of rapprochement. Interviewees on the Argentine side repeat time and again that they were aware of how difficult it was for Brazil's more complex system of nuclear governance to move in tandem toward higher levels of bilateral cooperation. The Argentine policy was to exercise "strategic patience", a stance they could afford because fears of Brazil's future nuclear intentions were – contrary to what many people have thought at the time and since – minimal. This reinforced a dynamic whereby Argentina would be the one to push for higher levels of cooperation – and later on, transparency, – while accepting that Brazil might move grudgingly and more slowly.

This is a rather impressive revelation. After all, suspicions had been growing around the world throughout the 1980s that Brazil was hiding a nuclear weapons programme. But this had not been merely a function of the unsafeguarded parallel programme; Brazil's activities surrounding missile technology had also raised eyebrows in the international community. Starting in 1979, Brasília sought to design and build its own satellites, a rocket to deploy them to low earth orbit (VLS), and a launching site in the northern coastal town of Alcântara. Reports at the time suggested that Brazilian engineers were assisting Iraq in extending the range of and providing replacement parts for Scud-B ballistic missiles purchased from the Soviet Union, and that Brazil had transferred Astros-2 artillery rocket systems to Iraq during its war with Iran. There were also accounts of Libya-Brazil missile-technology cooperation. Brazil soon found itself on the receiving end of an embargo imposed by a newly created Missile Technology Control Regime (MTCR), which cut it off from foreign technologies. By 1992 the US Department of Commerce had listed two of Brazil's Sonda rockets, plus the VLS rocket and other ballistic missiles, as projects of concern. Argentina, which had its own Condor programme, seems not to have feared Brazil, but on the contrary to have found common cause with it, first to resist and then gradually to negotiate adherence to the MTCR – not jointly with Brazil, to be sure, but surely with an eye on Brazil's pace and goals.

What drove Brazil to partner up with Argentina in ways that would limit its own policy choices? Our research programme yielded no compelling evidence that Brazil was driven by "security dilemma sensitivity", a situation in which Brazilian officials exercised self-restraint in their own nuclear programme in the knowledge that their Argentine counterparts would respond in kind. The longstanding pattern had been that the one country's acquisition of nuclear technology would push the other to make technological advances of its own, and so

forth. We found instead that Brazilian leaders did not think Argentine progress in nuclear technology was threatening or worrying enough to merit a targeted response.

Confronted with the Brazilian decision to set up an unsafeguarded programme, Argentine officials in the early 1980s sought to negotiate with Brasília a joint communiqué renouncing PNEs. (Brazil was to turn down Argentine overtures for the next ten years.) At that point Argentina underwent a rapid decline, plunging into a steep economic crisis; threatening war with neighbouring Chile; and in 1982 launching and losing a conventional war with the United Kingdom. A year later the Argentine military dictatorship collapsed, and their civilian successors were adamant about de-militarising foreign policy and rebuilding regional relationships. By 1984 Argentine military academies were no longer teaching that Brazil was the most likely enemy in a regional war scenario.

Our second finding is that this period also saw a slow but marked shift in Brazil's own regional strategies. Whereas no Brazilian Head of State had ever set foot in Colombia, Peru or Venezuela before 1982, after that date Brasília began to expand its regional ties and relationships. Key to this process was the emerging diplomatic entente with Argentina, under which successive Brazilian administrations slowly but surely agreed to become embedded in a set of nuclear governance agreements with Argentina: first establishing regular nuclear consultations, then setting up a protocol for mutual inspections.

Brazil began to adopt the view that a common front with Argentina would actually work as a shield against the ever more intrusive global non-proliferation regime. Opening up to Argentina, albeit marginally, was not about bringing Brazil's nuclear programme under tight, internationally monitored controls, but rather about resisting international pressures to join the non-proliferation club.

#### **HOW SUSTAINABLE IS NUCLEAR RAPPROCHEMENT, LOOKING INTO THE FUTURE?**

Soon after signing the NPT in 1998, Brazil quietly revived plans to enrich uranium industrially and reignited discussions about nuclear propulsion for submarines. The government resumed construction of the Angra II power plant that went into operation in 2002. Talk of a revived nuclear programme never took off, however, as the country was plunged into a cycle of financial instability and low economic growth. The nuclear issue only resurfaced during the 2002 presidential campaign. At a rally in 2002 then-candidate Luiz Inácio Lula da Silva, President from 2003 to 2011 offered a scathing critique of the NPT –

and his predecessor's decision to sign on to it – before a military audience.

Once in office, Lula revamped the nuclear programme. His administration moved ahead with the construction of an industrial enrichment centre in Resende that became operational in 2004. This facility fell under international inspections, but Lula invoked the proviso that inspectors be denied visual access to the centrifuges so long as industrial espionage remains a threat. The Lula administration also moved ahead with plans to build a nuclear-propulsion submarine.

A series of statements by high-ranking Brazilian officials caught worldwide attention. In 2004 the Minister of Science and Technology publicly declared that Brazil should acquire the knowhow to build nuclear artefacts. He was removed from his post as a result and the government had to issue a statement denying that the Minister was speaking on its behalf. In 2006 Brazil's Deputy Foreign Minister gave a speech questioning whether Brazil would in the future want to remain a party to the NPT. Vice President José Alencar stated, "A nuclear weapon that is a deterrent is of great value for a country that owns 15 thousand square kilometers of borders to its west, and an ocean of deep-sea oil of about four million square kilometers". The Office of the Presidency quickly denied that this was official policy, but Alencar made similar remarks soon afterwards without being disciplined.

During the early Lula years Brazil publicly resisted the notion that Additional Protocols to the safeguard agreements should grant inspectors expanded rights to access nuclear facilities. The argument was such instruments are not only too intrusive on countries like Brazil, but that they benefit nuclear-armed states to the detriment of non-nuclear-armed states. This led to hardnosed negotiations with the IAEA, which remained critical of Brazil's policy of visual denial.

The 2008 National Defence Strategy of Brazil states that Brazil will make no additional non-proliferation commitments until nuclear-armed states take effective steps to disarm. That same year Brazil and Argentina agreed to establish a Binational Nuclear Energy Committee to enrich uranium, produce radiological medical supplies, develop applications for agriculture, and design and build research reactors.

Throughout the 2000s Brazil engaged in more nuclear diplomacy than it ever had before. Since 1998 it has joined the New Agenda Coalition, a group of NPT signatories calling for global nuclear disarmament in line with the NPT. In addition, Brazil presided over the 2000

Conference on Disarmament, the 2005 NPT Review Conference, and the 2007 International Panel on Fissile Materials.

In 2010 Brazil and Turkey attempted to broker an agreement with Iran. They acted on the assumption that the tightening sanctions against Iran would further alienate the Islamic Republic, polarize international public discourse, and raise global tensions. The initiative brought US-Brazil relations to a new low (an episode that has been studied elsewhere). What is important to highlight is that the current evolution of the non-proliferation regime vis-à-vis Iran has reawakened Brazil's critical stance.

From Brasília's perspective, to sanction Iran – an NPT member – and to disallow it to develop uranium-enrichment technologies under IAEA supervision creates an unacceptable precedent. After all, in Brazilian eyes Iran is nowhere near the ability to produce a nuclear artefact and its leaders know that any move in that direction may be fatal to their regime. Iran may well have cheated on its treaty commitments in the past, and does owe greater clarification of its own nuclear goals, but the application of tighter sanctions, international discussions of the use of force, and the emphasis on regime change is hardly the best recipe for a solution.

Brasília worries instead that US non-proliferation policies are themselves a destabilising factor in the non-proliferation regime by rewarding a non-NPT member like India with a bilateral agreement; turning a blind eye to nuclear Israel; and moving painfully slowly – if at all – toward disarmament. In the Brazilian view, there is a real risk that the United States will only adhere to the non-proliferation norms as long as they continue to grant it multilaterally sanctioned tools to punish a country that the US unilaterally has decided to include in its “axis of evil”.

Brazil's apparent nuclear renaissance in the 2000s had a direct impact on Argentina. Buenos Aires became concerned that Brazil's nuclear intentions may be in a state of flux, and that existing commitments and linkages may have to be readapted. Argentina in the 2000s was keen on finding niches where cooperation with Brazil might be possible, as seen in the string of new agreements initiated by Buenos Aires in 2008, 2010 and 2011.

At first sight, then, Argentina in the 2000s set out to revive its 1980s strategy: to increase levels of institutionalised bilateral nuclear cooperation with Brazil, emphasising the potential



for joint technological development and joint participation in the global nuclear market. As WikiLeaks documents have shown, the Argentine government is concerned that Brazil will abandon it in the future. In the “unlikely event” that Brazil “backed out of the Brazilian-Argentine Agency for Accounting and Controls of Nuclear Materials (ABACC) or, worse, developed a nuclear weapons capacity [...] Argentina would choose a course of developing and deploying an advanced peaceful nuclear technology to demonstrate capacity, without actually going the way of nuclear weapons. [Government officials] mentioned a nuclear-powered icebreaker as such a demonstration project.” (WikiLeaks, 2009).

And yet, it would be a mistake to assume that Brazil’s recent nuclear activities have triggered a set of security dilemma dynamics. First of all, investment in the Brazilian nuclear industry has been uneven, with severe cuts and budgetary constraints limiting the scope of nuclear policies from 2012 onwards. The current downwards trajectory of the Brazilian economy and public-sector expenditures points towards little policy space for nuclear initiatives. In fact, the Angra III power plant has been postponed, and at this junction there are serious doubts as to the financial viability of the nuclear submarine project. Second, the Argentine-Brazilian nuclear relationship in the 2000s takes place in a context of deep cooperative ties among nuclear-sector personnel, inspectors, military personnel, and the diplomatic corps. The ties that bind, at least for now, seem to be resilient enough to prevent any mutual mistrust from spiralling into the competitive dynamics that characterize a security dilemma.

The administration of Brazilian President Dilma Rousseff (2011-present) seems to be aware of Argentine concerns, for she and her Foreign Minister have been speaking the language of reassurance. Her first presidential trip to Buenos Aires in January 2011 produced a set of agreements in the field of joint nuclear technological development. Bilateral nuclear cooperation is thus firmly rooted enough to remain a very significant constraint on the national nuclear policies of both Brazil and Argentina.

A further issue is the Additional Protocol to the NPT. This has been divisive within Argentina. Some argue that signing it would build new levels of international confidence, which would not only incentivise Brazil to follow suit but provide space for a revamping of its nuclear programme. Those who disagree point out that it would render ABACC redundant and useless, effectively shutting down the one channel it currently has to “peep into” the Brazilian nuclear programme. From a legal standpoint, Argentina would have to withdraw from the Quadripartite Agreement it signed with Brazil, ABACC and the Atomic Agency in Vienna before proceeding to sign the AP.

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For its own part, Brazil is firmly committed to the peaceful uses of nuclear energy, as mandated by its 1988 Constitution, and to a range of international agreements to which it is party. To a significant degree Brazil has moved toward the liberal international compact. But firm commitments to economic stability and democracy at home – and a willingness to put in place comprehensive safeguards under an umbrella of international agreements – do not exclude a self-identity based on the image of a non-status quo power committed also to challenging existing norms and institutions.

While there are no indications or reasons to believe that Brazil will retreat from its NPT commitments, its predominant stance is one of caution in face of the global non-proliferation regime's growing obtrusiveness into its domestic pursuits. From the standpoint of the policy community in Brasília, picking and choosing from the basket of rules on offer has paid off in the past and there is no indication that this approach will change in the near future.

Thus far, their shared rejection of the Additional Protocol to the NPT has drawn Brazil and Argentina closer together. Indeed, it may be the case that their joint resistance to the Protocol has further reinforced their commitment to a common nuclear policy. They consider their resistance has paid off up to this point, as with the formal agreement of the Nuclear Suppliers Group in 2011 that, for the purpose of the transfer of enrichment and reprocessing technologies, the Quadripartite Agreement between Argentina, Brazil, ABACC, and the IAEA is to be seen as a provisional alternative to the Additional Protocol.

But if history provides any guide, for all the deep roots that bilateral nuclear cooperation has laid in the past three decades, the structures currently in place have worked merely to manage the currents of mutual suspicion and mistrust; they have not to date transformed the nature of the relationship into one where the possibility of a nuclear-technology competition is off the map. It is no wonder, then, that experts in the nuclear sectors of both countries insist on the enduring importance of a system of mutual safeguards and inspection schemes as we move into the future.

What the newly released materials and the latest oral histories reveal is that there were moments in history when it was plausible to imagine less cooperative trajectories for the bilateral nuclear relationship. A great deal of the cooperation that eventuated has depended on key personalities and their skill at instrumentalising nuclear rapprochement with the other side so as to fight their political battles at home. And much of the mutual cooperative

effort was also a structural function of the shared perception of frailty in the face of an ever more intrusive global non-proliferation regime that is dominated by the major nuclear powers. It is the management of these factors by the future leaders of both countries that will shape the contours of the bilateral nuclear relationship to come.

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