

Defining Brazilian Nuclear *Intermestic* Policy: The role of the Military

Letícia Tostes Freitas de Oliveira Afonso Ortega¹

Foreword

Since its inception, the Armed Forces have widely participated in the definition of Brazil's nuclear policy, particularly the Brazilian Navy. Brazilian nuclear policy had its foundations laid before the Brazilian military dictatorship regime and widely developed during the military governments. Such affirmations arise from one of the many aspects that emerged in my master's dissertation research, developed at the Strategic Studies Institute at *Universidade Federal Fluminense*.

In this paper, I address the military participation in defining Brazilian nuclear policy, identifying the crucial traits established in the 1940s, the undergone changes and ruptures, and possible permanent features. I focus on the years before re-democratization because I recognize that the first 40-ish years of Brazilian atomic research were crucial for establishing nuclear policy's most significant traits. Nevertheless, I will also analyse which were the lasting characteristics of Brazilian foreign policy until 2010.

I argue that nuclear policy is inherently intermestic due to its implications at both the national and international levels. I believe there is an undeniable realist component in how the Military perceived the need to pursue nuclear technological development in Brazil. A realist-constructivist approach can be helpful by using the constructivist methodology for the historical narrative. I argue that the historical account is an indispensable tool to understand how the Military participated in defining Brazil's nuclear policy.

Theoretical framework and methodology

Realism is an essential component in any coherent international politics analysis because it focuses on power, interests, and rationality, crucial to understanding the global system (Keohane, 1983). Power politics is the core concept underlying realism. In its axioms, structural realism establishes the international system's inheritably anarchical trait and that an imperative of self-help compels States, from which they must care for their security and well-being. Realism suggests that the principle of self-help will be more stimulating in a situation of security conflict, where relations between States are

¹ MA, Universidade Federal Fluminense. PhD Candidate, University of Bern.

happening with high levels of risk. Even though anarchy does not nullify cooperation possibilities, any cooperation that shall emerge under such circumstances will be unstable, tenuous, and limited to peripheral matters.

Considering that the international system is anarchical by nature, power generates collective action problems, which in certain circumstances could exacerbate the global order's conflictive character (Alsina Jr, 2009). Nevertheless, the international relations' conflict level happens not only because of a material dimension of power but also because of its ideological dimension (Alsina Jr, 2009). Nye's classification of power differs between *soft power* and *hard power* and distinguishes the persuasive nature of influence (Nye, 2004). Nye (2004) also explains that soft power and hard power are not mutually excluding, but a juxtaposition of both builds its authentic and bold characteristics.

Waltz (1959) intended to develop a more rigorous approach to international politics: for him, realists have been unable to conceive a theory that distinguished the domain of International Relations from other social sciences fields. For Waltz (1959), Morgenthau has limited himself to the study of States' foreign policy, while Aron has exposed a series of obstacles for the analysis of International Relations; both would have failed at the attempt of presenting a general theory of international politics that allowed to explain and decode precise particulars of the field. According to Waltz (1959), the distinguishing feature of international politics regarding other social sciences is its birth from a system build by sovereign unities that interact and an anarchical structure. Therefore, Waltz's system wishes to analyse not only States' behaviour but how they organize themselves in such an anarchical arrangement. As such, Waltz's theory (1959) offers a "third image" when he binds States' behaviour to International Relations' structure and shows how the anarchical arrangement affects and restrains their behaviour.

Realism explains why some sovereign states have nuclear weapons, whereas others try to cooperate to contain and non-proliferate those weapons. Waltz (1979) also introduces an optimistic conception of atomic weapons' use and ownership: he explains that some States possessing and obtaining nuclear weapons has contributed to international stability as they lower the chances of conflict between nuclear powers, unlike conventional war conditions, thanks to mutual deterrence.

During the Cold War, more specifically in the 1970s, we face *détente*, which imposed itself, at first, as a challenge to Realism. In a realistic approach, *détente* can be read simply as a time when the threat of atomic cataclysm has created a powerful encouragement for superpowers to cooperate and avoid nuclear war (Weber, 1990).

According to this methodology, from 1949, since USSR has owned atomic weapons, the international system would be better able to prevent a direct battle between superpowers (Waltz, 1979). Nonetheless, Weber (1990) explains that the threat of nuclear war is not a required circumstance for security cooperation to happen between superpowers.

In the same research model, the realist constructivist framework accommodates a foreign policy analysis based on states' positions and discourses and a theoretical inquiry on the evolution of human-centred concepts and norms. As Guzzini (2020) establishes, "[a]dding norms and ideas to power hardly changes realism, whether structural or classic." Explaining the military's role in defining Brazil's nuclear policy is simpler to do using the valuable set of methodologies provided by Constructivism for the historical narratives that neoclassical realists commonly prefer (Barkin, 2020).

"Explicitly adopting a constructivist methodology would deal with all three of the general critiques of neoclassical realism. It deals with the tension between method (specific techniques for collecting and analyzing information) and methodology (the logic by which these techniques fit together) by providing a methodology that fits the core empirical method that most neoclassical realists already use. Constructivist analysis aims to explain particular cases through detailed empirical analysis, much the same as historical narrative. It does make inferential claims that historical narrative is generally unable to support. It is also well placed to use specifically those types of theoretical models, such as schematic and garbage-can models, that neoclassical realists often generate. These models, while they cannot serve effectively as a basis for specific predictions, are useful in telling the analyst where to look in establishing causal relationships in specific cases. They can also be used prospectively as well as retrospectively – likely to be in current or future foreign policy situations. In other words, while they cannot be used for inferential prediction in the narrow neopositivist sense, they can be used effectively to support policy analysis, in concert with details of the social construction of the international politics relevant to that case (Barkin, 2020, p.63-64)."

The realist constructivist framework is relevant to avoid a utopian analysis, distancing it from a conception of an ideal international system. This approach allows the recognition of defence and security's many layers, defining traces for a given State's foreign policy.

"Constructivism and realism, then, are distinct but compatible approaches. There is a scope both for a realist constructivism and for a constructivist realism, but neither entirely displaces the unmodified approach. A realist constructivism is a constructivism in which a concern for power politics, understood as relational rather than structural, is central ... A constructivist realism is a realism that takes intersubjectivity and co-constitution seriously, that focuses on social structure as the locus of change in international politics (Barkin, 2010, p.169)."

As Wrobel (2000) points out, one cannot examine Brazilian nuclear policy outside its international context. The ambition to dominate thermonuclear technology was a reactive impulse to the changes that occurred in the global system after the Second World War.

Early steps

During the Cold War and, more specifically, until the end of the 1960s, Brazil remained the United States of America (USA) preferred ally almost uninterruptedly. In the 1940s, for example, in technological research and development fields, both countries signed several agreements, establishing monazitic sand exports to the USA. The Strategic Minerals Inspection Commission (*Comissão de Fiscalização de Minerais Estratégicos*) was created in 1947, and monazite exports continued until 1951. Thenceforth, an intense dispute started within Brazil between sectors interested in exporting raw radioactive material, which was only resolved after creating the National Research Council (CNPq) on 15 January 1951 through Law nº1.310. Subsequently, the CNPq had a monopoly over raw radioactive material. Getúlio Vargas appointed Admiral Álvaro Alberto to preside over the Council.

Naturally, CNPq's conception was due, in large part, to governmental concerns about atomic energy, perceived as a matter of national security. The creation of CNPq was the first step towards establishing a Brazilian nuclear policy. Any area of public policy needs fundamental requirements, such as institutional framework, qualified personnel, clear goals, and stability for its implementation and execution (Wrobel, 2000). In the same year, Admiral Álvaro Alberto proposed legislation protecting national thorium and uranium reserves against foreign exploitation, prohibiting the export or application of the principle of specific compensation, and suggesting the search for scientific collaboration with other countries.

When negotiating a new agreement with the United States in 1951, Admiral Álvaro Alberto and the North Americans reached an impasse, and neither side wanted to give in until Chancellor João Neves da Fontoura spoke with the CNPq president in exercise – Colonel Dubois Ferreira – and explained the importance of settling the agreement.

A fundamental turning point in nuclear history was the “Atoms for Peace” program, announced in 1953 by USA President Eisenhower. The program, which preceded the International Atomic Energy Agency (IAEA), was announced in a speech² addressed to the United Nations General Assembly's (UNGA) 470th plenary session. In his speech, motivated by the end of the atomic bomb monopoly, Eisenhower suggested

² Full speech available at <<https://www.iaea.org/about/history/atoms-for-peace-speech>>.

creating an agency responsible for the seizure, storage, and protection of fissile and sensitive materials. Furthermore, he indicated that the most significant responsibility of this agency would be creating methods to allocate fissile material to meet the peaceful pursuit of humanity's use of atomic energy.

Eisenhower's speech presented a reversal in the existing policy: until then, the USA, the Union of Soviet Socialist Republics (USSR), and the United Kingdom had already invested in nuclear knowledge for peaceful purposes, applying it in electrical nuclear installations (Wrobel, 2000). After Eisenhower's speech in 1953, the possibility to disseminate the technology for peaceful purposes to friendly countries, with the USA's full collaboration to this end, paved the way for emerging countries to research in the area. This opening in North American politics contributed to developing a consistent nuclear policy in many countries – including Brazil. However, the Brazilian government's coordinated action that could enable the domination and application of atomic knowledge and technology required massive public investments in science and technology (Wrobel, 2000).

On 21 February 1952, Decree nº 30.583 created the Commission for the Export of Strategic Materials (*Comissão de Exportação de Minerais Estratégicos – CEME*). Representatives from each of the Armed Forces, the Ministry of Finance, the Ministry of Agriculture, the CNPq, the General Staff of the Armed Forces (*Estado-Maior das Forças Armadas – EMFA*), and Brazil's Bank Foreign Trade Portfolio (*Carteira de Comércio Exterior do Banco do Brasil – CaCEX*) constituted the CEME, and they reported directly to the Ministry of Foreign Affairs. The deal signed with the United States on 15 March 1952 provided for the annual sale of tons of processed monazitic sand, with a three-year term of validity. CNPq's policy advocated specific compensation for Brazil, but this agreement did not contemplate that policy.

Due to difficulties complying with the national policy, Admiral Álvaro Alberto asked the Brazilian government to authorize starting negotiations with other countries and travelled to Europe at the end of 1953 on a CNPq mission. France and Germany were among the countries he visited, with the purpose also to broaden the network. Admiral Alberto had studied physics in Germany before the Second World War, so he used his old connections to order the construction of three uranium enrichment centrifuge sets. From then on, his mission became a secret one as its actions began to ignore some decision-making bodies like the National Security Council, the Mineral Production Department, and the EMFA. Admiral Álvaro Alberto would depend on secret diplomacy

to complete his task. The Brazilian Embassy in Bonn recommended waiting until the establishment of West Germany's full sovereignty; afterward, it would be possible to import the centrifuges. CNPq formally accepted this recommendation, but Álvaro Alberto asked President Getúlio Vargas for a special authorization so that the Ministry of Foreign Affairs would support the machines' secret shipment.

Admiral Álvaro Alberto's mission collapsed in several respects. One of the failed episodes was related to contracting the secret construction of three structures for an ultracentrifugation installation (aiming at the uranium hexafluoride isotopic separation) for US\$ 80.000,00 paid directly by the Brazilian Government to the University of Bonn's Institute of Physics and Chemistry (Carvalho et al, 1987). In 1954, on the day before shipping the equipment to Brazil, the North Americans vetoed the operation and seized the centrifuges, supported by the British occupation troops' intervention. This embargo was only lifted in 1956, as Eisenhower abandoned the traditional North American atomic policy. In France, Admiral Álvaro Alberto's mission failed, among other reasons, for causes linked to the Café Filho administration's nuclear policy, which, in concession to the North Americans, modified CNPq's nationalist policy, previously inspired by the Admiral's ideas (Carvalho et al, 1987). Shortly before the failure of Admiral Álvaro Alberto's mission, Brazil and the USA signed the Third Atomic Agreement. This Atomic Agreement, signed in August 1954, established that Brazil was to supply 5.000 tons of monazitic sands and 5.000 tons of rare earth salts in exchange for 100.000 tons of wheat.

Genesis of a Brazilian nuclear policy

During President Juscelino Kubitschek's administration, the nationalist forces then dispersed managed to regroup, creating a Special Commission. This Commission's purpose was to establish the bases for a Nuclear Policy. The Commission produced some "Guidelines for the National Nuclear Energy Policy" proposing measures such as creating a National Nuclear Energy Commission and a financing fund for the sector (Carvalho et al, 1987). These guidelines called for government control over the marketing and export of nuclear class materials and the internal production of nuclear fuels, the national atomic industry support, the suspension of uranium and thorium minerals' exports, and the cancellation of the Joint Programme with the USA.

In August 1956, President Kubitschek created the Institute of Atomic Energy of the University of São Paulo (*Instituto de Energia Atômica – IEA*) to put the guidelines into practice, aiming to stimulate research and intensify human resources training

programs. The IEA followed the models established in the agreement signed between CNPq and USP on 11 January 1956, researching atomic energy on an installed research reactor from the Atoms for Peace program. On 10 October 1956, through Decree n° 40.110, President Kubitschek created the sector's normative and policy-making body, the National Nuclear Energy Commission (*Comissão Nacional de Energia Nuclear – CNEN*), directly subordinated to the Presidency. CNEN's creation extinguished CEME. The Decree established that CNEN oversaw proposing necessary measures towards guiding general atomic energy policy in all its phases and aspects and should execute the Nuclear Energy Policy approved by the President.

On 22 July 1960, the Federal Government created the Ministry of Mines and Energy through Law No. 3.782, placing CNEN under its jurisdiction. Decree No. 50.390 of 29 March 1961 established this new Ministry's operation. Considering the program outlined for Brazilian Nuclear Energy Policy, the Federal Government authorized CNEN, through Decree No. 50.753 of 9 July 1961, to use the income derived from the industrialization of nuclear matrices and the sale of by-products in:

- a) mineral prospecting and industrialization.
- b) administration, representation, and technical and scientific exchange expenses.
- c) installation of power reactors.
- d) training of technicians; and
- e) development of the activities of the National Nuclear Energy Commission.

Creating the Ministry of Mines and Energy also reflected the scandals with widespread national repercussions, which followed the Parliamentary Commission of Inquiry (*Comissão Parlamentar de Inquérito – CPI*). The CPI, installed by the Chamber of Deputies through the 10 December 1956 resolution, carried out investigations about atomic energy in Brazil. The CPI heard many deponents, including Admiral Álvaro Alberto (who eventually resigned from CNPq's presidency), physics professors, and military personnel (Carvalho et al, 1987). The investigation results' disclosure induced some politicians, civil servants, and businesspeople to look rather poorly in the eyes of public opinion.

Between 1957 and 1964, 1956's events strongly influenced the governmental orientation without altering established guidelines. In a message to Brazilian Congress in 1961, President Jânio Quadros mentioned importing electronuclear power plants as a possibility to meet the electricity demand. On 27 August 1962, Congress enacted Law No. 4.118, defining the Nuclear Energy National Policy, establishing a state monopoly

over radioactive minerals, and transforming CNEN into a federal autarchy. As such, CNEN's duties would be to control the export of these minerals and sign international agreements in the nuclear field.

During João Goulart's administration, a Triannual Plan was formulated, highlighting the need to build nuclear power plants in Brazil with the national industry's maximum participation, using Brazilian nuclear minerals, and achieving independence against nuclear fuels' external supply. The military dictatorship did not significantly alter this orientation.

At that time, the North/South polarity suffered densification. As such, it led to a double-sided articulated front: in the political sphere, based on the non-alignment with neither the USA nor the USSR; in the economic level, based on the Group of 77's creation, dedicated to improving access to development (Lafer, 1999). In a world with defined polarities between East/West and North/South, Global South's repudiation of the arms race and its option to promote a new and more fair international economic order stood out (Lafer, 1999). In the strategic-military plan, Global South countries condemned the arms race with an argument based on the insecurity and uncertainty that the "balance of terror" (Lafer, 1999) generated in the world. In the economic field, these arguments unfolded to indicate that international cooperation could receive the arms race resources, with particular attention to the development and the reduction of socioeconomic disparities on a global scale (Lafer, 1999). Thus, the Global South countries introduced the "dividends of peace" theme and expectations on the international agenda (Lafer, 1999).

Such a claim was recurrent. In 1960, Horácio Lafer, in his opening speech to the UNGA, proposed creating an international development fund with resources accumulated from the arms race (MRE, 1960). This theme had been taken up again in 1963 by Minister João Augusto de Araújo Castro, in the famous Three Ds speech³ – corresponding to Decolonization, Disarmament, and Development –, in which the Minister indicated the arms race as the main responsible for the lack of resources towards crucial economic development tasks (MRE, 1963). Throughout the following years, Brazilian pronouncements repeated this idea several times in disarmament forums and the UNGA.

The 1964 military coup and resulting dictatorship administrations had fundamental importance in the historical development of nuclear research in Brazil. In

³ Full speech available at <<https://www.funag.gov.br/chdd/index.php/ministros-de-estado-das-relacoes-exteriores/61-ministros-das-relacoes-exteriores/145-joao-augustp-de-araujo-castro>>.

1964, a multilateralization process began in Brazilian foreign policy, becoming its dominant vector (Vizentini, 2004). Yet, a setback in diplomacy characterized Castelo Branco's term (1964-1967): during his administration, Brazilian foreign policy returned to align with the USA within the hemispheric diplomacy logic. Thus, the first military government suppressed the nationalist tendencies arisen in previous civilian governments. There was an inflection in Brazilian foreign policy towards multilateralization and globalization with the Costa e Silva's Diplomacy of Prosperity, and the Diplomacy of National Interest, implemented in the Médici government, maintained the same multilateralization paradigm, despite apparent convergences with the USA (Vizentini, 2004).

In 1968, under the Costa e Silva administration, CNEN signed an agreement with Eletrobrás, through which Furnas (Eletrobrás subsidiary) was responsible for building a nuclear power plant in Angra dos Reis. In opposition to the old nationalist ideas to obtain national thermonuclear technology, was outlined the decision to purchase a North American enriched uranium reactor. Although several scientists disagreed, Institutional Act n° 5⁴ stifled all manifestations. President Costa e Silva assumed power with an explicit discourse on Brazil's stance regarding the nuclear issue. His administration agreed with the ban on nuclear weapons but reserved the country's right to manufacture its nuclear explosives for peaceful purposes (Andrade Melo, 2009).

At that time, nuclear disarmament was intensively discussed and was dealt with by a commission in Geneva; meanwhile, Ambassador Ovídio de Andrade Melo assumed Itamaraty's United Nations Division leadership. In this commission, the five nuclear powers dictated the rules and wanted, at any cost, to disarm the countries that had not yet developed this type of technology, preventing any possibility of scientific and technological progress (Andrade Melo, 2009). As an ambassador and civilian, Andrade Melo believed he could not fail to account for the military mentality and the relationship of this segment with atomic armaments – after all, they were governing Brazil. Andrade

⁴ Institutional Act No. 5, commonly known as AI-5, was a decree issued by the Military Dictatorship on 13 December 1968. AI-5 is the milestone that inaugurated the dictatorship's darkest period, concluding a transition that established a dictatorial period in Brazil. AI-5 resulted from a process that gradually implemented authoritarianism in Brazil between 1964 and 1968, and it summed up an undertaking that aimed to govern Brazil in an authoritarian way in the long run. This institutional act was presented to the Brazilian population on a national radio channel, read by the Minister of Justice, Luís Antônio da Gama e Silva. It had twelve articles and brought radical changes to Brazil. This decree prohibited the guarantee of habeas corpus in cases of political crimes. It also decreed the closure of the National Congress for the first time since 1937 and authorized the president to install a siege state for an indefinite time, dismiss people from the public service, revoke mandates, confiscate private property, and intervene in all federative states and municipalities. AI-5 consolidated censorship of the media and torture as a practice of government agents as habitual actions within the Military Dictatorship.

Melo's narrative leads one to believe that the nuclear powers sought an absurd: the monopoly at the expense of civilization's progress.

"The treaty drafted in Geneva did not consider anything about peaceful purposes' nuclear explosions. It did not contemplate the possibility that countries might want to manufacture their nuclear explosives for exclusively peaceful purposes. Could we accept this restriction on our development, on our sovereignty? Not in my view. Particularly an enormous country like Brazil would need nuclear engineering in the future. [...]"

The Geneva treaty, as well, did not seem to me to solely have the purpose to 'disarm the world' as it proclaimed. It had another hidden end, more important for the countries that already had the atomic bomb: it aimed to preserve and, if possible, to eternalize the monopoly of manufacturing any nuclear, warlike, or peaceful explosives for the already existing and recognized five powers. If that claim were to succeed, all disarmed countries would have to settle for limiting, or even abandoning, research on atomic energy. And the impression I had of the Geneva negotiations, according to telegrams and reports that I subsequently received at my desk, was that the nuclear powers, when they wanted to create such a monopoly for their benefit, were only dreaming of fanciful and historically unsustainable privileges (Andrade Melo, 2009, p.41)⁵."

The nuclear area represented the union between technological advancement and national security issues (Wrobel, 2000). Since the 1950s, when atomic technology became the face of progress, civilian and military elites mobilized in favour of this cause, which the Armed Forces considered a national security matter (Wrobel, 2000). Military influence on the nuclear subject was inevitable: the very nature of this issue led to Armed Forces' more active participation in decisions regarding the policies adopted (Wrobel, 2000).

Responsible and Ecumenical Pragmatism: nuclear development in Geisel & Figueiredo administrations

In the 1970s, the Cold War's relative easing allowed a certain rapprochement between the Western and Soviet blocs, even though it did not characterize an understanding between them. After the 1962's Cuban missile crisis and the 1964's Chinese nuclear bomb explosion, it seemed inevitable to mitigate the confrontation –

⁵ Originally in Portuguese: "*O tratado que estava sendo elaborado em Genebra não levava em conta nada a respeito de finalidades pacíficas para as explosões nucleares. Não contemplava a possibilidade de que países pudessem querer fabricar seus próprios explosivos nucleares para fins exclusivamente pacíficos. Podíamos aceitar essa restrição ao nosso desenvolvimento, à nossa soberania? A meu ver, não. Principalmente um país enorme como o Brasil, precisaria no futuro de engenharia nuclear. [...] O tratado elaborado em Genebra também não me parecia ter somente a finalidade que proclamava de 'desarmar o mundo'. Tinha outra finalidade oculta, mais importante para os países já possuidores da bomba atômica: visava a preservar e, se possível, eternizar o monopólio da fabricação de quaisquer explosivos nucleares, bélicos ou pacíficos, para as cinco potências já existentes e reconhecidas como tal. Se essa pretensão prosperasse, todos os países desarmados teriam de conformar-se em limitar, ou mesmo abandonar, pesquisas sobre energia atômica. E a impressão que eu tinha das negociações de Genebra, segundo telegramas e relatórios que seguidamente recebia na minha mesa de trabalho, era que as potências nucleares, ao pretenderem criar em proveito próprio tal monopólio, estavam apenas sonhando com privilégios fantasiosos e historicamente insustentáveis (Andrade Melo, 2009, p.41).*"

otherwise, the consequences could be catastrophic. Although he does not understand the nuclear conflict threat as a necessary condition for cooperation, Weber (1990) addressed Cold War's softening by interpreting the détente as a time of superpowers' collaboration, which prevented nuclear war. Cold War's bending influenced Brazilian foreign policy's shift. After a decade of "discretionary power undue exercise" (Souto Maior, 1996, p.343), a military weariness vis-à-vis civil society reinforced awareness. Public opinion's optimism towards Brazil's international potential also collaborated towards adopting a national affirmation's foreign policy (Souto Maior, 1996).

Since the 1964 military coup, General Ernesto Geisel's administration (1974-1979) represented a clear turning point in Brazil's international politics' axis. Defined early, Geisel's foreign policy guidelines resulted from his new vision towards Brazil's position globally, which contrasted sharply with previous military governments' orientations (Souto Maior, 1996). In Geisel's first message to Congress, the international relations' section starts as follows:

"Brazil's foreign policy, coherent with the country's traditions and animated by the spirit that presides over the Revolution⁶'s government's internal achievements, is guided by magnum national Development and Security goals (Geisel apud Fonseca Jr, 1996, p.299).⁷"

The new diplomatic action course prioritized national interests, defined autonomously. Although still declaring its identification with Western values, Brazilian foreign policy rejected the "automatic and a priori" West alignment (Souto Maior, 1996). Geisel's responsible pragmatism continues and rescues the Independent Foreign Policy⁸ implemented by San Tiago Dantas (Seixas Corrêa, 1981; Fonseca Jr, 1996), as both valued the internationalization of Brazilian diplomatic behaviour.

The notion of responsible pragmatism allows drawing a departure from the previous diplomatic doctrine, making an implicit criticism of the ideology guiding its formulation (Fonseca Jr, 1996). Under Geisel, Brazil could practice greater independence in its foreign policy due to its more diversified international connections (Fonseca Jr, 1996). Geisel's diplomacy

⁶ Due to the censorship, it was common to refer to the military dictatorship as "the revolution." Particularly the military and civilian supporters of the dictatorship used this definition.

⁷ Originally in Portuguese: "*A política externa do Brasil, coerente com as tradições do país e animada pelo espírito que preside as realizações, no plano interno, dos governos da Revolução, guia-se pelos magnos objetivos nacionais do Desenvolvimento e da Segurança (Geisel apud Fonseca Jr, 1996, p.299).*"

⁸ Bueno (2000) explains that the Independent Foreign Policy corresponded to the presidential effort to impose an independent attitude on Brazil's international behaviour towards the blocs of power, free from ideological prejudices. It focused solely on national interests' defence in favour of economic and social development, emphasizing Brazil's participation in international decisions, honouring the principles of non-intervention and self-determination, and the proper relationship with the American nations.

“freed the country from the alienation of ideological borders and United States’ automatic alignment’s policies to which the previous military governments had unfortunately subjected it, by establishing an independent foreign policy, pragmatically at national concerns’ service (Jaguaribe apud Souto Maior, 1996, p.337)⁹”.

Geisel’s strategic political vision was clear¹⁰: his administration perceived Brazil’s enormous potential. Even under development and with its complete economic growth realization conditioned by the international context, Brazil already had an economy of considerable dimensions and an explicit capacity for external action, mainly at the regional level (Souto Maior, 1996). Brazilian diplomacy had a prominent role towards achieving the main national objective: the country’s economic and social development, perceived as national security’s foundation (Souto Maior, 1996). Geisel’s foreign policy had a didactic meaning, expressed by the Minister of Foreign Affairs on 27 April 1974, at an Escola Superior de Guerra’s conference:

“Any foreign policy – conceptualized here in its operational sense as a set of directives for diplomatic action - has a necessarily limited validity over time, much more limited than national interests whose purpose is the defence. [...] in a world in constant change, there are no permanent coincidences or perennial divergences [...]. Under such conditions, there can be no automatic alignments because situations, and not countries, are the object of diplomatic action (Azeredo da Silveira, 1974)¹¹.”

Influenced by external and internal political factors, Geisel’s foreign policy does not result from a debate, as this would be inconsistent with the regime’s non-democratic character. Geisel’s Responsible and Ecumenical Pragmatism affirmed Brazilian foreign policy’s multilateralization and globalization (Vizentini, 2004). This foreign policy vector’s continuity was explicit in João Figueiredo’s administration (1979-1985) and has also remained in José Sarney’s years (1985-1990), albeit in an adverse context (Vizentini, 2004).

During General Geisel’s administration, Brazil denounced the 1952 Military Agreement with the USA, definitively breaking the bonds that prevented its nuclear capabilities’ complete development. There were many commercial and political conflicts

⁹ Originally in Portuguese: “*livrou o país da alienação da política de fronteiras ideológicas e de alinhamento automático com os Estados Unidos a que o tinham lamentavelmente submetido os anteriores governos militares, instaurando uma política externa independente, pragmaticamente a serviço dos interesses nacionais (Jaguaribe apud Souto Maior, 1996, p.337).*”

¹⁰ Azeredo da Silveira’s inauguration speech as Minister of Foreign Affairs made Geisel administration’s stance clear. His full speech is available at: <<http://www.funag.gov.br/chdd/index.php/ministros-de-estado-das-relacoes-exteriores/61-ministros-das-relacoes-exteriores/153-antonio-francisco-azeredo-da-silveira>>.

¹¹ Originally in Portuguese: “*Qualquer política externa – conceituada aqui no seu sentido operacional de conjunto de diretrizes de ação diplomática – tem uma validade necessariamente limitada no tempo, muito mais limitada do que a dos interesses nacionais cuja defesa constitui o seu objetivo. [...] num mundo em constante mutação, não há coincidências permanentes nem divergências perenes [...]. Nestas condições, não pode haver alinhamentos automáticos, porque o objeto da ação diplomática não são países, mas situações (Azeredo da Silveira, 1974).*”

between the two countries, mainly in military and technology acquisitions. Due to their ties, the USA's foreign policy strategies restricted Brazil's importation and technology transfer until 1974 (Andrade, 2010). After this rupture, relationships became problematic (Vizentini, 2004).

In 1977, the USA's demands to eradicate torture practices and other violations as a condition to renew the military aid agreement generated a harsh response. Alleging interference in internal affairs, Geisel denounced the Military Agreement. Although the Military Agreement had little use to Brazil, its denunciation had a symbolic value: it generated an increase in anti-Americanism in the barracks, affirmed Brazilian political cohesion, and asserted the understanding that Brazil's security policy was free from the North Americans' control (Lessa, 1998).

Brazil-USA's relationship shuddered: while the USA's sought to curb uranium enrichment and reprocessing technologies, guaranteeing the monopoly for the countries that already had them, the understandings between Brazil and West Germany regarding an agreement that would cover the transfer of such technologies contradicted the USA's policy, bringing to the agenda an old divergence, linked to the 1968 Brazilian refusal to sign the Non-Proliferation Treaty (NPT). The USA claimed that, together, the two processes (enrichment and reprocessing), if dominated, would grant the ability to assemble nuclear weapons.

In 1975, as Brazil and Germany surprised the world by announcing that they had signed the century's nuclear deal, granting cooperation and technology transfer, many national and international observers feared that Brazil was seeking atomic weapons' development (Barletta, 1998). The agreement's scale and ambition, which included transferring sensitive technologies that could produce offensive nuclear material, heightened the international community's concerns, and had a robust nationalist component (Reiss, 1995; Myers, 1985). Through technology transfer, Brazil could quickly overcome Argentina's advances in nuclear research, reinforcing its role as a regional leader. Brazilian-Argentine competition for nuclear primacy in Latin America and subsequent regional leadership fuelled international distrust (Reiss, 1995; Myers, 1985).

The nuclear agreement with Germany vetoed any military usage of cooperation's results (Martins Filho, 2011). The trilateral safeguards agreement signed between West Germany, Brazil, and the IAEA set stricter prohibitions than those established in the NPT, especially concerning materials' supply and information sharing (Lamm, 1984). The deal

imposed several conditions, including strict international inspections in Brazilian facilities. However, these inspections were not comprehensive, and the agreement did not prohibit Brazil from producing war material in facilities not provided for in it, nor did it force Brazil to renounce its interest in nuclear explosives (Fischer & Szasz, 1985). The agreement did not exclude the possibility of atomic weapons proliferation through nuclear export; according to the safeguards agreement, the safeguards system would not apply to all Brazilian peaceful nuclear activities (Lamm, 1984).

There was widespread international suspicion that Brazil was developing a secret nuclear program conducted by the military. Indeed, in 1979, Brazil started to develop the Autonomous Nuclear Technology Program (also known as Nuclear Parallel Program). Aiming to master the nuclear fuel cycle, Brazil would, ultimately, be able to manufacture an atomic bomb if so coveted.

Brazil had many reasons for wanting such an ambitious nuclear program, among which stands out the importance of technological autonomy for national security's affirmation: technology would boost development, which, in turn, would increase the country's security. Several aspects increased international distrust; for example, the Legislative Branch's lack of capacity to monitor atomic research's progress, Brazil's refusal to sign and accept NPT's safeguards, its determinations to conduct peaceful nuclear explosions, and its refusal to implement the Tlatelolco Treaty¹²'s clauses. Brazilian Navy's interest in uranium enrichment and developing a nuclear-powered submarine also fuelled the distrust. The Navy had an institutional interest in small nuclear reactors for propelling submarines, and one of its goals was to produce U-235 at 6-7%, used as fuel for submarine reactors (Wrobel, 1991). But the ability to enrich uranium would also allow Brazil to produce nuclear weapons (Reiss, 1995).

As the military regime's last and longest administration, Figueiredo's foreign policy opted to continue Responsible Pragmatism, although this option faced an increasingly unfavourable internal and external context (Vizentini, 2004). Chancellor Ramiro Saraiva Guerreiro preserved and deepened Brazilian diplomacy's presence worldwide, intensifying and materializing many of the Geisel administration's initiatives. Due to the growing difficulties in cooperating with developed countries, Brazilian foreign

¹² The 1967 Tlatelolco Treaty is a document of significant importance (Pitt, 1987, p.2). The contracting parties undertook to prohibit testing, manufacturing, or storing any nuclear weaponry or any device that would allow the launch of that type of weaponry, as well as direct or indirect acquisition. Although Tlatelolco, covering Latin American countries, was the first Treaty of its kind, Pitt (1987, p.2) explains that it was not only the developing countries that sought nuclear-weapon-free zones: the atomic club was and remains anxious to prevent horizontal nuclear proliferation to other powers.

policy has increasingly enhanced its ties with Latin America (Vizentini, 2004). As such, Figueiredo's foreign policy solidified the regional prioritization bias, which would be confirmed and matured in the next government, despite adverse conditions. In Latin America, the relationship between Brazil and Argentina, mainly in the nuclear energy field, stands out¹³.

During Figueiredo's administration, Brazilian diplomacy participated in the struggle to protect Brazil's autonomy in security issues. It was an increasingly sensitive area. In the 1980s, Brazil rejected the North American idea to create the South Atlantic Organization as this initiative contradicted Brazil's strategy for regional defense (Vizentini, 2004). This project would damage Brazilian relations with Africa; Brazil was no longer interested in an anti-communist alliance but rather in cultivating consumer markets and avoiding blockages to the oil route that could harm national consumption (Vizentini, 2004). In addition, Figueiredo's foreign policy kept its orientation of guaranteeing Brazil's access to nuclear energy and cutting-edge science and technology, implementing various initiatives towards achieving this goal. Figueiredo's administration continued the Brazilian arms industry's development effort, aiming to become a war material supplier to Third World countries (Vizentini, 2004).

Because of external pressures and economic challenges, nuclear policy suffered. Despite all the growing difficulties (such as the impossibility of purchasing fuel, materials for moderators, raw materials, and the components needed for production), the nuclear project continued its development.

On 17 January 1984, the Minister of Mines and Energy, César Cals, inaugurated the Angra I Nuclear Power Plant. However, in 1985, the USA refused to supply the CYBER 860 computer to the Institute for Advanced Studies, the WAX 11/785 computers to the Aerospace Technical Centre, the multichannel analysers to the National Safeguards Laboratory – CNEN, and the targets for UFRJ's research (Vizentini, 2004), revealing these countries intricate relations.

The Nuclear Parallel Program became widely known in August 1986, when the newspaper *Folha de São Paulo* published a series of reports exposing a nuclear test base in Pará (Reiss, 1995). In 1984 and 1985, the Brazilian Air Force dug a deep hole in Serra do Cachimbo as part of the Solimões Project's activities: it was less than 1 meter in diameter and approximately 280 meters deep (Reiss, 1995; Castro, Majlis, Rosa & Barros,

¹³ The author's Ph.D. thesis (under development) is precisely about the relationship between Brazil and Argentina, mainly in the nuclear energy field.

1989). The Brazilian government explained that the deep hole in Serra do Cachimbo was part of a mineral exploration project, immediately denying that it was a centre for nuclear tests or even that the country was developing nuclear weapons (Spector & Smith, 1990). According to the Armed Forces, the base had no connection to the parallel program, and that the hole's purpose was only testing equipment and materials dedicated to aerospace exploration (House, 1986). Many critics of this program and experts worldwide doubted the government's official stance (Reiss, 1995): they concluded that Brazil did not have, at that time, the nuclear material needed for a test – or even the non-nuclear components for a cold test¹⁴.

Nonetheless, Brazilian activities in the nuclear field assured explosive nuclear material development shortly (Reiss, 1995). With CNEN's support, the military had created a clandestine program. Outside IAEA's safeguards, the parallel program aimed at producing highly enriched uranium (Reiss, 1995). In September 1987, President José Sarney confirmed these suspicions and explained that the Navy's Institute for Energy and Nuclear Research had successfully conducted uranium enrichment inside a laboratory (Reiss, 1995).

Throughout those years, Brazil refused to renounce its right to conduct peaceful nuclear explosions (PNEs) or accept its status as a non-nuclear state through signing the NPT or fully implementing the Tlatelolco Treaty. Brazil's rejection of NPT and Tlatelolco, its insistence on its right to perform PNEs, aspirations for great power status, authoritarian military government, and tacit nuclear rivalry with Argentina increased widespread concerns that the ambitious atomic reactor construction and technology transfer program could mask efforts to build the bomb (Barletta, 1998).

In 1991, after transitioning to democracy, Brazil formally renounced PNEs, agreed to establish bilateral safeguards with Argentina, accepted IAEA inspections on its previously secret nuclear installations, and committed to ratifying the Tlatelolco Treaty – which only happened in 1994. It was a reversal in a long trajectory towards proliferation, soothing the apprehension inside and outside the country. Notwithstanding, military involvement in technological development continued.

Nuclear policy after redemocratization

¹⁴ A cold test corresponds to the test of nuclear capabilities without an explosion.

After 21 years of military dictatorship, President-elect Tancredo Neves passed away before being sworn in, characterizing the early stages of Brazilian re-democratization as complex. In Brazil, solid liberalization and multilateral international regimes' endorsement qualified the 1990s. Although Brazil has always officially expressed its nuclear research's peaceful character, the issue of signing the Nuclear Non-Proliferation Treaty emerged only after re-democratization, when Brazilian foreign policy aimed at global security.

José Sarney becomes President amid a remarkably complex situation (Alsina Jr, 2006), and simultaneous processes of change and transformation at the internal and external levels confronted his administration (Seixas Corrêa, 1996). In March 1985, Sarney's rise to power came with three arduous tasks: guiding the political transition, leading the National Constituent Assembly turbulent time, and ensuring the 1989 presidential elections' democratic clarity (Seixas Corrêa, 1996).

The dialectic continuity and innovation were present in practically all Brazilian foreign policy spheres (Seixas Corrêa, 1996), conducting Sarney's diplomatic agenda. Sarney administration's diplomacy consolidated Brazil's worldwide insertion and some of its foreign policy's fundamental characteristics. The approximation with Argentina, Cuba's reintegration in the inter-American system, and the bilateral narrowing with powers such as China, Russia, and Japan (Alsina Jr, 2006) are a few of Sarney's most important foreign policy achievements.

Sarney's diplomacy prioritized the approximation with Argentina, directly impacting Brazilian nuclear policy. The measures established for mutual trust between Brazil and Argentina since the 1980s have become essential variables in Brazilian security policy (Cervo & Bueno, 2008). When both Brazil and Argentina's national programs dominated the complete nuclear energy cycle, they felt the need to interrupt the arms race (Cervo & Bueno, 2008). From 1985 to 1991, these two countries held intense negotiations.

In June 1989, Argentina elected President Carlos Menem. In March 1990, Brazil elected President Fernando Collor de Mello. They brought new strength to cooperative efforts, felt on nuclear policy. The end of the Cold War introduced a new international order, and Collor's election shifted Brazilian foreign policy. Domestically, Brazil struggled with an uncontrolled inflationary process's consequences, while Collor sought to adopt a new international insertion model (Alsina Jr, 2006).

Collor's administration initiated civilian control over nuclear activities, and he commissioned studies on Brazil's nuclear program from a working group (called GT-Pronen – National Nuclear Energy Program), coordinated by the Strategic Affairs Secretariat (Malheiros, 1996). Collor did not accept all the GT-Pronen suggestions, such as investing around 2 billion dollars in military projects. Collor prioritized the Air Force's and Navy's programs – the latter focused on ultracentrifugation enrichment (Malheiros, 1996). Yet, Congressional budget cuts affected both programs.

On 18 September, President Collor symbolically closed the Serra do Cachimbo centre, throwing two lime shovels into one of the base's testing grounds' holes one week before attending the 45th UNGA session (Malheiros, 1996; Revista Veja, 22 July 1998). Upon arriving for the meeting at the United Nations headquarters in New York, Collor surprised everyone, receiving much praise, by announcing the existence, in the past, of a Brazilian program dedicated to producing nuclear weapons (Malheiros, 1996). Collor revealed the program's name (Solimões Project) and said it would have no continuity in his administration (Malheiros, 1996). On 28 November 1990, Collor and Menem signed the Declaration of Common Brazilian-Argentine Nuclear Policy. The Declaration ensured that Brazil and Argentina would use atomic energy only for peaceful purposes and created a formal bilateral inspections system.

In the early 1990s, Brazil and Argentina had advanced a lot in nuclear cooperation. However, even though they had convinced each other of their nuclear research's exclusively peaceful intentions, Brazil and Argentina still needed to convince the rest of the world (Reiss, 1995). It would not be an easy task: they had to find a way to dilute the distrust that had grown in the international community over the years. A profound transformation in traditional thinking about their nuclear programs would be necessary, as both countries had, in the past, solemnly ignored all suspicions raised by the international community.

A progressive advance in denuclearized zones' concept and the growing acceptance of atomic weaponry possession unilateral renunciation idea characterized the 1990s (Sombra Saraiva, 2001). Latin America was a pioneer region in this type of initiative, and the early 1990s witnessed Tlatelolco's Treaty full effect (Sombra Saraiva, 2001).

1991 was a crucial year in the history of Brazilian-Argentine nuclear cooperation. In July, Brazil and Argentina established the Common System for Accounting and Control of Nuclear Materials, whose purpose was to prevent the diversion of nuclear

material for military purposes. To implement this control system, Brazil and Argentina created the Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials (ABACC). In December, Presidents Collor and Menem went to Vienna to sign the Quadripartite Agreement, which linked Brazil, Argentina, ABACC, and the IAEA in one document. Thus, all nuclear material, in all nuclear activities, throughout both territories would be subjected to IAEA safeguards, verifying the activities' peaceful purposes.

After several corruption accusations, Collor renounced the presidency, and Itamar Franco replaced him in 1992. Both Franco's chancellors – Fernando Henrique Cardoso (1992-93) and Celso Amorim (1993-94) – led Brazilian diplomacy to try and adapt to international circumstances without leaving aside its historic priority to promote development and the search for autonomy (Pinheiro, 2004). There was a significant change in the state affairs' conduction style (Alsina Jr, 2006); however, a new foreign policy paradigm was not adopted (Pinheiro, 2004).

Itamar Franco's chancellors worked intensively to project a new image abroad without making significant changes in how predecessors Celso Lafer and Francisco Resek conducted foreign affairs (Alsina Jr, 2006). For example: on several occasions, chancellor Cardoso expressed that the world was moving towards lowering security agenda assigned priorities, presenting new themes, and prioritizing the economic-trade agenda (Alsina Jr, 2006). Through Mercosur's implementation, Brazil became Argentina's key trading partner, and they cooperated towards nuclear energy's peaceful use. ABACC, the Quadripartite Safeguards Agreement, and the Tlatelolco Treaty's full entry into force in 1994 consolidated such cooperation.

During Itamar Franco's brief administration, Brazilian foreign policy tried to combine Brazil's permanence towards economic liberalization while maintaining autonomy pursuing its goals (Pinheiro, 2004). Nonetheless, following the re-democratization trend, Franco's administration did not go beyond topical actions in national defence (Alsina Jr, 2006). In Franco's administration, the Armed Forces had a legitimate role in the democratic consolidation process; even so, there were almost no records of initiatives aimed towards a coherent defence policy (Alsina Jr, 2006). Under Franco, Brazil signed the Chemical Weapons Convention and the Biological Weapons Convention. At the United Nations, Brazil argued towards creating a body that registered all conventional weapons and defended the conclusion of the Comprehensive Nuclear-Test-Ban Treaty.

Brazil elected Fernando Henrique Cardoso as President in 1994, and the most significant shift in nuclear policy happened during his administration: Brazil joined the NPT. Argentina and Brazil had already abdicated their right to conduct PNEs and joined the revised Tlatelolco Treaty. Both countries also accepted the IAEA safeguards' application in all their nuclear activities, including the uranium reprocessing and enrichment facilities.

A search for strengthening international multilateral institutions, understanding that adhesion to global regulatory standards would guarantee the preservation of spaces of autonomy, and the assumption that the country's performance should stand on principles of power, which would ensure both greater independence and support in the global system summarizes Cardoso's diplomatic action (Pinheiro, 2004). In 1995, the same year that Brazil first announced its intention to join the NPT, the UNSC adopted Resolution 984¹⁵ by consensus, consolidating the relationship between the NPT and the UNSC, promoting the universal promotion of its terms (Patriota, 2010).

When addressing the National Congress regarding the intention to sign the NPT, President Cardoso highlighted the possibility to exercise more comprehensive political pressure for nuclear disarmament (Lafer, 1999), as Brazil's accession to the NPT would no longer carry a conformity connotation with the arms race: it represented Brazilian willingness to contribute towards non-proliferation, disarmament, and nuclear energy's peaceful uses (Lampreia, 1999). On 20 June 1997, President Fernando Henrique Cardoso formally requested authorization from the National Congress for Brazil to join the NPT.

For the Cardoso administration, it was time to decide to be part of the process, to be able to influence decisions about the regime. Cardoso's diplomacy argued that signing the NPT was a natural consequence of Brazil's commitment to exclusively peaceful purposes' nuclear energy use.

Brazilian adhesion to the NPT happened when one of the administration's trademarks was the lack of a strategic national project for the military technology area (Simão, 2009). With the gradual governmental investments withdrawal from strategic fields and proactive behaviour in abandoning old policies, Brazil moved in the opposite direction to the independent foreign policy that had marked several Brazilian administrations. When delivering the Instrument of Accession to the NPT in Washington,

¹⁵ Resolution 984 recognized the legitimate interest of non-nuclearized countries in receiving guarantees from the UNSC and nuclearized countries that the latter would immediately act if non-nuclear countries were victims of nuclear weapons use.

Lampreia (1999) said in his speech that that ceremony marked a turning point in Brazilian disarmament and non-proliferation policy. Indeed, it was a rupture with tradition.

After 1998, Brazil has remained critical of the NPT, refusing continuously to sign the Additional Protocol before the nuclear powers fully implement Article VI. If this was true during Cardoso's second term (1998-2002), such argumentation gained strength under Luiz Inácio Lula da Silva's administration (2002-2010). President Lula's diplomacy valued Brazil's autonomy in foreign policy agendas, and his administration widened Brazilian presence worldwide. Under Lula, Brazil became a significant international interlocutor, dialoguing with both superpowers and developing countries, and his defence policy followed the Constitution's guidelines. Until 2010, Brazil strengthened its advocacy towards nuclear disarmament, constantly criticizing nuclear technological curtailment and summoning superpowers towards disarmament.

Final remarks

From 1964 onwards, Armed Forces' presence in the atomic area was permanent, reflecting their understandable and inevitable interest. Naturally, nuclear policy decisions were secret, with effective control exercised by the National Security Council's executive secretary (Wrobel, 2000; Girotti, 1984).

Wrobel (2000) questions whether there is a Brazilian nuclear policy along the boundaries of a public policy:

“[...] a public policy in an area as complex as the nuclear [area] necessarily encompasses purposes' clarity, goals in the short, medium, and long-term, and proposed outcomes' compatible means. For observers and analysts from other areas of Brazilian public policy, this question must sound familiar. As in other areas of government policy, it is necessary to recognize that Brazilian nuclear policy suffers from the same evil: discontinuity is, unfortunately, its most striking feature.

However, despite this characteristic, it is legitimate to say that generations of Brazilians engaged in public policy share the same ambition. Such ambition is to provide the country with a scientific, technological, and industrial infrastructure to master nuclear technology, considered vital for the modern industrial society's prosperity. Over time, there was different policies' employment for this purpose. Therefore, one can say that Brazilian nuclear policy's fundamental goal is to provide the country with the capacity to master nuclear technology, including the nuclear fuel's complete cycle. In addition, segments of all the Brazilian Armed Forces influenced keeping the possibility open for military purposes' application of nuclear technologies. Applications for military purposes do not necessarily refer to atomic weapons' production – a process that involves political will as well as technical capacity building in addition to the Brazilian industrial structure – but, for example, the application

of nuclear technology to armaments like the production of a small nuclear reactor for naval propulsion (Wrobel, 2000, p.65).”¹⁶

The 1988 Brazilian Constitution enshrined the country’s willingness to be a non-nuclear state, establishing that Brazilian atomic technology had solely and exclusively peaceful purposes¹⁷. The State’s exclusivity to make policies derives from the State’s objective superiority in making laws and enforcing them (Secchi, 2013). In outlining its Nuclear Policy, the State prepares the regulations and establishes the guidelines delimitating the use of technology, whether peaceful or military. In this highly regulated field, few actors can participate in the decisions.

I argue that the Autonomous Nuclear Technology Program is a public policy because governmental authorities conceived its actions, goals, and purposes to achieve society's well-being and fulfil the public interest. The government defines society’s well-being, and the Program was designed based on selected priorities. According to Bardach (1998), a government must follow eight steps to properly elaborate a public policy: to define the problem to be faced; to collect data and information; to build alternatives; to select criteria for evaluating options; to project results; to confront costs; to make decisions, and to disseminate the results by defending the proposal. Thus, foreign policy is a public policy, as any foreign policy decision must answer sensitive questions based,

¹⁶ Originally in Portuguese: “[...] uma política pública em área tão complexa quanto a nuclear abarca, necessariamente, clareza de propósitos, objetivos a curto, médio e longo prazo e meios compatíveis com os fins propostos. Para os observadores e analistas de outras áreas de política pública brasileira, esta indagação deve soar familiar. Assim como em outras áreas de política governamental, é forçoso reconhecer que a política nuclear brasileira padece do mesmo mal: a descontinuidade é, infelizmente, o seu traço mais marcante. No entanto, apesar desta característica, é legítimo afirmar que gerações de brasileiros ocupados com política pública partilham de uma mesma ambição. Tal ambição é a de dotar o país de uma infraestrutura científica, tecnológica e industrial para dominar a tecnologia nuclear, considerada vital para a prosperidade de uma sociedade industrial moderna. Ao longo do tempo, políticas diversas foram empregues para tal fim. Assim sendo, pode-se afirmar que o objetivo principal da política nuclear brasileira é o de dotar o país de capacidade de dominar a tecnologia nuclear, incluindo o ciclo completo do combustível nuclear. Ademais, segmentos das três Forças das Forças Armadas brasileiras influenciaram no sentido de manter aberta a possibilidade de aplicações com fins militares da tecnologia nuclear. Aplicações com fins militares não se referem necessariamente a produção de armas nucleares – processo que envolve vontade política assim como capacitação tecnológica além da estrutura industrial brasileira – mas a aplicação da tecnologia nuclear em armamentos como, por exemplo, a produção de um pequeno reator nuclear para propulsão naval (Wrobel, 2000, p.65).”

¹⁷ Brazil determines, in the 1988 Constitution, that it is up to the Union (Art. 21, XXIII) to explore nuclear services and facilities of any nature and exercise a state monopoly on research, mining, enrichment and reprocessing, industrialization, and trade in nuclear ores and their derivatives, with due regard for the following principles and conditions: a) all nuclear activity in the national territory is only admitted for peaceful purposes and with the approval of the National Congress; b) under permission, the marketing and use of radioisotopes for research and medical, agricultural and industrial uses are authorized; c) under permission, the production, commercialization, and use of radioisotopes with a half-life equal to or less than two hours are authorized; d) civil liability for nuclear damage does not depend on fault. In Article 22, item XXVI, the Constitution establishes that legislating on nuclear activities of any kind is exclusively up to the Union. In turn, Article 49, item XIV, stipulates that it is the exclusive responsibility of the National Congress to approve initiatives of the Executive Power referring to nuclear activities. In Article 177, item V, the Constitution determines that the Union's monopoly includes research, mining, enrichment, reprocessing, industrialization, and trade in nuclear ores and minerals and their derivatives, except for radioisotopes whose production, commercialization, and use may be authorized under a permit regime, as paragraphs b and c of item XXIII of the caput of article 21 of the 1988 Federal Constitution.

first, on the information available through viable alternatives. I establish the following relationship: The Nuclear Parallel Program is a public policy of domestic nature, but it is *intermestic*¹⁸ due to its overlapping characteristics with foreign policy (whose decisions have internal and external reflections). As such, I argue that nuclear policy is inherently intermestic.

The Geisel administration had significant importance in Brazil's nuclear policy development. His decision to launch a nuclear energy production program was the subject of considerable internal and external controversy (Souto Maior, 1996). German equipment and technologies' importation would allow the program's development which, in turn, would lead Brazil to achieve autonomy in the sector, mastering the entire fuel cycle – including the enrichment of uranium and the reprocessing of irradiated material (Souto Maior, 1996).

In a realist approach, Geisel built a solution of power on the margins of the international non-proliferation regime established by the NPT. His administration did not perceive the need to fit into such a regime, considering it discriminatory and restrictive. Geisel's responsible pragmatism manifested its realistic perspective. The ideological profile's change could not be explained only by pragmatic reasons (Fonseca Jr., 1996); therefore, towards an ethical qualification for adopting a more realistic profile in Brazilian diplomacy, the adjective *responsible* was added, as the country sought a balance of power.

In 1998, the National Defence Policy (*Política Nacional de Defesa* – PND) was published. It established, in an explicit manner, the general outlines of Brazilian formulations for national defence. The PND harmonizes the perspectives between various government agencies linked, directly or indirectly, to the issue of defence, subordinating them explicitly to constitutional guidelines (Proença Jr.; Diniz, 1998).

Therefore, the PND is more valuable for what it excludes from the defence debate than for a normative role in the formulation of a specific policy. The document establishes the basis for a declaratory policy by communicating the Brazilian government's interpretation of the limits – constitutional, legal, and those arising from treaties – within which Brazil's defence policy would be built (Proença Jr.; Diniz, 1998).

It is essential to adopt a consistent stance on international relations and defence, constituting a prerequisite for establishing relationships between countries in times of

¹⁸ Hill (2003) argues that there is (and there has always been) an interpenetration between "domestic" and "foreign" spheres. These spheres are better perceived as a continuum, allowing an overlap. Hill defines this overlap as "*intermestic*".

peace. Likewise, it is necessary to remember that war is the continuation of politics by other means (Clausewitz, 2010): war is not a substitute for politics, but it *is* armed politics.

From a Realist standpoint, when joining the NPT, Brazil was no longer able to guarantee its security, abdicating the principle of self-help in a world divided between those allowed to have nuclear weapons and those who are not. In an anarchic international system, abdication from the nuclear program's full capacity development reflected Cardoso's administration's liberal character, as well as those that preceded him at the Presidency during the 1990s.

Brazil has evolved in its bilateral relationship with Argentina through creating ABACC and signing the Quadripartite Agreement. Brazil also signed the NPT in 1998 (3 years after Argentina did so) but, to this day, has refused to accept the Additional Protocol. Since the beginning of the 1990s, a discontinuity is identified in Brazilian Nuclear Policy. Signing the NPT broke once and for all the critical argument sustained by almost three decades. But remaining critical of the NPT due to its discriminatory traits is one of the nuclear policy's persisting elements defined by the military governments.

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