

ARTICLE

# The Falling-Out of Nuclear Suppliers: US–France–Canada Negotiations and Debates on the ROK Nuclear Program

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## Abstract

This article traces ROK–US negotiations for the termination of the ROK’s nuclear weapons program. It was not solely an issue of ROK–US relations; France and Canada, other allies of the United States, were also involved in the ROK’s nuclear weapons development. When an ally (ROK) attempted to develop nuclear weapons and another ally (France) pursued commercial interests by exporting nuclear technology, the US-led non-proliferation regime was put at risk. Therefore, the US had to coordinate the interests of its allies. In particular, it attempted to dissuade France from exporting nuclear technology with the support of another ally (Canada). By examining how the US endeavored to coordinate diverse interests, this study ultimately demonstrates that one of the prerequisites for establishing a successful non-proliferation regime led by the US was how to dissuade its ally from seeking financial gain through the export of nuclear technology and instead persuade them to support US-led non-proliferation regime building.

**Keywords:** ROK–US Nuclear Cooperation Agreement; Korea’s nuclear development; ROK–France–IAEA Trilateral Nuclear Agreement; US–France relations; Non-Proliferation Treaty; Valéry Giscard d’Estaing; Park Chung Hee; Richard Nixon; Gerald Ford

## The puzzle of US–France strategic nuclear cooperation and the ROK–France deal for plutonium reprocessing technology and facilities

In an interview with *The Washington Post* conducted on June 12, 1975, Park Chung Hee said: “If the US nuclear umbrella were to be removed, we have to start developing our nuclear capability to save ourselves” (Evans and Novak 1975). This was shocking to the US, not only because it spoke to the sensitive issue of nuclear weapons development, but also because the interview was conducted in the US press, which would vehemently oppose such development. The White House appeared shaken by the interview and subsequently initiated substantial pressure on the Blue House. This

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reaction stemmed from Washington's lack of anticipation regarding Seoul's disclosure of its covert nuclear weapons program. Seoul, in its turn, sought to leverage its nascent program as a bargaining chip to obtain a US security guarantee for the ROK (Choi 2014, 12). After two campaigns in East Asia, the Korean War and the Vietnam War, Washington was wary of becoming ensnared in the trouble between its allies and their Communist neighbors, Pyongyang, Beijing, and Moscow. Since Washington was responsible for the security of many allies facing the Communist threat, it did not allow any military adventure by its allies that would entangle the US in unintended conflicts (Morrow 2006, 114). Moreover, the US appeared to be worried about the nuclear armament of the ROK because it could have initiated a nuclear domino effect in East Asia that might have further undermined US influence after the nuclear test conducted by the People's Republic of China's 1964 (Burr and Richelson 2000/2001, 54–99).

Why did Park mention the sensitive issue at that point? Was he confident enough to withstand US pressure? Or was his primary objective to exploit the nuclear matter as a bargaining tool for obtaining benefits from the US, given the near impossibility of successfully pursuing the ROK's nuclear weapons program amidst significant US pressure? Despite their contributions to our understanding of the beginning and end of the story, existing studies on the ROK's nuclear attempt in the 1970s, focusing on the bilateral relations between Seoul and Washington, do not provide answers to these questions. However, addressing these questions is crucial for placing the ROK's nuclear weapons attempt within the context of broader US efforts to establish a new global non-proliferation regime, shifting from bilateral to multilateral frameworks.

Scholarly discussions on the ROK's quest for nuclear weapons have centered on the role of the alliance (Choi 2014; Hong 2011; Jang 2016; Kim 2001). Scholarship has shown that Seoul initiated a nuclear program with potential military applications when Washington weakened its security guarantee for Seoul during its struggles in Indochina. It has also been shown that the ROK decided to stop developing its nuclear program for military purposes when the Ford administration strengthened its security guarantee for the ROK and attempted to impose sanctions. After Ford assured Seoul that he would not pull US troops and tactical nuclear weapons from Korean soil, the ROK accepted the terms and conditions offered by the US for terminating its nuclear weapons program. While many scholars emphasize the role of US pressure in deterring the ROK from developing nuclear weapons, some scholars pay attention to how Seoul used its nuclear program as leverage in its relations with Washington (Choi 2014; Jang 2016). While agreeing that the ROK's decision to terminate its nuclear weapons program was rooted in the influence of ROK–US alliance relations, these scholars argue that the key question of the ROK's nuclear program is not why the ROK abandoned the program but how the ROK tried to use to its specific position in the US nuclear politics, to maximize its national interests. The Park regime was willing to discontinue its nuclear program for a price. The Blue House had expressed its willingness to end its nuclear weapons program even before its official decision to terminate it in January 1976. However, it delayed its official decision and engaged in discussion with the Ford administration regarding potential compensation from the US in exchange for its contract with France for reprocessing technologies and facilities, which could serve as the foundation for the ROK's nuclear

weapons program. These studies pay attention to the series of actions by the ROK after it decided to stop the program.

Other scholars focus on the political economic variables that influenced the ROK's decision on its nuclear program. For example, Solingen (2009) considers the cost-benefit generated from the development of nuclear weapons as one of the core variables affecting the program's initiation and termination. She argues that the ROK and other allies of the US in East Asia (e.g., Japan and Taiwan) stopped developing their nuclear weapons programs because the security benefits from nuclear arsenals did not seem to outweigh the costs associated with nuclear weapons. These states heavily relied on the global market led by the US and could risk losing access to it if they violated US non-proliferation rules by developing nuclear arsenals. However, Solingen also suggests that states with low reliance on the international economy (e.g., North Korea) might be more inclined to develop nuclear weapons, as the security benefits could offset the costs of international sanctions on their nuclear weapons programs.

Despite their differing emphases, perspectives, and arguments, these studies together contribute to our understanding of the initiation and termination of the ROK's nuclear weapons program. While demonstrating the crucial role of the US in steering the ROK's decision to both initiate and abandon its quest for nuclear arms, these studies also shed light on the ROK's political, strategic, and economic motivations. However, they do not delve into the details of how why equilibrium was achieved in ROK-US negotiations regarding the ROK's nuclear program.

By paying little attention to the negotiation process, existing studies fail to consider some crucial issues. In particular, it remains unclear how and why Park Chung Hee resisted the US pressure to halt the nuclear program. While improving its nuclear capabilities with the light-water reactor system, technologies, and low-enriched uranium supplied by the US based on bilateral ROK-US nuclear agreements, the ROK was not allowed to reprocess nuclear fuel from the US.<sup>1</sup> Thus, logically, the ROK should have abandoned its nuclear weapons program upon discovery by the US and the subsequent warnings against it. Additionally, it would seem reasonable that the US would penalize the ROK if it pursued nuclear weapons development, violating its commitment to non-proliferation based on the ROK-US bilateral agreement and the Nuclear Non-Proliferation Treaty (NPT). Yet, contrary to this logical reasoning, the ROK did not immediately halt its nuclear program, and the US did not immediately impose penalties; instead, a series of warnings were issued. Moreover, when the ROK withstood US pressure, the US offered compensation packages for the termination of the ROK's plans to acquire reprocessing facilities and technologies.<sup>2</sup> These paradoxes can be resolved through a close examination of negotiations involving the US, the ROK, France and Canada.

This article aims to explain the paradoxes in the US approach to its allies' nuclear proliferation by examining France's special position in the global non-proliferation order. To achieve this, the study employs the following approaches. Firstly, recognizing that the ROK's nuclear weapons development was closely linked to changes in international relations in the 1970s, the study looks beyond the narrow scope of US-ROK relations and examines not only the US but also France and Canada. The study particularly traces how the US, France, Canada, and the ROK responded

to these changes and how their responses impacted the ROK nuclear issue. Rather than viewing international relations merely as a backdrop, this study takes the changes in international relations during the 1970s more seriously as a critical factor influencing the policies of the states involved in the ROK's nuclear weapons program. Secondly, the study considers international non-proliferation regimes (bilateral agreements and/or the NPT) as another variable. These regimes mediated the influence of the primary independent variable, providing insights into the understanding that the ROK's attempt to develop nuclear weapons was not solely a matter of US–ROK relations, but a crucial aspect of US endeavors to construct a new international non-proliferation regime.

In this context, France becomes a pivotal actor. Scholars have explored the way that France, as a key nuclear exporter, oscillated between commercial and strategic interests, influenced by domestic politics and international relations (Hecht 2009; Kohl 2015; Konieczna 2020; Pouponneau 2013, 2015; Pouponneau and Mérand 2017). Building on these studies, we further investigate how France's pursuit of commercial interests through nuclear technology exports impacted not only the dynamics of ROK–US nuclear decision-making but also US-led non-proliferation regime building. It also explores how US efforts to solve the difficult problem of France's nuclear proliferation affected the end of the ROK's nuclear program directly or indirectly.

Another significant actor in the narrative of the ROK's nuclear ambitions was Canada. While holding a sales contract with the ROK for a nuclear reactor, Canada simultaneously sought to ensure that the reactor would not be used for plutonium production. Aligned with US non-proliferation efforts and acting in coordination with the US, Canada played an important role in deterring the ROK from pursuing nuclear weapons development and undermining the ROK–France connection by advocating a multilateral approach to nuclear non-proliferation. If Canada had not supported the US policy for global non-proliferation, it would have been much more challenging for the US to halt the ROK's nuclear weapons program. Canada's efforts to press for strict non-proliferation measures did not fundamentally transform the triangular relationship between the US, France, and the ROK into a quadrilateral one. Instead, it had an impact on the power balance within the triangle, particularly by pressuring France to reconsider its nuclear export policies and urging the ROK to cancel the reprocessing deal with France.

While paying special attention to France's involvement in the ROK's nuclear attempt, this study does not question the essential role played by the US in ultimately bringing an end to the ROK's nuclear weapons program. Rather, by shedding new light on France's role with an expanded view, this study specifically traces how the three nuclear negotiations (US–France, France–ROK, ROK–US) were intertwined, deadlocked, and eventually resolved. Even before the US perceived the ROK's nuclear ambitions, the France–ROK discussions of nuclear technology transfer were underway and nuclear diplomacy between the US and France was in progress. Thus, when the US embarked on efforts to dissuade Seoul from nuclear weapons development, these three discussions became interconnected and started to mutually influence one another. Consequently, the ROK nuclear issue became increasingly intricate to resolve. For the US, the ROK's nuclear attempt was not simply an issue of the alliance but was related to its broader non-proliferation efforts, which were

in turn, associated with the US's evolved Cold War strategy, emphasizing the role of European allies. This study delves into how nuclear diplomacy between Paris and Washington, as well as between Paris and Ottawa, major nuclear suppliers, affected global non-proliferation politics and the ROK's nuclear weapons program.

To comprehend how these international relations interplayed and reached resolution, this article poses the following questions: Why did France try to provide reprocessing facilities and technologies to the ROK despite US non-proliferation efforts? Why did France reconsider its nuclear export policy and engage in discussions with the US? How serious was the ROK government, knowing that the US would vehemently oppose nuclear weapons development? How and why did the ROK leverage its reprocessing contract with France to secure US guarantees for its national security? How did US–France nuclear diplomacy impact the ROK–France nuclear agreements? And what was the role of Canada in US nuclear diplomacy with France and the ROK?

In answering these questions, this article asserts that the issue of the ROK's nuclear weapons development was not merely a breach of the US–ROK nuclear agreement. Instead, it posed one of the crucial obstacles to US-led non-proliferation regime building. The US had to coordinate the interests of its allies by alleviating the ROK's sense of security crisis while simultaneously enticing France to its side by reducing the gap between their nuclear proliferation policies and European security strategies. While the new French administrations under Georges Jean Raymond Pompidou and his successor Giscard d'Estaing perceived this US approach as an opportunity to augment France's national power, Gaullist politicians and bureaucrats were reluctant to align immediately with the US position. Gaullists argued that France should boost its national power through independent nuclear arms development and capitalize on the economic gains from exporting nuclear technologies (Pouponneau and Mérand 2017, 123–124). Ultimately, this study demonstrates that the ROK government, in this intricate situation, did not merely succumb to US pressure but collaborated closely with the French Commission for Atomic Energy (Commissariat à l'énergie atomique, CEA<sup>3</sup>) led by the Gaullists to extract maximum benefits from the US before abandoning its fledgling nuclear weapons program.

### **US non-proliferation efforts and challenges**

Nuclear safeguards have been crucial in the global order since the dawn of the nuclear age. The UN Atomic Energy Commission (UNAEC) convened in June 1946, during which the US representative, Bernard Baruch, proposed the creation of an International Atomic Development Authority (IADA) to oversee all aspects of atomic energy development and utilization, exerting managerial control over dangerous nuclear activities. However, disagreements between East and West stalled progress, and UNAEC dissolved in 1951 after the Soviet Union developed nuclear weapons in 1949. The US, faced with the collapse of the Baruch Plan and the loss of its nuclear monopoly, sought alternative measures to safeguard the global nuclear order. President Dwight D. Eisenhower's "Atoms for Peace" speech, delivered to the UN General Assembly on December 8, 1953, aimed to address this need. Eisenhower suggested establishing a novel global organization called the International Atomic Energy

Agency (IAEA), tasked with overseeing a global repository of disarmed fissionable materials, while signing bilateral nuclear agreements with multiple countries. The hope was that sharing nuclear technology and expertise could mitigate the risk of proliferation, as international suppliers could secure guarantees from recipient nations that their assistance would be utilized solely for peaceful objectives (Fuhrmann 2012, 6–7; Roehrllich 2018, 29–34, 2022, 31–38).

Despite the optimistic vision of the freshly initiated global nuclear framework, concerns about nuclear weapons proliferation began to emerge as early as 1955. The “Atoms for Peace” initiative was formulated without fully assessing the potential risks of disseminating nuclear materials and technology. The IAEA, established in 1957, operated with limitations, having restricted authority over potential recipients of nuclear technology, and lacking the capacity to monitor powerful nations capable of developing nuclear weapons independently. Additionally, countries aspiring to significant economic and military advantages through nuclear power found this limited form of technological support inadequate (Futter 2015, 191–196; Roehrllich 2018, 35–36; 2022, 46–49).

The 1956 US–ROK nuclear agreement, a product of the Atoms for Peace, was forged within this historical context. In February 1956, the two nations signed the “Cooperation between ROK and the US Concerning Civil Uses of Atomic Energy” agreement, and the ROK officially joined the IAEA in 1957 (Go 1992, 62–87). Through the 1956 ROK–US Nuclear Cooperation Agreement, the US provided six kilograms of low concentration uranium to the ROK for educational reactors, with the storage and maintenance of residual nuclear fuel under US control. The ROK was banned from concentrating uranium and reprocessing used nuclear fuel with US-supplied facilities and materials without US consent.<sup>4</sup> In addition, the IAEA assumed responsibility for monitoring nuclear reactor operations and safeguarding measures after its establishment.

However, by the late Eisenhower era, Washington increasingly realized that the outcomes of the Atoms for Peace program might jeopardize US national interests. US positions in Europe and East Asia were further eroded by the emergence of nuclear powers like France and the People’s Republic of China (PRC) in the early 1960s, raising the specter of other countries following suit. Successors to the Eisenhower administration, beginning with John F. Kennedy and Lyndon B. Johnson, recognized that the existing non-proliferation regime was insufficient to prevent other countries from acquiring nuclear weapons. France and the PRC had successfully developed their own nuclear weapons programs without relying on assistance from either the US or the Soviet Union.<sup>5</sup> As a response, Kennedy and Johnson started to tighten surveillance over nuclear activities of US allies (Burr 2018, 16).

Ironically, as the US became more alert to nuclear proliferation in the 1960s, there was a growing advocacy for nuclear weapons development. With the progression of the ROK’s nuclear program, Koreans’ concerns about the constraints imposed by the ROK–US Nuclear Cooperation Agreement intensified. As the generative reactor projects gained momentum, there was a substantial increase in the supply of enriched uranium from the US. However, securing an excessive supply of enriched uranium from the US proved to be a challenge. To solve this issue, a group of South

Korean scientists began promoting the strategic utilization of reprocessing technology. This perspective contradicted policymakers who primarily emphasized the economic benefits of nuclear energy and resisted nuclear weapons development. (Kim 2012, 211). Ultimately, the combination of the threat from North Korea and fear of US abandonment led the Park administration in the late 1960s to contemplate nuclear weapons development. The key challenge revolved around acquiring weapons-grade materials, prompting a review of existing plans. With government support, ROK technocrats worked towards realizing their longstanding nuclear armament ambitions. (Choi and Lee 2023, 18–20).

The emergence of new nuclear weapon states and dissatisfaction among recipient countries, including the ROK, led the US to reevaluate its Atoms for Peace program. Despite efforts to prevent proliferation through bilateral agreements, the number of nuclear-capable countries had reached five. Acknowledging the need for a more comprehensive approach, as the existing bilateral framework proved insufficient, the US sought to enhance non-proliferation by collaborating with the Soviet Union to establish a multilateral Nuclear Non-Proliferation Treaty (NPT) system (Diehl and Moltz 2007, 14–15). Establishing and maintaining the non-proliferation regime, however, posed challenges for both superpowers (Nuti 2018, 968). The system led by the US and the Soviet Union faced criticism not only from non-nuclear weapon states (NNWS) but also from nuclear weapon states (NWS). European nations, especially France, contended that the NPT served as a façade for the two nuclear superpowers to maintain their control over nuclear weapons (Kohl 2015, 261–262). To address concerns about Soviet nuclear threats, France chose to counter by pursuing nuclear armament. It partnered with several Western European nations through the European Atomic Energy Community (EURATOM) to collectively advance nuclear power across the continent. Furthermore, France entered the nuclear market to strengthen its sustainable nuclear power and actively participate in the industry's expansion.

### **US non-proliferation efforts and the Cold War**

After navigating through crises and negotiations, the superpower relationship between Washington and Moscow began to stabilize. This prompted discussions about terminating the arms race and revisiting alliance strategies, including nuclear deterrence. The US encountered three major challenges within its alliance politics. To start, it had to find a way to disengage from conflicts involving Third World Allies without triggering further violence. Secondly, it aimed to curb the eagerness of Western allies to pursue the creation of nuclear arsenals. Finally, the convergence of the initial two challenges resulted in apprehensions about potential military conflicts in the Third World and the management of control over inter-Atlantic political dynamics. This was exemplified by the ROK's pursuit of nuclear capabilities. The negotiations between the ROK and France over reprocessing facilities and technologies illustrated how these challenges intertwined. The US eventually identified Canada as a capable partner to address these intricate challenges. This partnership swiftly propelled Canada into a vital position within the global framework of non-proliferation efforts.

The new Cold War strategy of the US under Richard Nixon's leadership in the early 1970s emphasized the military application of its Third World allies, implying a reduction in the security guarantee backed by the US (Choi 2020, 67–68). Consequently, the situation in Indochina, where the US intervened significantly, grew volatile, and security concerns escalated in other Asia-Pacific countries. Security threats grew bigger in the ROK as well, prompting Park Chung Hee to seek the development of nuclear weapons. Hence, shrouding its intentions in secrecy, the Korean government embarked on a diplomatic outreach to France, aimed at procuring vital technological resources to propel its nuclear weapons program forward. A significant aspect of this endeavor was France's possession of an autonomous nuclear armament system, operating independently from the confines of the Nuclear Non-Proliferation Treaty (NPT) framework, which positioned it as an ideal partner for collaboration. Therefore, there was an increasing possibility that the ROK and France would collaborate and initiate nuclear proliferation, posing a potential threat to US non-proliferation (Hong 2011, 438–510; Kim 2001, 53–80).

However, a conspicuous disparity emerged between the presidents and Gaullist officials in France regarding the ROK's solicitation for the new nuclear partnership. Similar to other cases, such as Pakistan, Iran, and Iraq in the 1960s and 70s, the CEA seemed to consider the new contract with the ROK one of the driving forces for France's nuclear development and leadership in Europe. On the other hand, the two successors to de Gaulle, Pompidou and Giscard d'Estaing, appeared to carefully reckon the impact and risk of proliferation into another US ally (Choi and Lee 2023, 57–61; Pouponneau and Mérand 2017, 128).

The relationship between the US and French leaders showed signs of improvement, driven by Nixon's evolving Cold War approach and shifts in French domestic politics. In Europe, the US aimed to bolster NATO's military strength to engage its allies, including France, which had been questioning US leadership. The primary goal of this updated policy towards France was to reinforce its nuclear capabilities and counter Soviet influence in Europe. The increasing significance of French nuclear power for the US resulted in an alignment of strategies for European security between the two nations (Trachtenberg 2011, 4–9).

President Pompidou shifted France's stance by adopting a pragmatic approach, moving away from the previous ambition to position France centrally in Europe. To enhance efficiency and reduce nuclear development costs, Pompidou aimed for nuclear technology cooperation with the US and the United Kingdom and attempted to introduce US-designed pressurized water reactors (Kohl 2015, 371–382; Lee et al. 2016, 40). In the early 1970s, US and French leaders discussed potential technological cooperation, which encompassed weapons projects, computer sales, and the sharing of missile and nuclear technology.<sup>6</sup>

However, the French presidents had to navigate the challenges of the Gaullists who had previously led nuclear technology development and exports, while seeking to acquire nuclear technology from the US. Cancelling the contract with the ROK also had implications for France's international reputation. The US had to balance improving relations with France and discouraging its nuclear proliferation. Despite its desire to develop nuclear weapons, the ROK had to consider its strategic relationship with the US. In this situation, Canada, engaged in negotiations with the ROK



regarding the sale of its heavy-water reactors, emphasized the importance of non-proliferation and joined the ROK–France discussion on reprocessing technologies. As each country pursued its own interests, taking risks and seizing opportunities, their relationships became increasingly intertwined.

## **Two concurrent negotiations: Initial nuclear negotiations between the ROK and France and between France and the US, 1972–1974**

### ***ROK's Nuclear Development, 1972–74***

Member states of the NPT were authorized to secure nuclear fuel cycles for the peaceful utilization of nuclear energy. However, according to the ROK–US agreement “Cooperation Concerning Civil Uses of Atomic Energy,” signed in 1956, the ROK was only able to use light-water reactors from the US and enriched uranium from outside its soil, and it was impossible to reprocess the spent nuclear fuel generated from these reactors without US consent. Since both the NPT and the ROK–US nuclear cooperation treaty were concurrently in effect, Seoul initiated efforts to acquire plutonium while also adhering to the terms of both the ROK–US agreement and the NPT. Consequently, the ROK attempted to introduce heavy-water reactors and reprocessing technology from countries other than the US.

First, the Park Chung Hee administration sought ways to introduce reprocessing technology. Its first attempt to acquire reprocessing technology by contacting Skelly Oil Co. and Nuclear Fuel Services (NFS) of the US and Mitsubishi Oil of Japan in January 1972 was discouraged by opposition from the US (Atomic Energy Research Institute 1990, 170–171). Nevertheless, in May 1972, the South Korean government reached out to France and commenced talks regarding the “ROK–France Nuclear Cooperation for Peaceful Uses of Nuclear Power.” The Minister of Science and Technology of South Korea engaged with representatives from the CEA, the entity overseeing France’s export of nuclear technology and facilities. During this interaction, the two parties discussed the prospects of collaborating on nuclear technology between their respective nations (Atomic Energy Research Institute 2019, 30–31).<sup>7</sup> This created the possibility of securing reprocessing facilities, which had not seemed viable before.

In addition to striving to introduce reprocessing technology, the ROK government pursued importing a heavy-water reactor operable with natural uranium in 1973. For the Wolsong nuclear power project, the second project after the first Gori plant, the ROK actively considered buying Canada’s heavy-water reactors, which were operable with natural uranium. At the time, the Atomic Energy of Canada Limited (AECL) was making efforts to sell Canada-made heavy-water reactors. The ROK considered pursuing Canada Deuterium Uranium (CANDU), a generative heavy-water reactor, and the National Research Experimental (NRX), a research reactor with easier control over the plutonium ratio of spent nuclear fuel (Jang 2016, 515).

Building reprocessing facilities would be of no use if the ROK could not secure enriched uranium by amending the ROK–US Nuclear Cooperation Agreement, which the ROK focused on beginning in the autumn of 1972. The 1956 ROK–US Nuclear Cooperation Agreement stipulated that the US should provide six kilograms of enriched uranium to the ROK for research reactors, but the amount lagged

far behind what was required for generative reactors. Therefore, the ROK tried to persuade the US to permit the reprocessing facilities and uranium enrichment, while also discussing ways to cooperate on non-military implementation of nuclear power. The US finally decided to increase the provision of enriched uranium, believing that the ROK would consistently introduce more pressurized water reactors from the US. This led to a new ROK–US Nuclear Cooperation, signed on November 24, 1972 and effectuated on March 10, 1973 (Atomic Energy Research Institute 1978, 33).

In October 1974, the ROKG and CEA of France reached an agreement and exchanged the Memorandum of Understanding for the Peaceful Uses of Nuclear Energy, in which the CEA would provide the technologies and facilities for fuel rod processing and reprocessing to the ROKG. The ROK considered the MOU equivalent to a formal treaty, even though it was not a binding agreement.<sup>8</sup> However, from the CEA's perspective, choosing a non-legally binding MOU was a political decision considering its US relations, one of the major concerns of the Giscard d'Estaing administration. This careful decision might have been made because the CEA considered the split between d'Estaing and Jacques Chirac. The CEA and Chirac were willing to push the Gaullist idea of nuclear exports but faced opposition from the d'Estaing administration (Pouponneau 2013, 112). In short, it is possible that the important decision by the CEA on its nuclear assistance to the ROK was subject to d'Estaing's relations with the US and the domestic power game in France. It is thus necessary to explore what happened in US–France relations and French politics when the ROK entered the nuclear negotiation with the CEA after de Gaulle's resignation.

### *US–France nuclear negotiation, 1972–74*

France, under de Gaulle's leadership, advocated for nuclear armament and took a distinct approach from the US on global nuclear proliferation. Nevertheless, in the late 1960s, there were political transformations in France that could result in a shift in the nuclear policy as well as its relationship with the US. After facing defeat in a referendum triggered by the events of May 1968, Charles de Gaulle stepped down from the presidency, leading to a transformation in the French government where the prevailing Gaullist ideology started giving way to a more practical and adaptable strategy (Grand, Juan, and Vignet 2015, 191). As Sotou explains, however, the two successors of de Gaulle considered that France would benefit more from partnership, rather than rivalry, with the United States. Top decision makers of Paris thought that they could gain more economic, industrial, and/or political benefits from the US if they could facilitate their American counterparts to implement more stable and stricter rules for non-proliferation (Sotou 2011, 1–2).

Against this backdrop, the Pompidou government tried to open a new stage of France–US relations and obtain advanced missile and nuclear weapons technologies from the US since 1973. The White House welcomed the change in the Elysee Palace and wanted to support France (Burr 2011). However, there were various obstacles to overcome in developing the US–France relationship and implementing the US plan for strategic nuclear technology assistance to France.

First, the Gaullist technocrats were not fully subject to Pompidou's authority and resisted any deviation from the nation's nuclear strategy. The CEA maintained a notable level of independence in exporting France's nuclear technology and equipment as a means to acquire economic resources for further enhancing nuclear capabilities (Pouponneau and Mérand 2017). Additionally, internal political issues in the US caused delays in US–France cooperation. Nixon's declining political influence amid the Watergate scandal diminished the impetus for enacting new policies (Borstelmann 2012).

Furthermore, the nuclear negotiations between the United States and France were intricately linked with broader external issues, particularly the arms control debate with the Soviets.<sup>9</sup> Additionally, the divergence between the US and France in European political matters further hindered the partnership. The US sought to garner France's support on European political matters while concurrently discussing the provision of technological assistance for France's requested Poseidon and Multiple Independently Targetable Re-entry Vehicle (MIRV) technologies.<sup>10</sup> Adding to this, Kissinger's "Year of Europe" speech on April 23, 1973, was regarded as a US effort to weaken European unity by supporting France's nuclear weapon capabilities (Burr 2011; Lundestad 2005, 182–183). Given the intricate circumstances, the United States adopted a cautious approach. At a Pentagon meeting on September 5, 1973, Kissinger instructed the negotiation team to withhold decision-making during discussions with French policymakers.<sup>11</sup> As a result, the impasse in US–France cooperation concerning nuclear weapons technology persisted.

However, a new variable appeared in 1974 that ended the inertia of France–US nuclear discussions. India's first nuclear test in May, "Smiling Buddha," alarmed the US about the odds of proliferation in Third World states that had access to the technology from states with advanced nuclear technology, such as France. The US monitored France's transactions with Third World states for sensitive nuclear technology: the CEA was working on its deals with the ROK and Pakistan regarding reprocessing technology (Choi and Lee 2023, 58). The CEA also talked with Iran about the construction of nuclear power plants and a uranium reprocessing laboratory in 1974 (Pouponneau and Mérand 2017, 127). In this situation, the US strongly felt the need to change French nuclear policy, despite the obstacles faced the new President, Gerald Ford, and his Secretary of State, Henry Kissinger, in implementing the new policy. The new leader of France, Gerard d'Estaing, who entered the Elysee Palace in May 1974 after Pompidou's sudden death in April, was also ready to talk with the US and willing to stop the CEA–ROK deal if the US was able to give him what he wanted.

## **Triangle stalemate and resolution: US efforts to coordinate the interests of the allies**

### ***Impact of the Smiling Buddha on the two nuclear negotiations***

After the Smiling Buddha test, the US took various measures to dissuade the ROK from developing nuclear weapons. At the request of the US, Canada terminated its discussions with the ROK regarding exports of NRX and subsequently urged the

suspension of negotiations between the ROK and France concerning reprocessing technology.<sup>12</sup> In addition, the US, together with Canada, pressured the ROK into ratifying the NPT. The Korean National Assembly, which had been delaying the confirmation of the NPT since 1968, finally ratified the treaty in March 1975 as a precondition for the introduction of Canada's CANDU.<sup>13</sup> Consequently, the CANDU program supplied to the ROK was under the control of Canada.

Simultaneously, from the autumn of 1974 to the spring of 1975, the US started to work with states with advanced nuclear technology, i.e., the USSR, UK, France, Canada, West Germany, and Japan, to establish a new regime to control the export of sensitive nuclear technology to other states. Under this revised framework represented by the Nuclear Suppliers Group (NSG), the US aimed to curb the emergence of more NWS by exercising control over exports of materials, facilities, and technologies pertinent to nuclear weapons production, following the Indian nuclear experiments. Ottawa itself played an important role in preventing additional proliferation in this forum: Canada pushed the idea that nuclear supplier states should take responsibility for monitoring all nuclear activities and facilities based on the supplier's technology in their recipient state. In addition, Canada insisted that the ROK cancel the reprocessing agreement with France as a prerequisite for the transfer of CANDU technology to the ROK (O'Mahoney 2020, 17).<sup>14</sup> Ottawa delayed signing the Nuclear Cooperation Agreement regarding the heavy-water reactor deal with Seoul to support the US stance on the ROK-CEA deal for reprocessing facilities.<sup>15</sup> Indeed, as Jang argues, US influence on non-proliferation in the ROK was limited before the summer of 1975, although it feared entanglement in conflicts on the Korean Peninsula and in Northeast Asia that might have resulted from the ROK's nuclear armament (Jang 2020, 221). In this sense, Canada, along with France, made a significant difference in the game of non-proliferation in the ROK. This call for strict non-proliferation from North America also started to affect Paris's approach to its nuclear export policy.

While pressing the ROK and attempting to address the issues of the existing non-proliferation system, the US started to closely monitor France's consideration of proliferation in Third World countries, including the ROK, that sought to secure nuclear technology. The US in particular took seriously the ROK-France negotiation on nuclear assistance along with Pakistan-France and Iran-France deals because they could result in another Smiling Buddha. In November 1974, during discussions about France's participation in the Nuclear Supplier Conference with a French diplomat, Xaver de Nazelle, the US State Department was informed that negotiations regarding France selling reprocessing facilities to the ROK were ongoing.<sup>16</sup>

Recognizing US concerns, however, d'Estaing could not simply terminate the deal with Seoul immediately by following Washington's direction. Should d'Estaing have been coerced by the United States into nullifying the international contract, he would have encountered resistance from the remaining Gaullists within his government. This could also have destroyed his political foundation for a new nuclear policy. Although d'Estaing could have avoided political damage and secured US trust by having South Korea withdraw from the deal with the CEA, Seoul chose not to cancel its deal with France despite Washington's pressure (Rabinowitz and Sarkar 2018). In this context, d'Estaing delayed the decision on the nuclear deal between the CEA and the

ROK and asked Ford to push the ROK to cancel the deal by itself (Choi and Lee 2023, 62–63; Rabinowitz and Sarkar 2018, 286).

While both Ford and d’Estaing endeavored to uphold the non-proliferation principle, the CEA and SGN persisted in promoting nuclear exports and ongoing negotiations with South Korea. On April 12, 1975, the ROK signed a contract with Saint Gobain Techniques Nouvelles for the construction of reprocessing plants based on its 1974 MOU.<sup>17</sup> As the ROK ratified the NPT in April 1975, it required IAEA safeguards on its program for introducing reprocessing facilities. In July 1975, the IAEA Board of Governors initiated the assessment of the initial version of the ROK–France agreement. Despite cautions from Washington, Seoul advanced with the ROK–France Nuclear Cooperation Agreement. The CEA sustained its discussions with Seoul, even though it held a stance against the utilization of French reprocessing technology for potential nuclear armament by the ROK. In September 1975, the ROK–France Nuclear Cooperation Agreement received official confirmation with certification from the IAEA. The IAEA Board of Governors ensured that France would furnish the necessary facilities, technologies, materials, and expertise for reprocessing spent fuel to South Korea. The agreement also included safeguards to prevent South Korea from utilizing nuclear power for weaponization, in accordance with the regulations of the NPT and IAEA.<sup>18</sup> This meant France could provide the ROK with reprocessing technology despite opposition from the US. During October, the French company SGN assembled a roster of technicians and established the requisite organization for the infrastructure design for the construction of reprocessing facilities, along with facilitation of technology provision activities. This was done in anticipation of project approval from the French government. The ROK–France–IAEA Trilateral Nuclear Agreement, along with SGN’s activities, implied that the ROK and CEA were ready to implement the agreement on reprocessing.<sup>19</sup> In September 1975, the United States exerted significant pressure on South Korea. However, South Korea did not backtrack on its position, as the CEA remained steadfast in pursuing its agreements. The White House may have anticipated a prompt response from the Elysee Palace; however, there was no substantial comment or action from Paris regarding the recent advancements in the ROK–CEA reprocessing project (Figure 1).

Still, both the Elysee Palace and the White House needed more time and effort to narrow their ideas on the ROK nuclear question. In particular, d’Estaing appeared cautious about France’s shift to a stricter non-proliferation stance, which was not yet an agreed principle in Paris. As an illustration, during the NSG discussions in September 1975, the French delegates voiced their dissent concerning the “Full Scope Safeguard” concept. This principle, advocated by Canada, proposed that suppliers mandate recipients to subject all nuclear facilities and technologies to IAEA safeguards. The French representatives upheld their alternative proposal, “Project Safeguards,” which suggested that suppliers should only insist on sensitive facilities and technologies being subject to IAEA safeguards by the recipients.<sup>20</sup> On its part, Washington’s efforts for the execution of strategic assistance to France did not make much progress. The Ford administration’s approval for the provision of supplementary ballistic missile assistance to France on June 23 was still pending clearance from the US Congress. The endeavors of the White House alone were insufficient to meet France’s requirements.<sup>21</sup>



Figure 1. Agreement between the IAEA-ROK-FR for the application of safeguards in September 1975. Diplomatic Archive of Republic of Korea, Class No.: 741.61FR

While the unwavering commitment of the US to global non-proliferation would eventually lead to the cessation of ROK's nuclear weapons program, achieving this goal posed challenges for the US in the immediate term. Indeed, the ROK resisted US pressure for more than a year. Complicating the US non-proliferation endeavors was the intricate connection between the ROK's nuclear development and its agreement with France, which in turn was intertwined with ongoing US–France nuclear negotiations. In this context, the White House needed to redirect French policy, but the issue was the domestic political split in France, a legacy of de Gaulle. Similar to his predecessor, Pompidou, d'Estaing endeavored to enhance France's rapport with the US, aiming to secure economic, industrial, and/or political benefits that were previously unattainable without a noteworthy alteration in France's stance on non-proliferation. In addition, the French president considered that France could expedite the development of sophisticated nuclear technology essential for protecting the nation from the nuclear threat originating from the East, thereby potentially saving resources (Soutou 2011, 1–2). Yet, d'Estaing faced resistance from the Gaullists. Washington, therefore, needed to strengthen d'Estaing's foundation in domestic politics to finish this stalemate over the ROK nuclear issue.

### *End of triangle stalemate: Progress in US–France nuclear negotiations*

With the advancement of nuclear negotiations between the US and France, the triangle stalemate finally began to show signs of resolution. In October 1975, France reiterated its call to the United States for nuclear support, including the sharing of ballistic missile technology.<sup>22</sup> During November, France sought information regarding the progress of its appeals for nuclear aid, encompassing a CDC 7600 mainframe computer and technical guidance for the enhancement of delivery vehicles.<sup>23</sup> Soon after, France assisted the US in completing the NSG guidelines, which “served to close many of the loopholes and inadequacies of previous nuclear cooperation agreements between suppliers and recipients.”<sup>24</sup> Neither France nor West Germany

completely agreed to impose an outright ban on the export of uranium enrichment and reprocessing technology. Nonetheless, both did embrace the concept of exercising restraint when it came to exporting facilities associated with these technologies, a stance that was endorsed by the United States (Walker 2001, 225). Consequently, France had the responsibility to thwart nuclear proliferation and refrain from selling sensitive technology to recipient nations if there was an intention to employ such technology for the development of nuclear weapons programs. The issue of determining the likelihood of nuclear proliferation and the level of sensitivity pertaining to the technologies emerged. In the scenario of the ROK–France reprocessing agreement, the responsibility for making this judgment rested with either the IAEA or the providing nation, which, in this specific instance, was France. Following the IAEA’s determination that the reprocessing agreement did not amount to a proliferation activity, France altered its understanding of the contract’s essence, with the French president holding both the responsibility and the political authority to make this adjustment. The NSG accord unquestionably bolstered the coalition for non-proliferation between Ford and d’Estaing (Choi and Lee 2023, 79). Despite the Republic of Korea’s repeated assurances that it would utilize reprocessing technology solely for peaceful intentions, adhering to the international regulations outlined by the NPT and IAEA, d’Estaing declined the Korean appeal to proceed with the construction agreements for reprocessing. This decision was founded on the rationale that the ROK might have the potential to develop nuclear weapons as a result of the reinforcement of US–France collaboration.

The ROK eventually realized that the Elysee Palace would not honor the contract with the ROK even if the ROK secured support from the CEA and Chirac. While urging the US to fulfill its commitment to provide technological aid, Giscard d’Estaing was simultaneously postponing the approval of the SGN reprocessing project. A meeting took place between AERI Vice Director Jae Yang Joo and the SGN representative in Japan from December 10 to 12, 1975, during which Joo inquired about the delay in the project. SGN communicated to Joo that the French president was deferring authorization due to apprehensions that the ROK’s intentions might not be geared solely toward peaceful purposes.<sup>25</sup> SGN suggested that the Korean government should provide France with assurances that the reprocessing technology and facilities would exclusively be employed for peaceful energy initiatives. The Republic of Korea heeded SGN’s counsel and made efforts to reassure France about its peaceful intentions.<sup>26</sup> Despite the Republic of Korea’s endeavors, the French government persisted in postponing the approval of the project. Simultaneously, France conveyed its willingness to collaborate with the United States via the NSG. Given these developments, the ROK concluded that it would not be able to obtain any further benefit from nuclear negotiations with France.<sup>27</sup> Washington and Ottawa also exerted pressure on the ROK by linking the ROKG–CEA reprocessing deal with US nuclear assistance toward the ROK and CANDU deal.<sup>28</sup> Following a period of prolonged uncertainty and turmoil, in January 1976, the ROK ultimately opted to terminate its reprocessing agreement with France.

Subsequent to the ROK’s decision to cancel the contract with France, the nuclear power committees of both Korea and the US engaged in two working-level discussions in February and June of 1976. These talks were focused on the possibility of

further nuclear support from the US, given the discontinuation of the ROK–France reprocessing facilities agreement.<sup>29</sup> Nevertheless, there were no subsequent talks convened to revise the ROK-US Nuclear Cooperation Agreement. While the ROK managed to attain supplementary assistance from the US with the backing of the CEA, it found itself under heavy pressure from the US.

## Conclusion

Understanding the complex trilateral relations among the US, France, and the ROK is crucial for comprehending the ROK's decision-making process regarding its nuclear development. The US needed to balance its non-proliferation efforts with its alliance relations with the ROK and France. Meanwhile, France, with its fluctuating attitude towards the US, sought to resolve the stalemate while also pursuing its own interests. The ROK, with its security and economic concerns, resisted US pressure while relying on its nuclear contract with France. Ultimately, the ROK abandoned its nuclear development when it became clear that France would not fulfill the contract.

In order to understand the trilateral relations among the three nations, this article broadens the scope of the issue of the ROK's nuclear development beyond ROK–US relations by considering the larger historical context of the 1970s: the US attempt to build a new non-proliferation regime in the changing Cold War order. The ROK–France nuclear cooperation negotiations and the resulting contracts had the potential to undermine the non-proliferation efforts led by the US. The ROK's nuclear weapons development could have set a bad precedent and encouraged other countries to seek similar deals with France or other nuclear suppliers, leading to nuclear proliferation. The US was concerned about this and exerted pressure on France to reconsider its position.

In this complex triangular relationship among the US, France, and South Korea, the role of France was important since it was influenced by the changing attitude of France towards the US after World War II. What made the issue more complicated was French domestic politics. The changing dynamics of the conflicts between the Gaullists and the new pro-US leaders were critical in the formation, stalemate, and resolution of the trilateral relationship. The Gaullists continued to export nuclear technology to Third World countries, including South Korea, despite the US's call for strict non-proliferation policies. On the other hand, new leaders in France sought US nuclear technology support. This led to a complex situation where the US and the ROK had to deal with France with two different nuclear proliferation policies.

While examining the intricate process of trilateral negotiations, this study raises crucial theoretical issues about the requisites of building a successful non-proliferation regime. It shows that resolving the challenges posed by the allies regarding the non-proliferation regime was not an easy task. The pursuit of commercial interests through nuclear technology export—even among Western allies—could be a serious threat to nuclear non-proliferation. The US, therefore, could not simply use force or punishment to deter nuclear proliferation by its allies but had to coordinate two different yet interrelated interests: the desire to develop nuclear weapons by importing nuclear technology and the exploitation of commercial opportunities to export nuclear technology. To solve these coordination issues within the alliance for a successful non-proliferation regime, Washington did not just apply political pressure



on Seoul. Instead, it tried to solve the complicated issue by meticulously adjusting the conflicting interests of the states involved. Therefore, the US offered security guarantees as well as economic and technological benefits to the ROK. Simultaneously, it attempted to prevent France's pursuit of economic gain and encouraged its participation in the US-led non-proliferation regime by assisting France in developing more advanced delivery systems for its nuclear arsenal. By examining US efforts to deter the ROK's attempt to develop nuclear weapons, this study ultimately demonstrates the difficulties and importance of coordination among allied states for building a non-proliferation regime.

The ROK's nuclear capabilities have significantly evolved over the past few decades, and it is now recognized as a major supplier of nuclear technology and facilities. The lifting of some restrictions on the ROK's nuclear capabilities in the renewed ROK-US Nuclear Agreement in 2015 reflects the evolving nature of the ROK's relationship with the US in the nuclear sphere. While the ROK's nuclear armament is not allowed, the new agreement allows for more efficient and effective uses of nuclear energy with the reprocessing of used nuclear fuel and the enrichment of uranium up to 20 percent. The coordination of interests between the ROK and the US was a key factor in reaching this agreement, which further emphasizes the importance of such coordination in the successful operation of an international non-proliferation regime.

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## Notes

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