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After the Hegemony of the “Atoms for Peace” Program: Multilateral Nonproliferation Policy under the Nixon and Ford Administrations

*Shinsuke TOMOTSUGU**

INTRODUCTION

The United States provided research reactors, isotopes, and training programs to its Western allies from December 8, 1953, when President Dwight D. Eisenhower gave his “Atoms for Peace” speech, to the end of the 1960s. In a divided world, the Americans took the lead in the development of nuclear power for civilian uses. In an attempt to avoid the spread of latent nuclear weapons capability, the United States used atomic cooperation as a diplomatic tool to demonstrate the advancement of its technologies against the Communist bloc, to boost the wellbeing of its allies, and to prevent the penetration of Communist influence with US allies. Yet this American-led nuclear order has eroded just as US hegemony has eroded in other areas such as the international economy and monetary systems.

The 1970s was a historical turning point where “US decision makers grappled with the challenges beyond the Cold War,” according to historian Daniel Sargent.¹ At the time when Soviet and US nuclear forces reached equilibrium, global issues such as human rights, environmental health, and depleted natural resources had become important.² Nonproliferation of nuclear weapons also was an issue. In this article, I describe how the United

*Associate Professor, Hiroshima University

States attempted to halt the decline of its influence in the area of civilian nuclear technology.

Before taking up the main subject, however, let us see how the United States disseminated atomic energy overseas for civilian use in the face of the risk of such technologies leading to proliferation of nuclear weapons. In the 1950s and 1960s, the United States was alone in undertaking the project of obtaining low-enriched uranium (LEU) that was necessary for manufacturing nuclear fuel for reactors for peaceful purposes. Although this capability could ultimately lead to producing high-enriched uranium (HEU), which is essential for producing an atomic bomb, the United States boasted of its superior capability in enriching uranium based on its ample experience and knowledge accumulated through the Manhattan Project. European states at first collaboratively launched their own programs to develop enrichment capability; however, they suspended those programs because they could import low-priced uranium from the United States. The United States could thus promote cooperation in the field of nuclear energy with its European and Asian allies while preventing the proliferation of technologies that could be applied to the production of nuclear weapons.

The 1973 oil crisis, however, put an end to US hegemony in the civilian atomic field. Recognizing how vulnerable an oil-dependent society was, more states placed construction orders for nuclear power plants; consequently, by the 1980s, the international nuclear industry faced a shortage of enriched uranium supplied by the United States. To match supply with the growing demand, the United States began to require any potential customer, internationally and domestically, to determine the ordering quantity of LEU in advance, even long before construction of planned power plants. This new way of commercial contract that the US government/potential supplier wanted to introduce would encourage the American private sector to enter the enrichment business.³ Because this new requirement for making contracts forced recipient countries to bear the risk of forecasting electricity consumption into the distant future, states lost faith in the United States as a supplier.

Before the oil crisis, European states had already begun conducting their own enrichment programs as well as dealing with the Soviet Union as a supplier of the required LEU. In September 1971, the United Kingdom, the Netherlands, and West Germany (Federal Republic of Germany; FRG) established the enrichment company URENCO. In March 1974, France, Italy, Spain, and Belgium launched the European Gaseous Diffusion Uranium Enrichment Consortium, also known as Eurodif. France's nuclear

agency signed a contract in the summer of 1971 with a Soviet company, TENEX, for LEU for France’s nuclear power plant in Fessenheim.⁴ Although Japan did not sign a contract with the Soviet Union, it conducted research and development and finally launched its own enrichment program in 1985. The United States initially promoted atomic cooperation to solidify the unity of its alliances and demonstrate its superior political and economic system. However, the United States had to step down as the champion in the atomic field when these new rivals in uranium-enrichment services appeared in the global marketplace.

Moreover, France, the FRG, the United Kingdom, Belgium, and Japan planned to reprocess spent nuclear fuel and retrieve the plutonium and uranium for the production of mixed oxide fuel (MOX) used in conventional-type commercial nuclear reactors. These countries also wanted separated plutonium as fuel for fast-breeder reactors, which they used for research and development, mainly during the 1960s and 1970s. However, a heavy initial investment in the development of reprocessing technologies and facilities, newly designed MOX fuel fabrications, and innovative nuclear reactor requires a large market. Of these states, France and the FRG particularly wished to export reprocessing technologies to Brazil, Pakistan, Taiwan, South Korea (Republic of Korea; ROK), and Iran, despite separated plutonium being used not only for civilian purposes but also as fissile material in making atomic bombs. In fact, India conducted its first nuclear detonation test in 1974 using plutonium retrieved from spent fuel from a Canadian-designed reactor that was originally built for peaceful purposes in 1964. In these circumstances, the United States tried to maintain its influence over the global enrichment market by encouraging US-led international joint ventures. The United States also saw these joint ventures as a way to minimize the proliferation of reprocessing technologies.

Scholars have tended to study how certain countries initiate or abandon nuclear weapons programs.⁵ Few, however, have investigated what specific measures the United States undertook to dissuade certain nations from possessing sensitive technologies in the 1970s, when US hegemony was ending in the field of nuclear energy for peaceful use. In this article I illustrate how the United States attempted to revive its hegemonic position in the global nuclear market to prevent the spread of sensitive technologies and consider what lessons the United States might have learned by examining three initiatives under the Richard M. Nixon and Gerald R. Ford administrations: (1) the US-led public-private enrichment venture called Uranium Enrichment Associates (UEA), which Iran and Japan were

expected to join and fund; (2) multinational reprocessing proposals for Korea and Japan; and (3) multinational reprocessing proposals for Iran and Pakistan.⁶

URANIUM ENRICHMENT ASSOCIATES

With the increase in contracts for nuclear power plant construction worldwide, the United States found it difficult to fulfill the demand for enriched uranium with its facilities in Oak Ridge, Tennessee; Paducah, Kentucky; and Portsmouth, Ohio, which had once monopolized Western allies' enrichment services. Uncertainty about the ability of the United States to keep up with enrichment encouraged other industrialized nations to enter the global nuclear market. This step would spread sensitive technologies that might result in more countries developing nuclear weapons capability. Thus, to prevent proliferation, the United States wanted private companies to form a consortium to fund the building of a fourth enrichment plant in the United States.

On February 11, 1974, at the Washington Energy Conference, which led to the creation of the International Energy Agency (IEA), President Nixon's secretary of state Henry Kissinger asserted, "Within a framework of broad cooperation in energy, the United States is prepared to examine the sharing of the enrichment technology-diffusion and centrifuge" and "such a multilateral enrichment effort could be undertaken in a framework of assured supply, geographic dispersion, and controls against further proliferation."⁷

Because enrichment required a huge initial investment, the Nixon and Ford administrations (from January 1969 to January 1977) expected to receive investment from overseas, particularly from Japan and the Imperial State of Iran, which was rich in oil money. The United States intended to reconstitute the international enrichment market in a manner that was favorable to defending its national interests, while avoiding the proliferation risk of exporting sensitive technologies and materials. In response to the US government's call for creating a private venture, Bechtel, Westinghouse, and Union Carbide established Uranium Enrichment Associates (UEA) and began exploring the feasibility of constructing a new enrichment plant in the United States with capital investment from Japan, which was seeking a stable enrichment service. In Tokyo, the panel set up by Japan's Atomic Energy Commission on uranium enrichment in 1971 recommended investing in the new American enrichment venture, or perhaps a multinational

initiative in Europe.⁸

Accordingly, preliminary negotiations were held in June 1973 between UEA and the investigation board on the uranium enrichment business that Japanese electricity companies had set up earlier.⁹ President Nixon and Prime Minister Kakuei Tanaka delivered a communiqué at the US–Japan summit on August 1, 1973, in Washington, DC, that included a pledge for a joint venture in the UEA.¹⁰ Following these meetings, however, the UEA judged it would need an additional partner and also notified Japan that 60 percent of the required capital would have to come from overseas. In alignment with the UEA, the US State Department sounded out France and the FRG on the matter. Recognizing France and the FRG's hesitation, the UEA and the State Department eventually determined to seek the participation of Iran in addition to Japan.

In the early 1970s, with substantial revenues from oil exports, Iran was industrializing and modernizing its weapons, and it launched a commercial nuclear program.¹¹ After establishing the Atomic Energy Organization of Iran in March 1974, Teheran, apart from the UEA plan, tentatively obtained assistance from the United States for construction of two commercial reactors in June 1974. In May 1975 it also began constructing two German-designed reactors in Bushehr. The following month, Akbar Etemad, Iran's first minister for nuclear energy, made a tentative deal with France to import six French reactors, while agreeing to participate in Eurodif through an indirect investment arrangement with Eurodif's subsidiary, Sofdif.

Meanwhile, the Ford administration sought financial help from Iran for the UEA project. David Elliott, a staff member of the US National Security Council, argued that the success of UEA would depend on it.¹² Project Board-Private Uranium Enrichment, which was established to prepare the venture by Robert Seamans, the director of the US Energy Research and Development Administration (ERDA), wanted to increase Iran's proportion of the funding from 20 percent to as much as 30 percent.¹³

Within the Ford administration some feared the increase in Iranian participation because of proliferation risk. David Elliott, for instance, feared Iran might acquire the right to obtain more enriched uranium than needed for its domestic demand.¹⁴ He expressed his concern that Tehran might export the surplus to sensitive areas such as Pakistan and Brazil.¹⁵ The US Congress was likely to object to such a situation. Elliott understood, however, that the UEA project would be seriously delayed without a larger Iranian investment.¹⁶ The Ford administration faced a dilemma over the needed Iranian involvement in the UEA project and the associated

proliferation risk.

Tehran questioned the proposal from the outset, as it expected the US Congress to oppose the arrangement and the US Nuclear Regulatory Agency to refuse permission for the export of enriched uranium to Iran.¹⁷ Although the United States was still a major supplier of enriched uranium worldwide, it was no longer the sole provider. As the US embassy in Tehran observed in March 1975, the Iranians insinuated that they had an alternative in their comprehensive agreement with FRG as a new supplier and Brazil as a customer for nuclear energy.¹⁸ Iran asked whether it could immediately import the entire amount of enriched uranium from the United States in accordance with the Iranian proportion of investment. Whereas the Ford administration publically hesitated to immediately transfer all the enriched uranium to Iran, it confidentially, albeit reluctantly, considered consenting to the Iranian wish as a “fallback option.” However, the United States did not get a chance to play its hand. As Iran’s nuclear energy minister Etemad said in retrospect, Iran lost interest in the UEA venture in the early phase of negotiations.

The United States, meanwhile, persuaded Japan to join UEA after suggesting Iran as a major candidate.¹⁹ In Japan, the investigation board on the uranium enrichment business evolved into the Noshuku Saishori Junbikai (Enrichment and Reprocessing Preparatory Committee), or what American embassy simply called the Enrichment and Reprocessing Group (ERG).²⁰ This new committee tried to be more discreet than its predecessor organization in dealing with the American-led multinational enrichment project. Kissinger sent a telegram to the US embassy in Tokyo asking whether 30 percent Iranian participation would encourage the Japanese to participate in UEA or put them off. Sporadic negotiations took place in Japan from July to August 1975, between Myron Kratzer, deputy assistant secretary of state for nuclear energy and energy technology affairs, and Ryukichi Imai and Shigefumi Tamiya (a retired bureaucrat from Japan’s Science and Technology Agency) from newly established ERG. Imai and Tamiya expressed reservations about the UEA proposal because 55 percent of the vote was to be retained by the United States, though the financing would be only 40 percent American and 60 percent by foreign countries.²¹ Kratzer concluded that “Japanese participation in [the] project is far from assured.”²²

The US delegation, comprising Harold Bengelsdorf from the State Department, Charles Van Doren from the Arms Control and Disarmament Agency, and Gerald F. Helfrich and Jarvis L. Schwennesen from the ERDA,

held a series of talks with the Japanese government and private power companies in Tokyo from January 26 to 29, 1976. According to US ambassador James Hodson, Japan took a “hardboiled business stance” on the UEA issue. The multinational enrichment concept was a real dilemma for the Ford administration because it wanted to make UEA attractive to Japan and Iran but was unwilling to forego the US leading position.

It was American domestic politics that ultimately determined the fate of the UEA. The General Accounting Office published a report in November 1975 stating that the United States should consider expanding the enrichment capacity of existing facilities through repairs because the UEA project would require too much capital. At the public hearing on the Nuclear Fuel Assurance Act, which was to be the legal basis for UEA as it authorized the ERDA to provide the private sector with the required financial guarantees, Kissinger, on February 2, 1976, repeated his views on the act:

[The] act will fill an indispensable role in pursuit of our foreign policy objectives by maintaining the United States in its longstanding position as the world’s foremost supplier of such enrichment services. Our policy of sharing the peaceful benefits of nuclear energy with others has been the key factor in the development of an unprecedented network of international agreements, arrangements, and institutions which have, to an encouraging degree, enabled us to avoid the unrestrained proliferation of nuclear weapons.²³

Despite Kissinger’s efforts, the Nuclear Fuel Assurance Act, by a narrow margin, failed to pass in the US Senate, although it passed in the House in August. The act expired in the fall of 1975. From the point of view of the Ford administration, the multinational enrichment venture would have strengthened US nonproliferation policy; however, it appeared dangerous to half of the senators. The UEA was not only unable to attract enthusiastic support from potential foreign partners, it also lacked sufficient backing at home.

MULTINATIONAL REPROCESSING FAILURE IN KOREA AND JAPAN

From the 1950s to the mid-1970s, Western industrialized nations considered the reprocessing of spent nuclear fuel as a rational option for efficient use of resources. When it first appeared that American enrichment services were unlikely to meet the demand overseas, Dixy Lee Ray, the

director of the US Atomic Energy Commission, argued at a congressional hearing in August 1974 that reprocessing spent fuel for MOX fuel fabrication would compensate for meeting all the demand for enriched uranium.

India succeeded in its first nuclear bomb test on May 18, 1974, using plutonium from reprocessed spent nuclear fuel at Bhabha Atomic Research Centre located in Trombay near Mumbai. The United States became more apprehensive about the risks posed by reprocessing technologies, which were supposedly for peaceful use. Although some countries, including India, Pakistan, and Israel, have still not signed it, the 1970 Treaty on the Non-Proliferation of Nuclear Weapons (NPT), in article 4, permits signatory countries to use nuclear energy for peaceful purposes as an “inalienable” right. The problem for the United States was how to respect this legal right while dissuading countries from acquiring their own sensitive materials. The Ford administration decided that “multinational reprocessing” would be a good solution. In this concept, a multilateral reprocessing plant would be established in a more reliable nation, which less reliable neighbors would be allowed access in exchange for giving up their own reprocessing capabilities.

This idea emerged soon after India’s first nuclear test. The negotiation team, led by US Arms Control and Disarmament Agency director Fred Ikle and Canadian Ministry of External Affairs assistant undersecretary of state for economic affairs Michel Depuy, consulted on the nonproliferation issue on July 25, 1974. In these talks, the US delegation promoted multinational reprocessing plants as a way to prevent Pakistan from obtaining a reprocessing plant.

Furthermore, the undersecretaries committee of the NSC argued in a memorandum for President Ford on December 5, 1974, that it would be desirable to “restrict the spread of independent national enrichment and chemical reprocessing facilities through (a) reaching common principles regarding the supply of sensitive technologies, equipment, and assistance in the construction of national facilities; and (b) encouraging multinational plants (or bilateral plants involving the US) capable of satisfying future world demands for reliable and economic commercial services in these fields.”²⁴

President Nixon had declared at a press conference in Guam on July 25, 1969, that the United States “would not undertake all the defense of the free nations of the world.” The resulting decline in confidence in the US military presence in East Asia might have encouraged the ROK to seek the sensitive technologies and facilities needed for the production of nuclear weapons.

The Ford administration followed Nixon's adamant stance when the ROK sought to purchase a reprocessing plant from France. Discovering South Korean president Park Chung-hee's nuclear ambitions through intelligence analysis, President Ford and his advisers recognized the risk of nuclear weaponization in such a geopolitically sensitive area as the Korean Peninsula, as it could spark a further spread of nuclear weapons, particularly to Japan, or even provoke a limited nuclear war.²⁵

The ratification of the NPT by the ROK did not take place until April 1975. By August 1974, the ROK's failure to ratify the NPT had aroused strong doubts within the Ford administration, along with the Korean move to import a French reprocessing plant that would allow the nation to acquire plutonium. The US mission at the International Atomic Energy Agency sent a telegram to the State Department in reference to the report called REF A. Seoul 4957 and argued that "Report REF A that ROK government apparently would prefer to keep an option to develop nuclear weapons is most revealing report we have yet seen of real reasons for Korean failure [to] ratify NPT" and concluded that the "potential for acquisition by Korea of large quantities of plutonium is significant, and we believe as result that question of ROK ratification of NPT warrants very high priority attention."²⁶ Under these circumstances, the United States attempted to apply the concept of multinational reprocessing to the ROK. By March 26, 1975, W. R. Smyser, a staff member at the State Department, had prepared a memorandum for National Security Advisor Brent Scowcroft requesting a meeting with the US ambassador to the ROK, Richard L. Sneider. This memorandum gave interim guidance on "Korean nuclear weapons development" and "stressed that our policy on this question has to be evolved in a multilateral framework which includes the other nuclear material suppliers."²⁷ In this case, the multinational facility had to be established in a more reliable nation, namely Japan.

Oddly enough, the ROK countered the US proposal with its own version of a multinational reprocessing plant, one that would be built on its own territory. The ROK government understood that the Japanese government would encounter difficulties in trying to locate a second reprocessing plant on Japanese territory due to strong protests by environmental and peace groups. Thus, South Korea informally offered their multinational-reprocessing concept to the Japanese government with the premise that a facility would be established in the ROK.²⁸ In February 1975, Sneider reported that high-ranking Korean officials told the feasibility study team of the American reactor vendor G.E. that an ROK-based multinational

reprocessing plant would be able to export plutonium to both Japan and Taiwan.²⁹ Thus, the Park government attempted to exploit the concept of multinational reprocessing as a way to get its own reprocessing plant.

On April 17, 1975, in a talk with the official in charge of scientific matters at ERDA, ROK's minister of science and technology, Choi Hyong-sop, argued that the ROK, Japan, and Taiwan should collaborate on a regional reprocessing plant and radioactive waste disposal facility. According to Hyong-sop, South Korean involvement in a multinational reprocessing framework with international control and monitoring would put North Korea (Democratic People's Republic of Korea; DPRK) at ease.³⁰ Furthermore, he asked the United States to persuade Japan to join the ROK-led version of the multinational reprocessing plant in Korea.

President Lee Eun-Taek of the Korean industry giant Samsung met with Sneider on September 5, 1975, to brief him on his company's ambition to play a key role in organizing a tripartite reprocessing program involving the ROK, Japan, and the United States (not mentioning Taiwan). At this time, he confided that Samsung founder and chairman Lee Byung-chul had talked with Japanese business leaders.³¹ Furthermore, Lee Eun-Taek visited the US State Department on September 29, 1975, to discuss Samsung's interest in being part of a private multinational reprocessing plant.³² The State Department knew that Lee had visited European countries with the aim of a nuclear trade, although Lee was close-mouthed about it in this venue. The next month, Korean officials talked with Shigefumi Tamiya, an officer of ERG, about a joint study on a multinational reprocessing facility involving the ROK, Japan, and the United States.³³ In the talks, South Korean officials proposed a multinational reprocessing plant in Korea. Tamiya replied by saying that it would be conceivable for Japan if the United States took the initiative.³⁴

The implementation of a reprocessing plant on the Korean Peninsula was not acceptable to the Ford administration, however, whether on a multinational basis or solely operated by the ROK. The State Department prepared an instruction for Ambassador Sneider in Seoul to dissuade the ROK from importing a reprocessing plant from France by July 1975.³⁵ In this directive, the State Department formally proposed a multinational reprocessing facility outside ROK as an alternative.

While the United States never explicitly stated that a multinational reprocessing center should be built in Japan, it clearly demonstrated its concern about the "sensitive and unsettled Japanese position on multinational versus national reprocessing modes for a large commercial plant."

Simultaneously, in a regional study led by the International Atomic Energy Agency, the United States stated that “Japan should be drawn actively into participation.” Presumably, the Ford administration hoped that a Japan-based reprocessing plant would be useful in discouraging the ROK’s ambition of getting its own facility.³⁶ The United States focused on a second possible Japanese reprocessing plant rather than Japan’s pilot plant in Tokai, which was ready for operation. A State Department analysis observed that “some of Japanese concern over the multinational concept may have been reduced since the US government assured that government” that they “did not expect existing Tokai plant to be affected by proposed multinational plants.”³⁷

The United States applied more pressure on the ROK after the summer of 1975. On August 23, Ambassador Sneider informed Choi Hyong-sop of the Ford administration’s growing concern that a reprocessing facility in the ROK might provoke the DPRK to seek nuclear technologies from China and the Soviet Union. Furthermore, to express US support for a multinational reprocessing plant, but one located outside the ROK, Sneider talked with Lho Shin Young, ROK’s acting foreign minister, along with Yoon Yong Ku, director of the Korean Atomic Energy Research Institute, on September 25; Nam Duck Woo, deputy prime minister, on September 26; and the aforementioned Choi Hyong-sop on September 29.³⁸ Robert S. Ingersoll, on October 9, requested the South Korean ambassador, Hahm Pyong Choon, to inform his home government of the American opinion that the ROK should forgo the introduction of a reprocessing plant.³⁹

In the negotiations with Ambassador Sneider on October 24, Lho Shin Young argued that it would be impossible to cancel the contract for a French reprocessing plant to be used for study purposes only.⁴⁰ Furthermore, he asked Sneider why the United States was more suspicious of the ROK than Japan in regard to developing reprocessing capability. Sneider bluntly replied that “Japan was not on DMZ; ROK was critical area where NK [North Korea] and China and Soviet reaction needed to be considered; we know how strongly adverse Japanese people are to nuclear weapons development.”⁴¹

The Japanese government, however, did not want to get involved in multinational reprocessing as it considered this concept politically volatile. To avoid intergovernmental talks as much as possible, Japanese leaders entrusted the industrialist group ERG with conducting the sensitive negotiations. At the same time that the Ford administration urged the ROK to give up its own reprocessing with French assistance in exchange for

multinational reprocessing, it continued to try to persuade the Japanese government to engage in official talks with the United States.

Although they were invited to join the various versions of multinational reprocessing projects by the United States and by the ROK, the Japanese government and nuclear industry remained noncommittal about both proposals. Japan avoided getting trapped in proposals from both sides. On December 24, 1975, Seiya Nishida, a minister in the Japanese Embassy in the United States, officially informed the State Department that the Japanese government did not intend to negotiate with its American counterpart on this topic.

Meanwhile, on December 10, 1975, Ambassador Sneider and the State Department attempted to intimidate the ROK by indicating that the acquisition of a French reprocessing plant could have a negative impact on US-Korean relations, including the security partnership.⁴² Soon thereafter, the ROK gave up trying to gain a reprocessing plant of its own. This decision probably did not come as a result of the possibility of participating in multinational reprocessing but rather because of the country's need for continuing US security assistance.

MULTINATIONAL REPROCESSING FAILURE IN IRAN AND PAKISTAN

The United States was somewhat ambivalent about Iran. The Ford administration did not favor the transfer of sensitive technologies to the Iranians without strict safeguards. On June 23, 1974, in replying to a question by French daily *Le Monde* as to "whether Iran would one day possess a nuclear weapon," Shah Mohammad Reza Pahlavi answered, "Certainly, and sooner than is believed, but contrary to India, we have first thought of our people and then of technology."⁴³ The US Embassy in Paris called attention to this interview in a cable to Washington, DC, in June 1974.⁴⁴

Nevertheless, Iran was a geopolitically important ally, a potential good client for a US-designed commercial reactor and a strategic partner in the US global nuclear nonproliferation effort. As mentioned, the Ford administration had invited Iran to join a multinational enrichment venture. However, the United States did not want Iran to independently seek sensitive nuclear technologies. National Security Decision Memorandum no.292, issued on April 22, 1975, directed the United States to require Iran to obtain approval for reprocessing US-supplied fuel.⁴⁵ This memorandum also directed the United States to indicate that "the establishment of a

multinational reprocessing plant would be an important factor favoring such approval.”⁴⁶ National Security Advisor Brent Scowcroft, in a memorandum to President Ford dated January 26, 1976, stated that “our object [is] to preclude reprocessing and storage in wholly [Iranian] national facilities,” while the United States had assured the government of Iran that it “would permit our fuels to be reprocessed in Iran on a suitable multinational basis.”⁴⁷

According to a memorandum dated February 4, 1976, President Ford approved the proposal that “the State Department and ERDA should promptly send a high-level team to Tehran in order to expose to the Shah and others to [sic] the reasons for the US interests in discouraging the establishment of completely [single] national reprocessing in Iran and other countries.” The United States intended to approve a multinational reprocessing facility located in Iran.

The purpose of the Iranian multinational reprocessing plant was not only to prevent Tehran from solely operating reprocessing plant but also to keep the Pakistanis from acquiring the reprocessing plant from France. Scowcroft wrote a memorandum for the Oval Office with talking points before a meeting between the President Ford and Hushang Ansary, minister of economy and finance of Iran, that was scheduled for March 29, 1976.⁴⁸ Scowcroft expressed his views on one of the possible discussion points that Iran could contribute to “mutual non-proliferation objectives by bringing Pakistan into a multinational reprocessing venture in Iran.”⁴⁹ It was intended that Minister Ansary, Iranian ambassador Ardeshir Zahedi, Secretary of State Kissinger, Undersecretary Charles Robinson, and Scowcroft would exchange views in a meeting.

Both Pakistan and Iran were important US allies. Pakistan was a member of the Southeast Asia Treaty Organization (SEATO), which the United States had created, while Iran was a member of the UK-led Central Treaty Organization (CENTO), which the United States had joined as an observer. However, after India’s first nuclear detonation in 1974, the possible nuclear weaponization of Pakistan was a more urgent issue than the Iranian nuclear program for the Ford administration. Kissinger lamented in a memorandum to the president on September 9, 1974, that the “Indian nuclear explosion, of course, raises the danger of proliferation in this region. Nothing we can say will effectively calm the Pakistanis on that subject.”⁵⁰ Whereas Pakistan was far advanced in the field of nuclear energy for peaceful uses, it was unstable geopolitically. Pakistan had been at war with India over territory and sphere of influence in 1947–49, 1965–66, and 1971. The Indian nuclear

test had heightened Pakistan's hostility. In such circumstances, the United States requested Pakistan to reconsider the purchase of a reprocessing plant from France. Kissinger presented the American concerns to Prime Minister Zulfikar Ali Bhutto in New York on February 26, 1976. However, both France and Pakistan rejected the US request, and they planned to proceed with the reprocessing project in Pakistan.

Similar to the case of the ROK, Pakistan advocated multinational reprocessing on its own territory. Noting that Iran lacked skilled manpower, Munir Kahn, the chairman of the Pakistan Atomic Energy Commission, emphasized to the US mission International Atomic Energy Agency in Vienna in February 1976 the advantages of establishing a multinational plant in Pakistan "with a seaport available for receiving spent fuel, a permanent waste storage facility (in an arid region), and a supply of skilled manpower."⁵¹ Prime Minister Bhutto asserted that the shah of Iran had expressed his willingness to convert the planned reprocessing plant in Pakistan into a regional project.⁵²

In an unofficial meeting held in Washington, DC, from April 20 to 23, however, Iran's atomic minister, Etemad, denied the possibility that Iran would join a Pakistani-based regional reprocessing project.⁵³ He emphasized that the "Shah was very firm in not wishing to become associated with the Pakistani reprocessing effort."⁵⁴ Moreover, the shah himself claimed that "Bhutto must have misunderstood him if he thought that he (the Shah) [sic] was in favor of having a reprocessing plant in Pakistan."⁵⁵ The shah believed that "such a plant should be located in Iran."

In an interview conducted by the author, Etemad recalled that he once asked Kissinger if he (Kissinger) really thought, not as a governmental person but as a political scientist, that Pakistan would abandon its own nuclear program in favor of multinational reprocessing outside the country. Kissinger replied that the Pakistanis would certainly not give up their program. In fact, by July 1976, Kissinger no longer wished to "sponsor an Iran multinational reprocessing plant as a quid pro quo for Pakistan cancellation of its planned plant."⁵⁶ He observed that a multinational reprocessing in Iran "would be inconsistent with his demarche to the FRG[s] objecting to their possible provision of a reprocessing plant."⁵⁷

Understanding that the United States did "not have a really legitimate basis on which to object to Pakistan wanting to reprocess its fuel in its own country,"⁵⁸ Kissinger eventually concluded that "the concept [was] a 'fraud' since there [were] virtually no locations where either we or the host [were] really ready to approve."⁵⁹ He finally recommended using pending export of

A-7 military aircraft to Pakistan as leverage to prevent Pakistan developing a reprocessing plant.⁶⁰ The disagreement between Iran and the United States over nuclear development in Iran centered on the American “desire for firm controls over reprocessing of nuclear fuel” and Iranian “unwillingness to concede.”⁶¹ Thus, in due course, this multinational reprocessing concept failed in both the Middle East (Iran) and South Asia (Pakistan).

Iran, Pakistan, and the United States did not seriously talk about multinational-based reprocessing after the summer of 1976. In October 1976, President Ford sent formal notice to all American allies, including Iran and Pakistan, that the United States would forgo its own reprocessing and that every country should refrain from reprocessing spent fuel for the time being until there was effective elimination of the proliferation risk from sensitive technologies.

It was during the Jimmy Carter administration that Iran and Pakistan suspended reprocessing. However, this was not because of the US idea of multinational reprocessing. In the case of Pakistan, on August 23, 1978, General Muhammad Zia-ul-Haq, who came to power by a coup d'état, announced that France had backed out of the deal to provide a reprocessing plant. Zia had declared martial law in Pakistan on July 5, 1977. The change in the political landscape might have affected the French decision.

In the case of Iran, the Carter administration continued negotiations with Tehran, and on July 10, 1978, the two governments signed a bilateral agreement concerning cooperation in civil uses of nuclear energy. In this agreement, Iran could only reprocess spent fuel if both countries agreed, although Tehran gained “most favored nation” status for reprocessing. As Louis V. Nosenzo, deputy director of Nuclear Policy and Operations in the Bureau of Political-Military Affairs and assistant secretary of state at the time of the negotiations with Iran, recalled, “most favored nation status referred to conditions in any new US Agreement for Nuclear Cooperation (not existing agreements, such as the US agreements with the EC and with Japan) and thus was dependent on any future concessions, if any, the US might include in its new agreements.”⁶² Hence, this agreement did not guarantee the Iranians any privileges despite the Iranians’ expectations. Furthermore, the agreement was terminated after the Islamic Revolution in 1979.

CONCLUSION

By the 1970s the United States was no longer able to monopolize uranium enrichment services. Industrialized nations sought out new markets for nuclear technologies and materials, and developing countries became interested in nuclear energy for civilian use. The Nixon and Ford administrations tried to regain control over the enrichment market through a US-led multinational public-private venture, UEA, to be located on US territory, with the wealthy candidate partners being Iran and Japan. However, this arrangement fell through. The UEA was not absolutely needed by Iran and Japan for securing their enrichment demands because alternative suppliers had become available.

Regarding the new concept of multinational reprocessing, both Iran and Japan were favorites of the United States as locations for plants that would serve more than one nation. When the ROK and Pakistan proposed building multinational plants on their territories, however, the United States opposed it as both countries were considered geopolitically risky. As well, the Japanese and the Iranian governments refused the US offer to build plants in their countries. They did not want to be caught up in controversy. Moreover, even if they built multinational reprocessing or enrichment facilities at home they would still face interference from the United States.

Whether it was for enrichment or reprocessing, the failure of multinational ventures made the United States seek after more harmonious rules among the new nuclear suppliers and universally applied international norms regarding sensitive technologies. In 1974, along with Canada, the FRG, France, Japan, the Soviet Union, and the United Kingdom, the United States established the Nuclear Suppliers Group (NSG), a nonbinding agreement in which each member would refrain from exporting sensitive technologies to states that failed to meet certain standards related to nuclear nonproliferation. Since then, the group has developed into a forum for imposing nonproliferation norms on participant countries.

Drawing on lessons from earlier US experiences, the Jimmie Carter administration adopted a more universal approach toward nonproliferation. It halted domestic reprocessing and asked other countries, including Japan, to adopt a similar policy. Japan, however, rejected Carter's request, in the belief that reprocessing was crucial for strengthening energy security. Following negotiations, the United States eventually accepted Japan's position, while Japan agreed to assist the US-led universal nonproliferation

initiative by sharing sensitive data obtained at nuclear facilities that could help develop proliferation-resistant technologies.⁶³

The Ronald Reagan administration that followed did not eliminate reprocessing as a research topic, but it never considered multinational reprocessing as a nonproliferation measure. Neither did the administration of George H. W. Bush. In the views of these administrations, multinational reprocessing had already proved ineffective. The Nuclear Suppliers Group worked well. However, the Pakistanis, after failing to import reprocessing technologies from European nations, illegally obtained sensitive equipment for uranium enrichment in order to produce a nuclear weapon.⁶⁴ The ROK was quiet about reprocessing during the 1980s.⁶⁵ It promised not to seek enrichment and reprocessing options in a 1991 agreement with the DPRK, although this was eventually broken by the latter.

The lessons of history are often forgotten, notwithstanding. The George W. Bush administration initiated the Global Nuclear Energy Partnership in 2006 that included the element of multinational reprocessing.⁶⁶ In this initiative, the participant countries (twenty-seven as of the end of 2010) were expected to (1) develop proliferation-resistant reprocessing technologies that would not spread pure plutonium that could be used for the production of nuclear weapons, and (2) jointly operate the reprocessing facilities resulting from the new technologies. In this regard, the new partnership was a revival of the multinational reprocessing concept. As the Congressional Research Service researcher Mary Beth Dunham Nikitin warns, however, “it may be difficult for the United States and others to define which states are suppliers and which are recipients.”⁶⁷

The Barak Obama administration returned to the universal approach in which sensitive activities based on dual-use technologies should be curtailed as much as possible. President Obama virtually suspended the Global Nuclear Energy Partnership. In July 2015, the United States, along with the UN Security Council’s five permanent members plus Germany (the P5 + 1), eventually conceded the right of LEU enrichment for nuclear energy power plants to the Islamic State of Iran.

NOTES

¹ Daniel J. Sargent, *A Superpower Transformed: The Remaking of American Foreign Relations in the 1970s* (New York: Oxford University Press, 2015), 9.

² One of the founders of the containment policy, George Kennan, proposed the establishment of an international environmental agency in his article “To Prevent World

Wasteland” in *Foreign Policy* in April 1970. He indicated that a simple US-Soviet confrontation was no longer the supreme concern as a myriad of global issues were emerging.

³ For declining US reliability in the enrichment business, see Michael J. Brenner, *Nuclear Power and Nonproliferation* (New York: Cambridge University Press, 1981), which recounts the efforts of US government and industry to increase enrichment capability in the 1970s.

⁴ RWE, the FRG’s electrical company, similarly made a deal with TENEX for enriched uranium.

⁵ See, e.g., Etel Solingen, *Nuclear Logics: Contrasting Paths in East Asia and Middle East* (Princeton: Princeton University Press, 2007); Maria Rost Rublee, *Nonproliferation Norms: Why States Choose Nuclear Restraint* (Athens: University of Georgia Press, 2009); and Jacques E. C. Hymans, *Achieving Nuclear Ambitions: Scientists, Politicians, and Proliferation* (New York: Cambridge University Press, 2012). These books are concerned with what makes states seek or not seek nuclear armament.

⁶ In this article, the section “Uranium Enrichment Associates” is partially based on the author’s unpublished dissertation (2011). The following section, “Multinational Reprocessing in East Asia” is revised with new findings, from the author’s article published as “1970Nendai no Beikokukakufukakusanseisaku to Kakunenryosaikuruseisaku: Higashiajia takokukansaishorikoso to Tokaimurashisetsu wo meguru Gaikokosho karano Kosatsu” [The evolution of the US nuclear nonproliferation policy in the 1970s: Consideration through the diplomacy on multinational reprocessing concept and the Tokai-Mura reprocessing plant], *Ningen kankyogaku kenkyu* [Journal of human environmental studies] 7, no. 2 (2009): 107–27. Here, I additionally point out that the leader of the Korean industrial conglomerate Samsung became interested in the tripartite reprocessing arrangement. The section before the conclusion is a new analysis.

⁷ “Major Oil-Consuming Countries Meet at Washington to Discuss the Energy Problem, Statement by Secretary Kissinger, press release 46 dated February 11,” Department of State Bulletin 70, no. 1810, March 4, 1974, 204. Hathi Trust Digital Library website, <http://catalog.hathitrust.org/Record/000598610> (accessed February 28, 2016).

⁸ *Genshiryoku Iinkai Noshuku Uran Taisaku Kondankai Hokoku* [Report of the Atomic Energy Commission’s panel on the policy of enriched uranium], December 10, 1971, Japan Atomic Industrial Forum Library (Tokyo). This library closed in 2010 and the documents are lost. Some documents were donated to the private think tank MRI Research Associates, according to a librarian.

⁹ Telegram, American Embassy Tokyo to Secretary of State, “Joint Venture Enrichment Plant,” July 18, 1973, US National Archives and Records Administration, National Archives at College Park, Maryland (NARA), Access to Archival Databases

(AAD).

¹⁰ 225 Joint Communique Following Discussions with Prime Minister Tanaka of Japan, Public Papers of the Presidents of the United States, Richard Nixon, Washington DC, August 1, 1973, The American Presidency Project website, <http://www.presidency.ucsb.edu/ws/index.php?pid=3925&st=&st1=> (accessed February 18, 2016).

¹¹ Jacob D. Hamblin’s “Nuclearization of Iran in the Seventies,” *Diplomatic History* 38, no. 5 (2014): 1114–35, is a pioneering work on the Iranian nuclear program. Yet he does not shed light on how the United States tried to persuade the Iranian government to join the American-led multinational initiatives.

¹² Memorandum, David Elliott to Secretary Kissinger, March 2, 1975, “Iranian Investment in U.S. Uranium Enrichment,” Presidential Country Files for the Middle East and South East Asia, box 12, Gerald R. Ford Presidential Library (GRFL).

¹³ Project Board-Private Uranium Enrichment, “Uranium Enrichment Associates Project Description and Evaluation,” April 5, 1975, George Washington University, National Security Archives (GWU-NSA).

¹⁴ Ibid.

¹⁵ Ibid. David Elliott did not specify sensitive areas in his statement.

¹⁶ Ibid.

¹⁷ Author’s interview with Akbar Etemad, Paris, March 30, 2009.

¹⁸ Telegram, American Embassy Tehran to Secretary of State, “US Nuclear Cooperation with Iran,” March 10, 1975, Dixy Lee Ray Papers, box 92, Stanford University, Hoover Institution Archives. In this telegram, the US Embassy referred to Iranians as “Arabians,” though this was not correct as Iranians are Persians.

¹⁹ There was never any record of meetings held all together among the United States, Japan, and Iran, probably because they did not get together at the same place for talks; bilateral confidential talks were held separately, partially because the United States did not want to show its hand.

²⁰ *Gensiryoku Sangyo Shimbum* [Japanese nuclear industry newspaper], May 30, 1974.

²¹ Routine Tokyo, from OES Myron Kratzer, “Uranium Enrichment Cooperation: Discussions with Japanese Officials,” August 4, 1975, GWU-NSA.

²² Ibid.

²³ *US Department of State Bulletin* 74, no. 1915 (March 8, 1976), 301.

²⁴ Memorandum for the President, NSC Under Secretaries Committee, “US Nuclear Non-Proliferation Policy,” December 5, 1974, US National Security Council Institutional Files, box 76, GRFL.

²⁵ Seung-Young Kim contends that “the US threatened to withhold Export-Import Bank financing of \$292 million for the Kori 2 nuclear power plant” to dissuade the ROK from seeking sensitive technologies. See Kim, “Security, Nationalism and the Pursuit of Nuclear Weapons and Missiles: The South Korean Case, 1970–82,” *Diplomacy and*

Statecraft 12, no. 4 (December 2001): 53–80. However, he makes no mention of the multinational reprocessing concept as a scheme to dissuade the ROK to abandon its nuclear program because of the lack of declassified documents at the time of his writing.

²⁶ Telegram, US Mission Vienna to Secretary of State Washington DC, “Korean Ratification of NPT,” August 13, 1974, NARA, AAD.

²⁷ W. R. Smyser to Brent Scowcroft, “Your Meeting with Our Ambassador to South Korea, Richard N. Sneider on March 27, 1975 at 5:00 pm,” March 26, 1975, National Security Advisor, Presidential Countries Files for East Asia, box 9, GRFL.

²⁸ Telegram, US Mission Vienna to Secretary of State Washington DC, “Korean Ratification of NPT,” August 13, 1974, NARA, AAD.

²⁹ Telegram, American Embassy Seoul to Secretary of State, “ROK Nuclear Program,” February 20, 1975, NARA, AAD.

³⁰ Telegram, American Embassy Seoul to Secretary of State, “ROK Desire for Joint Japanese Taiwanese ROK Regional Nuclear Fuel Reprocessing Facility,” April 21, 1975, NARA, AAD.

³¹ Telegram, Secretary of State to UN mission Vienna, “Korean Commercial Interest in Regional Nuclear Fuel Cycle Facility,” September 11, 1975, NARA, AAD.

³² Telegram, Secretary of State to American Embassy Seoul, “Visit of President Lee of Samsung,” October 3, 1975, NARA, AAD.

³³ Telegram, American Embassy Tokyo to ERDA, “Multinational Reprocessing Plant,” October 16, 1975, NARA, AAD.

³⁴ *Ibid.*

³⁵ Telegram, Secretary of State to US Delegation Secretary Priority, “Daily Activities Report from Principals for Tuesday July 1, 1975 for the Secretary from Robert S. Ingersoll,” July 2, 1975, NARA, AAD.

³⁶ Telegram, Secretary of State to American Embassy Tokyo, “Bilateral Approach on Regional Fuel Cycle Centers, October 16, 1975, NARA, AAD.

³⁷ *Ibid.*

³⁸ Telegram, American Embassy Seoul to Secretary of State, “ROK Nuclear Fuel Reprocessing Plants,” September 30, 1975, NARA, AAD.

³⁹ Telegram, American Embassy Seoul to Secretary of State, “Deputy Secretary Ingersoll’s Meeting with Ambassador of Korea,” October 9, 1975, NARA, AAD.

⁴⁰ Telegram, American Embassy Seoul to Secretary of State, “ROK Rejects Our Representations on Nuclear Reprocessing,” October 24, 1975. NARA, AAD.

⁴¹ *Ibid.*

⁴² Telegram, American Embassy Seoul to Secretary of State, “ROK Nuclear Reprocessing,” December 10, 1975, National Security Advisor, Presidential Countries Files for East Asia and the Pacific, box 11, GRFL.

⁴³ Telegram, American Embassy Paris to Secretary of State, “Interview with Shah,”

June 24, 1974, GWU-NSA.

⁴⁴ Ibid.

⁴⁵ National Security Decision Memorandum no. 292, “US-Iran Nuclear Cooperation,” April 22, 1975, US National Security Council files 1974–1977, IFD (Institutional Files-NSDMs), NSDM 346, Security of US Telecommunications (1), box 69, GRFL.

⁴⁶ Ibid. Roham Alvandi also discusses in detail the idea of a multinational reprocessing facility in Iran in, *Nixon, Kissinger and the Shah: The United States and Iran in the Cold War* (New York: Oxford University Press, 2014), 141–70. While Alvandi focuses on the idea of multinational reprocessing as a way to contain Iranian nuclear ambitions, I focus on the US intention to encourage Iran as its partner to support the American nuclear nonproliferation effort toward Pakistan, a more urgent problem.

⁴⁷ Memorandum for the President from Brent Scowcroft, “Nuclear Agreement with Iran,” January 26, 1976, US National Security Council files 1974–1977, IFD, NSDM 291, US Security Policy toward Greece (2), box 59, GRFL.

⁴⁸ Memorandum for the Oval Office from Brent Scowcroft “Meeting with Hushang Ansary Minister of Economy and Finance of Iran, March 29, 1976, 30 minutes,” Presidential Country Files for the Middle East and South Asia: Country File Iran (4), box 13, GRFL.

⁴⁹ Ibid.

⁵⁰ Memorandum for the President from Kissinger, “Ambassador Helms Assessment of Situation of Near East and South Asia,” Presidential Country Files for the Middle East and South Asia, box 12, GRFL.

⁵¹ Telegram, US Mission IAEA Vienna to Secretary of State, “French Supply of Reprocessing Plant to Pakistan,” February 27, 1976, NARA, AAD.

⁵² Telegram, Secretary of State to American Embassy Tehran, “Sensitive Nuclear Technology in Pakistan,” May 12, 1976, Presidential Countries Files for East Asia, box 13, GRFL.

⁵³ Ibid.

⁵⁴ Ibid.

⁵⁵ Telegram, American Embassy Tehran to Secretary of State, “Sensitive Nuclear Technology in Pakistan,” May 16, 1976, Presidential Countries Files for East Asia, Country Files Iran-State Department Telegrams from SECSTATE-NODIS (4), box 14, GRFL.

⁵⁶ Memorandum, David Elliott and Robert Oakley to Brent Scowcroft, “Kissinger’s Interim Decisions Regarding Pakistan’s Nuclear Acquisition,” July 12, 1976, Presidential Country Files for the Middle East and South Asia: Country File Pakistan (4), box 27, GRFL.

⁵⁷ Ibid.

⁵⁸ Ibid.

⁵⁹ Ibid.

⁶⁰ Ibid.

⁶¹ Telegram, American Embassy Tehran to Secretary of State, “Your Visit to Tehran: The Shah’s Mood and Major Issues,” August 1, 1976, Presidential Countries Files for East Asia, Country Files Iran-State Department Telegrams from SECSTATE-NODIS (4), box 14, GRFL.

⁶² Letter from Louis Nosenzo in response to my inquiry, May 19, 2009. In author’s possession.

⁶³ President Carter organized the International Nuclear Fuel Cycle Evaluation or INFCE (1977–80) in which sixty-one working group meetings were held with 519 experts from forty-six countries and five international organizations to discuss the ideal use of nuclear energy. He hoped that the discussion would lead to a judgment that every country should abandon sensitive technologies even if they had peaceful purposes. The talks with a final sixty-six participant countries, however, concluded that nuclear energy for the peaceful purposes would not be incompatible with a nonproliferation aim.

⁶⁴ International Institute for Strategic Studies, *Nuclear Black Markets: Pakistan, A. Q. Khan and the Rise of Proliferation Networks* (London: International Institute for Strategic Studies, 2007), chap. 1. Khan is said to have sold sensitive nuclear technologies to the Islamic State of Iran, North Korea, as well as to his own country, Pakistan.

⁶⁵ A favorable security environment does not always make a nation refrain from pursuing sensitive nuclear programs. In the first half of the 1980s, US-ROK relations were amicable under the Reagan and Chun Doo-hwan administrations. In the era of the “new Cold War,” the Reagan administration reestablished US credibility by strengthening its commitment to the ROK. However, the ROK continued its secret nuclear program. Under pressure from the IAEA, the ROK in 2004 disclosed that it had retrieved plutonium in 1982.

⁶⁶ George W. Bush in the NSG in 2004 advocated a universal ban on any nuclear export related to reprocessing. But this did not come to pass.

⁶⁷ Congressional Research Service, “Managing the Nuclear Fuel Cycle: Policy Implications of Expanding Global Access to Nuclear Power” (by Mary Beth Dunham Nikitin), (October 2012), 30.