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ARTICLE



'It isn't over until the fuel cell sings': A reassessment of the US and French pledges of nuclear assistance in the 1970s

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ABSTRACT

Based on newly declassified archival documents, the aim of this study is to contribute to an improved understanding of the evolution of the non-proliferation regime through an examination of US and French nuclear cooperation agreements in the latter half of the 1970s. The four pledges of nuclear assistance examined – US assistance to Egypt and Israel, and French assistance to Pakistan and South Korea – failed to materialise by the end of the decade. Why did that happen? What caused the four pledges to fail? We find that the 1974 Indian nuclear explosion and the emergence of opposing domestic factions on the nuclear front in the supplier states generated major changes in US and French nuclear export policies, and also contributed to the development of a collaborative partnership between the two competing nuclear exporters, on the other.

KEYWORDS Nuclear proliferation; the United States; France; Middle East; Asia

Introduction

The latter part of the 1970s witnessed a wave of signed but failed pledges of nuclear assistance.¹ Despite the fanfare surrounding the pledges of nuclear assistance embodied by the signing of contracts, in many cases, full or even partial nuclear assistance never materialised. The abandonment of supply commitments raises questions about the reliability of the supplier: the exporting states dread the tainted reputation of a 'fickle supplier' since it can damage the prospects of securing future deals. In other words, states prefer to follow through on their pledges of nuclear assistance since doing otherwise is contrary to their long-term interests as exporter states.² The

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¹Pledges of nuclear assistance are made through agreements or contracts signed between the supplier and the recipient. Hence, the terms, 'nuclear cooperation agreements', 'nuclear contracts', 'pledges of nuclear assistance' and 'nuclear deals' have been used interchangeably in the text.

²The terms, 'nuclear supplier' and 'nuclear exporter' have been used interchangeably throughout the text.

four US and French nuclear pledges that we examine – US contracts with Israel and Egypt, and French contracts with Pakistan and South Korea – also were unsuccessful. For the United States and France, two key nuclear exporters of the time,³ the termination of nuclear assistance contracts presented a break with their existing export policies. What caused the four pledges to fail, and why?

In the United States, in the first half of the 1970s, the Nixon/Ford administration was preparing to defend American hegemony as a global supplier of nuclear technology and nuclear fuel around the world. While promoting agreements with new clients and opening new nuclear markets in the Middle East, namely in Israel, Egypt and later in Iran, the administration was preoccupied with maintaining leading status of the United States as a nuclear supplier, on the one hand, and commitments to support non-proliferation objectives embodied in the Nuclear Non-proliferation Treaty (NPT), on the other.

As Washington was contemplating how to balance its commercial interests in nuclear exports with its non-proliferation goals, European competitors, mainly French and West German firms, were increasingly threatening to overturn the US monopoly in the nuclear field, signing agreements to export nuclear technology to clients in the developing world, including Brazil, Argentina, South Korea, Taiwan, Pakistan and India, among others. Despite this clear clash of commercial interests, throughout the second half of the decade, the fierce US–French competition gradually developed into a collaborative partnership, with both nuclear suppliers working in tandem, accepting limitations on commercial nuclear exports while setting the stage for closer nuclear association in the years to come.

The aim of the study is to contribute to the current understanding of the evolution of international nuclear cooperation by analysing four case studies: United States' pledges to export power reactors to Israel and Egypt, and French pledges to export plutonium reprocessing plants to South Korea and Pakistan. Our study is based on recently declassified documents from several archives around the world.⁴ The cases were chosen to reflect a variety of instances involving different regions, clients and technologies. By examining the political history of these four nuclear pledges, we investigate what factors were responsible for their failure, and why. We argue that the 1974 Indian 'peaceful nuclear explosion'

³Jones, Rodney W., Cesare Merlini, Joseph F. Pilat and William C. Potter. *The Nuclear Suppliers and Nonproliferation: International Policy Choices*. (Lanham, MD: Lexington Books, 1984), 67.

⁴Archives accessed for this research include the National Archives and Records Administration, College Park, MD (NARA), The Ford Presidential Library, Ann Arbor, MI (GFPL), The Jimmy Carter Presidential Library, Atlanta, GA (JCPL), Israeli State Archive, Jerusalem (ISA), the Digital National Security Archive (DNSA), Wilson Center Digital Archive (WCDA) and several additional archives.

(PNE) and the emergence of opposing domestic factions on the nuclear front in the supplier states generated major changes in US and French nuclear export policies. This dynamic not only caused the termination of the nuclear pledges but also engendered a collaborative partnership between the United States and France. The study aims to contribute to the ongoing debate in the non-proliferation literature regarding the role of nuclear suppliers in the spread of nuclear weapons and the importance of exports to eventual weapons development by the recipients. The more alarmist school, championed by Fuhrmann⁵ and Kroenig⁶, attaches great significance to nuclear exports in promoting nuclear weapons proliferation.⁷ Fuhrmann stresses the importance of signed NCAs in this regard, maintaining that the completion of at least one NCA statistically raises the chance of the recipient launching a weapons programme by 500%.⁸ The opposing 'state capacity' school maintains that the role of nuclear exports in promoting proliferation is limited, as motivated states can develop capabilities independently.⁹ Braut-Hegghammer underlines the importance of 'state capacity' in determining the trajectory of a state's nuclear programme,¹⁰ while Hymans and Montgomery both focus on the degree of competence demonstrated by the bureaucracy and its ability to operate freely and effectively as the decisive factors over and above the technology transferred.¹¹

The evolution of US non-proliferation policy during the Cold War till today presents a parallel and related discussion in the literature. One contemporary strand of research examines US support and commitment to the

⁵Fuhrmann argues that 'receiving civilian nuclear assistance over time increases the likelihood that states will begin nuclear weapons programs', see: Matthew Fuhrmann, 'Spreading Temptation, Proliferation and Peaceful Nuclear Cooperation Agreements', *International Security*, 34, (1) (Summer 2009), 7–41. See also: Matthew Fuhrmann, *Atomic Assistance: How "Atoms for Peace" Programs Cause Nuclear Insecurity*. *Cornell Studies in Security Affairs* (Ithaca NY: Cornell University Press 2012).

⁶Kroenig concluded that powerful states are less likely to give nuclear assistance and that 'states are more likely to provide sensitive nuclear assistance to states with which they share a common enemy'. Matthew Kroenig, 'Exporting the Bomb: Why States Provide Sensitive Nuclear Assistance,' *American Political Science Review*, 103 (1) (February 2009), 113–133. See also: Matthew Kroenig, *Exporting the Bomb: Technology Transfer and the Spread of Nuclear Weapons*. *Cornell Studies in Security Affairs* (Ithaca NY: Cornell University Press 2010).

⁷Fuhrmann refers to 'civilian nuclear assistance' in general and Kroenig refers to 'sensitive' nuclear technology.

⁸For the emphasis on NCA's, see: Matthew Fuhrmann, 'Spreading Temptation: Proliferation and Peaceful Nuclear Cooperation Agreements,' *International Security* 34, (1) (2009), 7–41, 28.

⁹R. Scott Kemp, 'The Nonproliferation Emperor Has No Clothes', *International Security*, 38 (4) (Spring 2014), 39–78, 40.

¹⁰Malfrid Braut-Hegghammer. *Unclear Physics: Why Iraq and Libya Failed to Build Nuclear Weapons* (Ithaca, NY: Cornell University Press 2016).

¹¹Jacques E. C. Hymans, 'Botching the bomb: Why Nuclear Weapons Programs Often Fail on Their Own – and Why Iran's Might, Too,' *Foreign Affairs*, May/June 2012. Alexander H. Montgomery, 'Stop Helping Me, When Nuclear Assistance Impedes Nuclear Programs', Chapter 7. in Adam N. Stulberg and Matthew Fuhrmann (eds.), *The Nuclear Renaissance and International Security* (Stanford, California: Stanford University Press 2013), 177–201. See also: Jacques E. C. Hymans. *Achieving Nuclear Ambitions : Scientists, Politicians and Proliferation* (Cambridge: Cambridge University Press 2012).

non-proliferation regime, and US centrality to it. Most recently, Gavin has argued that the continuing US attempt to curtail nuclear proliferation constitutes a US grand strategy, not just a general foreign policy goal.¹² Other recent studies by Miller¹³ and Gerzhoy¹⁴ underpin the importance of US attempts to stop proliferation, while Cavanna argues that it was the primacy of US geostrategic interests over non-proliferation goals that shaped US behaviour.¹⁵ Other contemporary studies have underlined the nuances, which characterise the approach of different American administrations to the question of non-proliferation and American commitment to it and to the NPT.¹⁶ In this context, the evolution of the global non-proliferation regime and the corresponding US non-proliferation policies in the 1970s has, until recently, remained a largely under-explored field of study. This is now changing, with significant contributions to this field by Burr's study on the origins of the Nuclear Supplier Group (NSG)¹⁷ and a body of related work.¹⁸

The article proceeds as follows. First, we study the US nuclear pledges to Israel and Egypt during the presidencies of Richard Nixon, Gerald Ford and Jimmy Carter. Second, we examine the French pledges of nuclear assistance to Pakistan and South Korea during the Ford and Carter years. Third and finally, we conclude with our findings on the evolution of nuclear non-proliferation regime and US non-proliferation policy since the 1970s.

The rise and fall of the Israel–Egypt reactor deal

In June 1974, President Richard M. Nixon went on a historic tour of the Middle East, a tour which included visits to Cairo and Jerusalem. In these

¹²Francis J. Gavin, 'Strategies of Inhibition: U.S. Grand Strategy, the Nuclear Revolution, and Nonproliferation', *International Security* (2015) 40 (1), 34–5.

¹³Miller places an emphasis on the importance of American policies in preventing 'reactive proliferation'; see: Nicholas L. Miller, 'Nuclear Dominoes: A Self-Defeating Prophecy?', *Security Studies* 23, no. 1 (2014) and Nicholas L. Miller, 'The Secret Success of Nonproliferation Sanctions', *International Organization* 68 (4) (Fall 2014), 914–944.

¹⁴Gerzhoy places an emphasis on American willingness to use conditional threats of military abandonment, see: Gene Gerzhoy, 'Alliance Coercion and Nuclear Restraint: How the United States Thwarted West Germany's Nuclear Ambitions', *International Security* 39(4) (Spring 2015), 91–129.

¹⁵Thomas P. Cavanna, 'Geopolitics over Proliferation: The Origins of US Grand Strategy and Their Implications for the Spread of Nuclear Weapons in South Asia', *Journal of Strategic Studies*, 1–28, published online: 10 June 2016.

¹⁶See: Rabinowitz, Or and Miller, Nicholas L. 'Keeping the Bombs in the Basement', *International Security* (2015), 40(1), 47–86, and Cameron, James and Rabinowitz, Or 'Eight Lost Years? Nixon, Ford, Kissinger and the Non-Proliferation Regime, 1969–1977', *Journal of Strategic Studies*, 1–28. published on-line on 5 January 2016.

¹⁷Burr, William. 'A Scheme of "Control": The United States and the Origins of the Nuclear Suppliers' Group, 1974–1976', *The International History Review* 36 (2) (2014), 252–76.

¹⁸Relevant overviews of this period are: Michael J. Brenner, *Nuclear Power and Nonproliferation: The remaking of U.S. policy* (Cambridge, UK: CUP 1981). Peter A. Clausen, *Nonproliferation and the national interest*, (NY, NY: Harper Collins 1993). Peter Tzeng, 'Nuclear Leverage: U.S. Interventions in Sensitive Technology Transfers in the 1970s', *Nonproliferation Review*, 20(3), 473–92; J. Samuel Walker, 'Nuclear Power and Nonproliferation: The controversy over nuclear exports, 1974–1980', *Diplomatic History*, 25(2) (2001), 215–49. Dane Swango, 'The United States and the Role of Nuclear Co-operation and Assistance in the Design of the Non-Proliferation Treaty', *International History Review*, 36(2) (2014), 210–29.

two capitals, Nixon declared his administration's intent to export nuclear power reactors to both countries.¹⁹ In the months leading to this tour, the Nixon administration was considering whether to export nuclear power reactors to the two countries, who were not members of the NPT at the time. Egypt signed the treaty in 1968 and subsequently ratified it in 1981, while Israel has neither signed nor ratified it as of 2017. A week before the Cairo visit, on 7 June, a preliminary report composed by an ad hoc committee was submitted to Secretary of State, Henry Kissinger.²⁰ Significantly, right in the middle of the committee's proceedings, in May 1974, India conducted its PNE.

The committee did not see the PNE as a reason to block the deal. It concluded that exporting reactors to both actors 'would be desirable' as long as the deal included 'stringent safeguarded mechanisms'.²¹ It argued that this would reaffirm the US commitment to stem 'the further spread of nuclear weapons', while supporting the spread of 'nuclear power'. It stressed that from a proliferation standpoint, the exports were desirable, as the United States could set 'more careful standards' compared with 'non-US suppliers to the Middle East'.²² This rationale would become the main justification for continued US efforts to export nuclear technology in the 1970s. Retaining its position as a global leader in nuclear exports was vital. Kissinger's deputy, Roy Atherton, explained, 'our ability to impose special conditions on countries like Israel and Egypt depends in large part on the extent to which the United States is the sole and preferred source'.²³

Another thorny issue was whether to create an explicit linkage between the reactor deal and an NPT accession. On this, the report stated that the Israel–Egypt deal should not include an explicit linkage, though it would be desirable to ask both clients to affirm that 'each would not be the first to introduce nuclear weapons into the Middle East'.²⁴ Uniquely, this phrase reflected official Nixon-era willingness to adopt and incorporate verbatim the famously vague Israeli nuclear guarantee as the basis for future non-proliferation agreements in the region. This willingness was not repeated in later non-proliferation initiatives,²⁵ or in the initialled agreement from

¹⁹On the Cairo declaration: Henry Tanner, 'Nixon and Sadat Sign Sweeping Accord on Cooperation' *New York Times* 15 June 1974. On the Jerusalem declaration: Terence Smith 'Nixon promises long term help for the Israelis' *New York Times* 18 June 1974.

²⁰'Nuclear Energy Cooperation with Egypt and Israel', memo from Lewis and Atherton to Secretary, 7 June 1974 (attached to notes and draft agreements), in RG 59, Records of the Policy Planning Staff, Director's Files (Winston Lord), 1969–1977, box 344, NARA, MD [hereafter 'Winston Lord Papers'].

²¹'Nuclear Energy Cooperation with Egypt and Israel', 7 June 1974.

²²*Ibid.*

²³'Future International Position of the United States in Civil Uses of Nuclear Power', memo From Atherton to the Secretary, 12 August 1974, in Winston Lord Papers, Box 349.

²⁴'Nuclear Energy Cooperation with Egypt and Israel', 7 June 1974.

²⁵The guarantee that 'Israel will not be the first to introduce nuclear weapons to the Middle East' was first pronounced in 1963 and later put into writing in an Israeli–American MOU from 10 March 1965. See: Avner Cohen, *Israel and the Bomb* (New York: Columbia University Press 1998), 207.

August 1976. Significantly, it recommended treating both requests 'on parallel and on the basis of comparability', a recommendation which was applied throughout the life span of the negotiations. Rather sensibly, it concluded that 'no safeguards system is completely fool proof', though a combination of safeguards can be effective.²⁶ Following Nixon's twin declarations, the administration rushed to sign two conditional agreements on the supply of enriched uranium fuel to both recipients on 26 June 1974, before a cut-off was declared.²⁷

The Indian PNE caused the State Department to hold a round of nuclear policy debates in the summer of 1974, but these did not bring about a 'U-turn' on policy concerning nuclear exports, or what was termed 'the Egypt-Israel reactor deal'.²⁸ The official reasoning was that deal holds several non-proliferation objectives. Echoing the June report, the diplomats concluded that since both recipients were to guarantee that they 'will not to be the first to introduce nuclear weapons in this area', the deal posed no proliferation problem. A further objective included a pledge that the related 'nuclear materials' would not be used for nuclear explosives, reflecting an attempt to close any PNE loopholes and the lessons learnt from India's ability to use plutonium from its CIRUS reactor for its test.²⁹

Perhaps, most importantly, both states were expected to agree that 'all future nuclear facilities and materials from any source would be placed under IAEA safeguards', a condition which was meant to create some sort of an extension of the NPT.³⁰ While this would leave the Israeli Dimona reactor 'untouched', it would essentially represent a functional equivalent to an NPT obligation, covering the bulk of each nation's nuclear power programme by catching in its net all future nuclear facilities of Israel. The rationale was simple, if rather optimistic: 'If Israel accepts this "Partial NPT" agreement, it is likely that Egypt will follow', and this could lead the two to join the NPT down the road.³¹ In a highly hopeful assessment, Winston Lord, Kissinger's Director of Policy Planning, explained that 'these agreements can, in turn create a climate for NPT ratification by Israel and Egypt in the future ... used to build a base of support for a Middle East Nuclear-Free Zone'.³²

²⁶'Nuclear Energy Cooperation with Egypt and Israel', 7 June 1974.

²⁷George Springsteen, 'Transcript, Under Secretary Sisco's Principals' and Regionals' Staff Meeting, Friday, 21 June 1974,' in *Document 3, Electronic Briefing Book 467* (Washington DC: National Security Archive), 16. "[Response to Inquiry about the Proposed Sale of Nuclear Reactors to Egypt and Israel], Letter, 27 June 1974", in Collection: Nuclear Non-Proliferation, Item Number: NP01364 (Washington DC: National Security Archive).

²⁸James Cameron and Or Rabinowitz, 'Eight Lost Years? Nixon, Ford, Kissinger and the Non-Proliferation Regime, 1969-1977'. *Journal of Strategic Studies*, 1-28. Published online on 5 January 2016.

²⁹Annex E: Israel and Egypt", (attached to the draft memo Analytical Staff Meeting on Non-Proliferation Strategy), Draft for Analytical Staff Meeting on Non-Proliferation Strategy, from Fred Ikle and Winston Lord to Kissinger, 31 July 1974', in Winston Lord Papers, Box 344.

³⁰Ibid.

³¹Ibid.

³²"Your Luncheon with Fred Ikle, ACDA", from Winston Lord to Joseph Sisco, 16 August 1974,' in Winston Lord Papers, Box 349.

The Egyptians were delighted with Nixon's news. Under President Anwar Sadat, Egypt was realigning itself strategically, abandoning Moscow in favour of Washington's sphere of influence, making a 'fundamental strategic choice' which would later lead to the peace accord with Israel.³³ Sadat's interest in a safeguarded American nuclear reactor signalled a break from previous Egyptian nuclear interest in a nuclear option.³⁴ Israel, on its part, had been engaged with the question of whether to develop nuclear power infrastructure since its establishment, and commissioned several internal studies on the subject over the years.³⁵ In the early 1970s, momentum was finally picking up in Israel, and in May 1973, the government approved initial preparations towards a public tender for the construction of Israel's first nuclear power plant.³⁶

The Indian PNE had some additional ramifications on the Israel–Egypt reactor deal. Israel's fear, in the context of the US–Egypt deal, was that India would grow to become a supplier of nuclear technology to Egypt and the Arab world at large, replacing the US safeguarded exports with an unsafeguarded approach, making it a 'hired sword in the nuclear field'.³⁷ Israel's fear of a potential Egyptian nuclear power plant was such that when Nixon made his statement in Jerusalem, it was marginalised by news of the exports to Egypt.³⁸ In a meeting held with Nixon and his delegation upon their arrival on 16 June, Israeli Prime Minister Yitzhak Rabin linked the fear of the reactor sale to Egypt with India's PNE and a possible future Egyptian–Indian nuclear cooperation.³⁹ Also linking Egyptian nuclear technology to the

³³Robert J. Einhorn, 'Chapter 4. Egypt', in Kurt M. Campbell, Robert J. Einhorn, Mitchell B. Reiss (eds.), *The nuclear tipping point, why states reconsider their nuclear choices* (Washington DC: The Brookings institution 2004), 51.

³⁴In the 1960s, Egypt demonstrated interest in developing a nuclear option, but Sadat's strategic choices ended that endeavour. See: Robert J. Einhorn, 'Chapter 4. Egypt', in Kurt M. Campbell, Robert J. Einhorn, Mitchell B. Reiss (eds.), *The nuclear tipping point, why states reconsider their nuclear choices* (Washington DC: The Brookings institution 2004). Barbara M. Gregory, 'Egypt's Nuclear Program: Assessing Supplier-Based And Other Developmental Constraints,' *Nonproliferation Review* 3(1), (Fall 1995), 20–27. And: Maria Rost Rublee (2006) 'Egypt's nuclear weapons program', *The Nonproliferation Review*, 13(3), 555–67.

³⁵For the deliberation over nuclear desalination in the late 1960s, see: Levey, Zach. 2014. 'The United States, Israel, and Nuclear Desalination: 1964–1968.' *Diplomatic History* 39 (5), 904–25.

³⁶David Moshayof, 'Matay Tukam Tahant Koach Garinit' (From Hebrew: 'When will a nuclear power plant be established', *Davar*, 27 February 1974.

³⁷Urgent cable, 23 October 1974, from Yehoshua Trigor consul in Bombay to Foreign Office, In: File: Israel-India government level relations, 7 March 1974–31 March 1974, archive identifier number: 93.42.1.32, Foreign Office files, ISA.

³⁸The American–Egyptian negotiations were reported on in the Arab press, but the Israelis were not aware of it, and the State Department did not inform the Israeli Foreign Ministry on the deal's completion prior to Nixon's visit. See: Ze'ev Schiff, 'Israel Huftea al af yedioth al mum amerikai mitsri beinyan hakur' [From Hebrew: 'Israel was surprised by news of American Egyptian negotiations on the reactor], 19 June 1974, Ha'aretz.

³⁹'Working Meeting' [Between Nixon, Rabin, and respective delegations], 16 June 1974, King David Hotel, Jerusalem. File: Talks with US [From Hebrew: 'Sihot with Arhab'], archive identifier: 7038/18, ISA. The discussion was also mentioned briefly in Rabin's memoir. See: Rabin, Yitzhak and Goldstein, Dov. 'Pinkas Sherut' (From Hebrew: Record of Service), Ma'ariv: Tel-Aviv, 1979, 426.

Holocaust, Rabin stressed to Nixon that 'people in Israel ... worry, they worry! I cannot deny it.'⁴⁰

Nixon's terse reply is important as it represents a very rare occasion in which his verbatim reference on Israel's nuclear capabilities is documented. Nixon, clearly surprised by Rabin's criticism of the Egypt deal, answered: 'Well, Israel will be doing all right too. We know how well off you are in this respect. Just don't let's kid each other.' ...⁴¹ Rabin and his ministers soon realised that Israel's dramatic public reaction to the Egyptian deal was counterproductive for Israel as it drew global attention to Israel's unsafe-guarded nuclear facilities, namely Dimona, and its nuclear programme.⁴² To remove the subject from the headlines, the Israeli leadership decided not to pursue the subject further in a public manner.⁴³

In private, the issue was still on the agenda. In July 1974, Israeli Foreign Minister Yigal Allon asked Kissinger as a 'personal favour' to delay the Egyptian deal for a few months.⁴⁴ Kissinger agreed to 'look into it'.⁴⁵ In December 1974 and now under President Ford, the issue was raised again, and this time Allon made it clear that Israel had no objection to the US–Egyptian deal.⁴⁶ Clearly indicating a lack of interest in the American reactors at the time, Allon also suggested the de facto decoupling of the execution of the two deals, allowing Egypt to get its reactor while Israel waited, citing fears about the reactor's security and the costs of its protection.⁴⁷

Progress along the two tracks – the Egyptian and the Israeli – was affected in 1975 by significant changes in bilateral relations with Washington: while Egyptian President Anwar Sadat was forming closer ties with the Ford administration, Israeli Prime Minister Yitzhak Rabin was distancing himself from Washington, bringing about the 're-evaluation period' between March and September 1975.⁴⁸ By agreeing to withdraw from parts of Sinai, Israel also consented to hand over the Sinai oilfields, which at the

⁴⁰Ibid.

⁴¹Ibid.

⁴²Y. Tirah, 'Hamemshala sham'a du'ach al masa Nixon' (From Hebrew: 'The government has heard a report on Nixon's journey'), Ha'aretz, 19 June 1974. Matti Golan, 'The secret conversations of Henry Kissinger', (NY, Quadrangle 1976), 214–16.

⁴³Dalia Schori 'Arhab todia le Israel ma yihyu sidrey ha-pikuac h al hakur be-Mitsrayim' (From Hebrew: 'The US will inform Israel on future safeguards arrangements on the Egypt reactor'), Al Hamishmar, 20 June 1974.

⁴⁴'[Meeting with Israeli Officials], Secret, Memorandum of Conversation, 31 July 1974,' in *Collection: Kissinger Transcripts, Item Number: KT01267* (DNSA).

⁴⁵'Cable 2, untitled, 1 August 1974, from Washington embassy to Foreign office in Jerusalem, [Allon-Kissinger meeting],' in *File: Foreign Minister visits to US, July 1974-June 1975, Serial number: 130.20/2–35 ISA*.

⁴⁶For the American protocol see: "'Secret, Memorandum of Conversation", 9 December 1974,' in *Collection: Kissinger Transcripts, KT01442* (DNSA). For the Israeli protocol, see: "'Cable 149, 10 December 1974, untitled, discussion over lunch]," in *Box: Foreign Minister visits to US, July 1974–June 1975, File: 130.20/2–35, ISA*.

⁴⁷Ibid.

⁴⁸On the re-evaluation period, see Rabin's memoir: Yitzhak Rabin, 'Pinkas Sherut', [from Hebrew: 'Service record'], Ma'ariv publishing, Tel-Aviv, 1979, 465.

time were producing 4.5 million tons of crude oil per year, the equivalent of 55% of Israel's domestic needs.⁴⁹ In the first half of 1976, the cut-off date for a possible favourable Congressional action on the deal was fast approaching, without substantial progress. American legislation stipulated that both agreements, if concluded, had to be placed before Congress for 60 days before they were voted on, and the November 1976 elections meant that time was running out. Since the deals were linked, no progress on the Israeli channel meant no progress in the Egyptian channel too. American diplomats in Cairo reported that the Egyptians were eager to conclude a deal, adding that receiving a nuclear reactor carries great 'symbolism ... for Egypt as a modern technical state' and that the Egyptians would give up their objections 'if they could sign this year'.⁵⁰

Then, in the last days of June 1976, the Israelis suddenly decided to pick up where they left off. An Israeli team 'arrived in Washington on very short notice' to discuss the agreement and immediately started to conduct 'strenuous negotiations' which proceeded 'smoothly and quickly', giving the clear impression that it was 'seriously interested in moving ahead as promptly as possible', and making an agreement likely within days.⁵¹ For the Americans, this development meant they could 'move forward with both agreements in tandem ... as rapidly as possible', and that concluding the agreements by the end of the year was not 'a complete dead letter'.⁵² The Egyptians agreed to the proposed text after they were reassured that the Israeli text was 'identical to the Egyptian text'.⁵³

What caused the Israeli delegation to show up in Washington? Further research is needed to ascertain what exactly motivated Israel to revive the talks. One account, which is yet to be corroborated, suggests that this occurred due to a direct policy change. Uzi Eilam, who took up his position in January 1976 as the general director of the Israeli Atomic Energy commission, offers the following explanation. A governmental committee headed by Rabin met in February 1976 to discuss the policy on the reactor deal, since no policy was in fact in place. Following the meeting, Prime Minister Rabin gave a 'green light' to move forward with the US–Israel deal.⁵⁴

⁴⁹Bishara A. Bahbah, 'The United States and Israel's Energy Security,' *Journal of Palestine Studies* 11(2) (1982), 115.

⁵⁰Telegram 8722, 25 June 1976, Embassy in Cairo to Sec State, "Subject: US/Egyptian Nuclear Agreement for Cooperation", NSC, Middle East and South Asian Affairs Staff: Files 1974–1977, Country file: Egypt-military (6), box 4, GFPL.

⁵¹Telegram to embassy in Cairo, "Subject: US/Egyptian Nuclear Agreement for cooperation", 2 July 1976, NSC, Middle East and South Asian Affairs Staff: Files 1974–1977, Country file: Egypt-military (6), box 4, GFPL.

⁵²Ibid.

⁵³Cable to Cairo embassy, "Subject: Egypt and Israel Nuclear Power agreements", 20 July 1976, NSC, Middle East and South Asian Affairs Staff: Files 1974–1977, Country file: Egypt-military (6), box 4, GFPL

⁵⁴Author interview with Uzi Eilam, 18 December 2015, Tel-Aviv.

Indeed, the two agreements were swiftly concluded, and were initialled in Washington on 5 August 1976.⁵⁵ In a memo to President Ford, National Security Advisor Brent Scowcroft noted that 'Israel accepts the package concept and supports the Egyptian agreement', concluding that 'The agreements contain unprecedented restrictions and controls and present no real proliferation risks'.⁵⁶ The text of the agreements contained no trace of the Nixon-era 'no first introduction' guarantee, or any mention of paving the way to NPT accession and the creation of a Nuclear Weapons-Free Zone in the Middle East.

By September 1976, it was also clear to the Ford administration, then in its last weeks in office, that immediate Congressional approval for these agreements was not probable. Both deals, but especially the Israeli deal, presented a non-proliferation difficulty for the administration since they were on a collision course with a newly crystallising non-proliferation/nuclear exports agenda. The main obstacle was the newly forming 'comprehensive safeguards' condition, or in other words, the willingness of a client to submit *all* nuclear facilities to safeguards.

In mid-1976, the Ford administration nominated an interagency panel led by Deputy Administrator of the Energy Research and Development Agency, Robert Fri, and representatives from relevant agencies, to examine American nuclear energy and export policy.⁵⁷ The 'Fri study' proposed that the criteria for considering new nuclear agreements would include NPT membership or 'willingness to submit all ... nuclear facilities to safeguards', and significantly all the relevant agencies concurred with this proposal.⁵⁸ Scowcroft warned Ford that since the proposed agreements did not meet this criteria, Congress may 'perceive inconsistencies' in the president's position, and noted the 'awkwardness' of submitting agreements which would directly contradict the policy Ford was about to declare.⁵⁹

Ford declared his new policy on 28 October 1976, touting the agreements with Israel and Egypt as containing 'the strictest reprocessing provisions and other nuclear controls ever included in the 20-year history of our nuclear cooperation programme'.⁶⁰ Their fate was not at all clear. Several senior officials, including Kissinger and Scowcroft, recommended submitting the

⁵⁵Dan Margalit, 'The initialled agreement for the supply of reactors: US monitoring capabilities augmented to prevent 'use' of reprocessed plutonium' (from Hebrew), Ha'aretz, 6 August 1976.

⁵⁶Memo 4773 for the president from Brent Scowcroft, Subject: The Egypt and Israel Nuclear Agreements, [undated, attached to a note dated 23 September 1976] NSC, Middle East and South Asian Affairs Staff: Files 1974-1977, Country file: Egypt-military (6), box 4, GFPL.

⁵⁷Robert Zarate, 'The Non-Use and Abuse of Nuclear Proliferation Intelligence in the Cases of North Korea and Iran,' Nonproliferation Policy Education Center, <http://www.npolicy.org/article.php?aid=1195&tid=4>.

⁵⁸The Egypt and Israel Nuclear Agreements', 23 September 1976.

⁵⁹Ibid.

⁶⁰President Gerald Ford, Statement on Nuclear Policy, 28 October 1976, The American Presidency Project, <<http://www.presidency.ucsb.edu/ws/?pid=6561>>.

agreements for approval, 'mainly because of our commitments to the Egyptians and the Israelis that we would do so'⁶¹ and due to the 'possible negative reactions' in Egypt and Israel if agreements were 'set aside'.⁶²

Yet Ford 'took no action' during the remainder of his term.⁶³ The Egyptians were led to believe that the new administration would likely 'promptly approve them and submit them to Congress'.⁶⁴ The Israelis, for their part, were offered yet another understanding regarding their nuclear exceptionalism.⁶⁵ A State Department official told Israeli diplomats in late October 1976 that should Ford win the elections, his new administration would swiftly move ahead to implement the deal. The diplomat explained that since the new policy allowed for the President to make exceptions in the Israeli case, there was no need to 'renegotiate or do anything with regard to the agreement we initialled'.⁶⁶

Ford narrowly lost the 1976 presidential election and the newly elected President, Jimmy Carter, had no reason to make an accommodation on Israel's behalf. After Carter was sworn in, both sides were asked to wait until the conclusion of a US policy review.⁶⁷ Carter's non-proliferation policy was adopted into the 1978 Nuclear Non-proliferation Act (NNPA), which included stringent non-proliferation conditions for nuclear exports, including the demand for full-scope safeguards from recipient states.⁶⁸

While the Egyptians were 'anxious to proceed immediately', and were described as 'chafing at the bit', Israel was still 'unwilling to accept the full-scope safeguards'.⁶⁹ Far from a surprise, it was quite clear to the Carter administration that there was 'little possibility that Israel will consent at this time to place Dimona under safeguards'.⁷⁰ Though Carter had, in theory, the power to waive the requirement, his administration believed that 'to do so in the case of Dimona would undercut the whole non-proliferation effort'.⁷¹ In the second half of Carter's term, the peace negotiations between Israel and Egypt became the focus of Carter's attention, leading the completion of the Camp David peace accords and largely marginalising the reactor deal.

⁶¹'The Egypt and Israel Nuclear Agreements', 23 September 1976.

⁶²Ibid.

⁶³Secret Memo from Cyrus Vance to the President, 3 March 1977, 'Subject: official working visit by Israeli Prime Minister Rabin', Plains File- Box 11- Folder 17, JCPL.

⁶⁴'Subject: US/Egyptian nuclear cooperation agreement, REF Cairo 7029, From Cairo embassy to Washington, 31 May 1977', (AAD: NARA).

⁶⁵The first understanding in this context would be the deal on Israel's nuclear ambiguity as reflected in the Nixon–Meir understanding of September 1969.

⁶⁶'29 October 1976, Secret Cable from Washington Embassy to Uzi Eilam, [President Ford's non-proliferation policy speech], in *File: USA – Minister Yigal Allon, correspondence, 6861/3, ISA*.

⁶⁷Secret Memo from Cyrus Vance to the President, 3 March 1977, 'Subject: official working visit by Israeli Prime Minister Rabin', Plains File- Box 11- Folder 17, JCPL.

⁶⁸Clausen, *Nonproliferation and the national interest*, 127–154.

⁶⁹'Memo for Zbig, NSC Middle East Evening Report, 17 February 1978', In: Brzezinski Material, Staff Evening Reports File, Box 9, Folder 1, JCPL.

⁷⁰'US economic assistance to Israel' [undated, circa 1978], in: Counsel's Office, Box 4, Folder 16, JCPL.

⁷¹Ibid.

Amended agreements, which reflected in the new NNPA, were offered to both sides. Cairo chose to accept it. It ratified the NPT on 26 February 1981, a month after President Reagan was sworn in, and in the following months signed nuclear cooperation agreement with both Paris and Washington.⁷² These agreements, however, did not lead to the construction of nuclear power plants in the following decades. Israel, as expected, did not accept the amended Carter-era agreement. In March 1980, the Americans assessed that ‘serious technical and safeguards issues will prevent any nuclear power reactor from coming on stream before 1990 at the earliest.’⁷³ Israel does not have any nuclear power reactors as of 2017.

French nuclear pledges to Pakistan and South Korea

In the second half of the 1970s, French nuclear exports policy was internally conflicted and inconsistent, as a result of a domestic political power struggle between the newly elected French President Valéry Giscard d’Estaing (1974–1981), and his Prime Minister Jacques Chirac. The conflict between Giscard and Chirac played out strongly on the question of French nuclear export policy, especially until Chirac’s exit from government in August 1976. Giscard called for a stronger French commitment to nuclear non-proliferation, and assured Ford that France shared US non-proliferation concerns in their meeting in Martinique in December 1974.⁷⁴ Chirac, on the other hand, supported the maintenance of an active French nuclear export policy.⁷⁵ Given Giscard’s domestic political opposition from the Gaullists and the socialists, and the pressures from the nuclear industry, the French President considered it prudent to have the recipient states terminate ‘problematic’ cooperation, rather than having France withdraw under US pressure. Any impression obtained by the Gaullists or the French media that France was acting under US influence could be politically costly for the Giscard government. The French were also somewhat concerned by the American move to adopt the Symington amendment to the Foreign Assistance Act, which banned US economic and military assistance to countries that deliver, receive, acquire or transfer unsafeguarded nuclear enrichment technology without full-scope IAEA safeguards.⁷⁶ The French were

⁷²Judith Miller, ‘U.S. pact allows Egyptians to buy 2 atom reactors’, *New York Times*, 30 June 1981.

⁷³Memo from Bob Hunter for Stu Eizenstat, ‘Subject: Your meeting with Minister Modai today’, 27 March 1980, [attached intelligence report] in: White House Central Files, CO 34–2, JCPL.

⁷⁴Frédéric Bozo, *La Politique Étrangère de La France Depuis 1945*, Champs Histoire (Paris: Flammarion, 2012). Florent Pouponneau, ‘Les Changements De La Politique Française D’exportation Nucléaires (1974–1976): Un Triple Double Jeu’, *Critique Internationale* 58, no. 1 (2013), 112.

⁷⁵For an overview of the evolution of French non-proliferation policy, see Bruno Tertrais, ‘France and nuclear non-proliferation: From benign neglect to active promotion’, in Olav Njolstad (ed.), *Nuclear Proliferation and International Order: Challenges to the Non-Proliferation Treaty* (New York: Routledge 2011), 217–226.

⁷⁶Brenner, ‘Nuclear power and Non-proliferation’, 91–92.

keen to understand how the amendment could affect Paris if the reprocessing contract with Pakistan remained in place.

In 1976, Giscard undertook a significant step to strengthen French export controls: his government established the Council on Nuclear Export Policy (*Conseil de politique nucléaire extérieure*, or CPNE) to ensure better control by the Quai d'Orsay of French nuclear export policy, thus reducing the French Atomic Energy Commission's (*Commissariat À l'énergie atomique* or CEA) authority in the subject matter. The CPNE served two key purposes. First, it redefined French nuclear export policy according to the guidelines of the NSG that had started convening in London in 1975. Second, it established coherence in the French national nuclear export policy.⁷⁷ By increasing oversight of the foreign ministry on nuclear exports, the CEA's quasi-autonomy in the field of nuclear exports was challenged. Chirac's exit from the government in August 1976, and the establishment of the CPNE, enabled Giscard to gain a stronger hold on the CEA's nuclear export policy, and strengthened French commitment to nuclear non-proliferation. As a result, when Carter took office in January 1977, he found a much more amenable French partner on the Pakistani front. In December 1976, the CPNE also declared that the French government would not authorise any new sale of reprocessing plants to foreign countries.

The French company, *Saint Gobain Nouvelle Technique* (SGN), was the key contracting company for the CEA since the 1950s, and was instrumental in both nuclear pledges to Pakistan and South Korea (ROK). In December 1974, SGN signed a contract with Pakistan for the construction of a prototype plutonium separation plant in the Punjab province, leading to the conclusion of a tripartite agreement involving France, Pakistan and the IAEA in March 1976.⁷⁸ Parallel to the Pakistani track, the French were also holding discussions with the South Koreans over the sale of a pilot plutonium reprocessing facility, and a deal was concluded on 12 April 1975.⁷⁹ The Ford administration was concerned by both French nuclear deals. American assessments of the South Korean deal warned of a regionally destabilising domino effect, stressing that 'the degree of early cooperation among key nuclear suppliers – particularly the French – would be important in inhibiting any such ROK moves.'⁸⁰ On the Pakistani front, the administration mounted pressure on Paris to end the agreement owing to its high

⁷⁷Georges Le Guelte, *Histoire de La menace nucléaire* (Paris: Hachette 1997), 213.

⁷⁸Text of Safeguards Agreement of 18 March 1976 between the Agency, France and Pakistan, INFCIRC/239, IAEA, <<https://www.iaea.org/sites/default/files/publications/documents/infcircs/1976/infcirc239.pdf>>

⁷⁹Tzeng, Nuclear leverage, p. 476. Tzeng quotes the Nuclear Threat Initiative, 'South Korea Nuclear Chronology', September 2004, http://www.nti.org/media/pdfs/south_korea_nuclear.pdf?_=1316466791, 269.

⁸⁰'Second Alert Report' from Winston Lord, Martin Packman, to Henry Kissinger, 20 November 1974, in: Winston Lord Papers, Box 348.

proliferation risk. When the French informed the Americans of their agreement to participate in the NSG, they also used the opportunity to state that they would not cancel their agreement with Pakistan.⁸¹ Nonetheless, the French assured the Americans that France would not oppose US pressures to convince Pakistan and South Korea to terminate the contracts. France's withdrawal from its pledges of nuclear assistance would draw the ire of the Gaullists, the industry and the CEA. Hence, encouraging recipients to terminate the contracts was the 'safest' route for the Giscard government.

In spring 1975, a US inter-agency intelligence study concluded that the ROK could develop nuclear weapons and a missile delivery capability within 10 years.⁸² Immediate steps were necessary to prevent such a crisis. The United States had to stop the reprocessing plant transfer by the French, stall the CANDU reactor sale by Canada (India used the same type of reactor to produce plutonium for its explosion), convince Seoul to ratify the NPT and increase surveillance on ROK's activities in the nuclear realm. In August 1975, Kissinger was convinced, after internal discussions, to formally ask Seoul to cancel the reprocessing deal, using future American civilian nuclear cooperation as leverage.⁸³ Throughout the summer and autumn of 1975, the Americans pressured the South Koreans to cancel their contract with the French company. The US Secretary of Defense James R. Schlesinger held talks in late August with ROK President Park and other leading South Korean officials, with no immediate success.⁸⁴ Washington was further concerned by French intention to sell two power reactors to ROK, which was seen as having the potential to be an additional source of spent fuel for the French-supplied reprocessing plant.⁸⁵ A State Department briefing paper from September 1975 noted that Washington had fruitful bilateral discussions with France on its nuclear cooperation with South Korea and Taiwan, and that Paris expressed its willingness to acquiesce with US pressure on Seoul and Taipei.⁸⁶ But that success was limited: France

⁸¹White House Memo, 'Meeting with French Foreign Minister Louis de Guiringaud' from Brent Scowcroft, 1 October 1976, NSA, Presidential Country Files for Europe and Canada, Box 3, Folder France (9), GFPL.

⁸²State Department telegram 048673 to the U.S. Embassy Seoul, 'ROK Plans to Develop Nuclear Weapons and Missiles,' 4 March 1975, Secret, RG 58, AAD: MDR release by State Department from P- reels, DNSA collection. See: National Security Archive Electronic Briefing Book No. 582, edited by William Burr, 22 March 2017.

⁸³Tzeng, Nuclear leverage, 478. See also 'M. Jacques Chirac rejette la proposition américaine d'une négociation tripartite sur l'accord franco-pakistanaï', *le Monde* 12 August 1976, p.1-4. Cited in Florent Pouponneau, 'Les changements de la politique française d'exportations nucléaires (1974--1976): Un triple double jeu,' *Critique internationale* n°58, 2013, 112.

⁸⁴Memoranda of Conversations between James R. Schlesinger and Park Chung Hee and Suh Jyong-chul,' 26 August 1975, WCDA, National Security Adviser Presidential Country Files for East Asia and the Pacific, Box 9, Korea (11). Obtained by Charles Kraus. <http://digitalarchive.wilsoncenter.org/document/114633>.

⁸⁵Tzeng, Nuclear leverage, 478.

⁸⁶State Department Briefing Paper, 'Bilateral Talks During UNGA, France - Foreign Minister Sauvagnargues,' circa September 1975, NSA, NSC Europe, Canada and Ocean Affairs Country Files 1974-1977, Box 8, Folder France, 1975 WH (5), GFPL.

rejected the US proposal to limit the provision of sensitive nuclear exports only to recipients who accept IAEA safeguards, while also rejecting the US proposals that reprocessing be only offered on a multinational basis.⁸⁷

The ROK's intransigence on the reprocessing plant led US Deputy Secretary of State Robert Ingersoll to double down on its Ambassador Hahm Pyong Choon in their meeting in October 1975.⁸⁸ When Hahm argued that the French-supplied reprocessing plant would be too small to produce nuclear weapons, the US officials argued that if the plant operated uninterrupted for a year, it could produce 20 kg of plutonium – enough for three 'Fat Man'-type bombs dropped on Nagasaki. Hahm also underlined Seoul's unhappiness that the United States was allowing the Japanese to build a much larger reprocessing plant, also with French assistance. To that, the US response emphasised on the 'strategic significance' of a reprocessing plant in the Korean peninsula, Japan's larger nuclear energy programme, and that Tokyo's reprocessing plans began during an earlier era of optimism surrounding that technology.

In November 1975, the South Koreans continued to insist on the reprocessing deal. State Department officials wrote to Kissinger that they 'strongly favour strengthening our opposition to the French plant', and that the Department should 'attempt to reverse' the Korean decision by using all available leverage, including future civilian nuclear cooperation.⁸⁹ They also recommended to 'inform France of our renewed efforts, formally advise them of our firm conclusion that the ROK government has embarked on a covert programme to develop a nuclear weapon, and note the importance to our efforts of their continuing to refrain from early implementation of the contract, pending the resolution of the issue'.⁹⁰ During December 1975, Washington continued to pressure South Korea to cancel the French deal, and the US Ambassador to South Korea, Richard Sneider, reported of informing the South Koreans of the 'very adverse implications' of the deal and of the 'great importance' attached to the issue in Washington.⁹¹

When in January 1976, the South Koreans relented, they indicated that 'the ROKG is now, due to US concern, reconsidering whether to proceed with the purchase and installation of an experimental reprocessing facility

⁸⁷Ibid.

⁸⁸State Department telegram 240692 to the U.S. Embassy Seoul, 'Deputy Secretary Ingersoll's Meeting with Ambassador Hahm of Korea,' 9 October 1975, Secret, RG 59, AAD. See: National Security Archive Electronic Briefing Book No. 582, edited by William Burr, 22 March 2017.

⁸⁹'Korean Reprocessing – The Next Step', memo for the secretary, 18 November 1975, Winston Lord papers, Box 359.

⁹⁰Ibid.

⁹¹'US Department of State Cable, ROK Nuclear Reprocessing,' 10 December 1975, History and Public Policy Program Digital Archive, Gerald Ford Presidential Library, National Security Adviser Presidential Country Files for East Asia and the Pacific, Box 11, Korea – State Department Telegrams, to SecState – NODIS (8). Obtained by Charles Kraus. <http://digitalarchive.wilsoncenter.org/document/114611>.

from France and that the final decision on the matter will be made on the basis of the ROK/US discussions.⁹² In follow-up talks in June, the two sides outlined the extent of the planned nuclear cooperation, and upon discussing reprocessing technology 'the US side reemphasised the special sensitivity associated with reprocessing facilities and technology'.⁹³ A CIA report would later establish that 'in December 1976, [ROK] suspended the whole formal programme to develop nuclear weapons technology that it had inaugurated only two years earlier'⁹⁴

Parallel to the success achieved in the ROK front, the Americans were also trying to reach some progress on the Pakistani front. Giscard had already sustained heavy political fire from the Gaullists for the cancellation of the ROK deal, when in August 1976, Henry Kissinger arrived for a visit in Paris. Kissinger, who had just completed a trip to Islamabad, faced a French media storm for giving a so-called diktat to the French on who to export their nuclear equipment to.⁹⁵ During the following 2 years, the French–Pakistani cooperation for the construction of a plutonium reprocessing plant would become a test case for the 'Giscardist turn' in French non-proliferation policy.⁹⁶

When trying to convince Islamabad to cancel the deal, the United States stressed the plant's lack of economic viability, rather than its proliferation potential, and proposed the purchase of a French reactor and a fuel fabrication facility instead. Making sure not to antagonise Pakistani Prime Minister, Zulfikar Ali Bhutto, the US Ambassador to Islamabad, Henry Byroade, explained that: 'In approaching the non-proliferation issue, I thought the best tactic would be to try to play the role of a personal friend in persuading him....'⁹⁷ Bhutto, however, was not willing to acquiesce. In September 1976, Pakistan's Ambassador, Yaqub Khan, lamented the situation in a meeting with US officials. He explained that if only Washington had approached Islamabad before the agreement was signed, then 'perhaps something could have been done'.⁹⁸ Public opinion, the Pakistani ambassador claimed,

⁹²'ROK Nuclear Reprocessing', United States Embassy. Korea (South). Secret, Cable. 23 January 1976: 5 pp. DNSA collection: Korea, 1969–2000.

⁹³'U.S.-ROK Discussions on Nuclear Cooperation', United States. Department of State. Limited Official Use, Cable. 16 June 1976: 7 pp. DNSA collection: Korea, 1969–2000.

⁹⁴'South Korea: Nuclear Developments and Strategic Decision-making', Central Intelligence Agency. National Foreign Assessment Center. Secret, Intelligence Report. June, 1978: 23 pp. DNSA collection: Korea, 1969–2000

⁹⁵Telegram from the US Secretary of State to USDel Secretary entitled, 'Press Material,' August 1976, Electronic telegrams 1/1/1976–12/31/1976, Central Foreign Policy Files, RG59, (NARA).

⁹⁶Secret cable 8167 from the US embassy in Islamabad to the US State Department entitled, 'Reprocessing Plant,' 21 August 1978, NSA. See also: Pouponneau, 'Les Changements De La Politique Française D'exportation Nucléaires (1974–1976): Un Triple Double Jeu.', 113.

⁹⁷Telegram from the US embassy in Pakistan to State Department, 'Bhutto and Ambassador discuss Nuclear Proliferation Issue,' 8 June 1976, Presidential Country Files for the Middle East and South Asia, Country File Pakistan (4), Box 27, GFPL.

⁹⁸State Department Telegram from Henry Kissinger to the US Ambassador Byroade, 21 September 1976, Presidential Country Files for the Middle East and South Asia, Country File Pakistan (4), Box 27, GFPL.

was so strong that the Ministry of External Affairs had advised Prime Minister Bhutto against even discussing the reprocessing issue with the US Government. Concurrently, Washington also urged France and other key suppliers to adopt a moratorium on the sale of reprocessing facilities.⁹⁹

While remaining inflexible on the reprocessing issue, Pakistan sought increased US military assistance by purchasing A-7 light attack aircraft, and sought to keep it separate from the proliferation issue.¹⁰⁰ The United States also saw value in avoiding linkage between the two issues. Kissinger explicitly instructed his diplomats to avoid creating the linkage, stressing that the 'A-7 is required for legitimate defensive purposes', and adding that 'to link the A-7 sale with the reprocessing plant would be the same thing as saying that the reprocessing plant was intended for purposes of security, i.e., Pakistan trying to make a bomb. Since this was not the case, the two issues could not be linked.'¹⁰¹ On this point, the Ford administration's willingness to refrain from creating a linkage between the Pakistani A-7 request and Islamabad's nuclear programme is reminiscent of President Lyndon B. Johnson's decision while in his final months in office to not link a similar Israeli request to purchase Phantom jets with Israel's nuclear programme.¹⁰² Kissinger also stressed in his instructions that Washington only wanted Pakistan to forego reprocessing temporarily, not ruling out future reprocessing contracts if found to be economically justifiable. Referring to the potential A-7 linkage, the Pakistanis replied that since 'there was no guarantee that the United States would be a reliable and continuing supplier of weapons even if Pakistan abandoned the reprocessing plant', there was no reason to link US military assistance to non-proliferation concerns.¹⁰³

The Giscard government coordinated its non-proliferation policy with that of the Ford administration through direct consultations. The French government's chief concern, however, was to make sure that French export control reforms seemed to be independent of US influence. In October 1976, only weeks before President Ford's statement on US nuclear policy, French Foreign Minister Louis de Guiringaud candidly told Henry Kissinger and President Gerald Ford in their meeting at the Oval Office¹⁰⁴:

⁹⁹Memorandum for the president from Henry Kissinger, 'Your Meeting with Foreign Minister de Guiringaud on October 1,' 30 September 1976, NSA, NSC Europe, Canada and Ocean Affairs Country Files 1974-1977, Box 8, Folder France, 1976 (3) WH, GFPL.

¹⁰⁰Secret NSC Memo from Robert Oakley to Brent Scowcroft, 'Your meeting with Rogers Morton and LTV President Paul Thayer on A-7s for Pakistan,' 18 September 1976, Presidential Country Files for the Middle East and South Asia, Country File Pakistan (6), Box 27, GFPL.

¹⁰¹State Department Telegram from Henry Kissinger to the US Ambassador Byroade, 8 September 1976, Presidential Country Files for the Middle East and South Asia, Country File Pakistan (5) Folder title: SECSTATE-NODIS (2) Box 27, GFPL.

¹⁰²Rabinowitz and Miller, 'Keeping the bombs in the basement', p. 56.

¹⁰³Ibid.

¹⁰⁴White House Memorandum of Conversation with President Ford, Louis de Guiringaud, Henry Kissinger, Brent Scowcroft and Jacques Koscuisko-Morizet, 1 October 1976, National Security Adviser's Memoranda of Conversation, GFPL. <<https://www.fordlibrarymuseum.gov/library/document/0314/1553548.pdf>>

I would like to make one point. We would like it to appear that our policy in this area is independent even though it is coordinated with you. It would be impossible for President Giscard to appear to accept a line already set out by the United States. Otherwise it will paralyze us. So if you are going to make a statement, we would like to know beforehand so we could issue something beforehand.

Although the French adopted a unilateral moratorium on the future sale of reprocessing plants in December 1976, there was not much movement on the France–Pakistan nuclear pledge after the US presidential elections in which Gerald Ford lost to Jimmy Carter. The Carter administration strongly hoped for a French cancellation of the reprocessing contract with Pakistan. An internal document of the State Department from April 1977 explained that ‘A further delay in transferring reprocessing technology to Pakistan is in everyone’s interest’.¹⁰⁵ When Carter met Giscard in May 1978, the issue was still at the top of the bilateral agenda. Carter’s talking points for the meeting contained the following emphasis: ‘We have intelligence that Pakistan is pursuing a nuclear weapons programme, and we believe that none of us should do anything which clearly contributes to a weapons capability’.¹⁰⁶ French–American effort to curtail the Pakistani nuclear programme intensified during the Carter period, which paved the way to closer discussions of technical aspects of Pakistan’s programme in the following year.¹⁰⁷ Eventually, in the fall of 1978, after several rounds of negotiations between French diplomat André Jacomet and Carter’s ambassador for non-proliferation, Gerard C. Smith, Jacomet told the Americans that ‘the reprocessing deal has been cancelled and there will be no more deliveries to the plant’.¹⁰⁸ The French assessed that since Pakistan ‘will not be receiving French help under the contract’ this would make ‘any effort to complete the [reprocessing] plant more difficult’.¹⁰⁹ Thus, the French pledge to provide nuclear assistance to Pakistan also drew to a close, like its contract with South Korea.

It is believed in some quarters that by the time the French government pulled out, the French company SGN had transferred most of the engineering designs, drawings and blueprints to the Pakistanis.¹¹⁰ Given the tug of war between the Giscard and the supporters of stricter export controls, on

¹⁰⁵Top secret report, [untitled daily report], 21 April 1977, in Brzezinski Material, President’s Daily Report File-2-1-6-1, JCPL.

¹⁰⁶Memo 7810082 for the President from Cyrus Vance, subject: your dinner with President Giscard d’Estaing, May 26’, 22 May 1978, in: Donated Historical Material – Mondale, Walter F-215-7-33-2, JCPL.

¹⁰⁷Cable 21073 from the US embassy in Paris to the Secretary of State, 4 October 1979, Subject: Intelligence Discussion on Pakistan Nuclear Program, Brzezinski Material, Cables File-26-6-48-8, JCPL.

¹⁰⁸Subject: next step on Pakistan reprocessing deal, cable 227260 from State department to embassy in Paris, 12 November 1978’, in Brzezinski Material, Cables File-113-2-32-2, JCPL.

¹⁰⁹Immediate message 7931, from embassy in Vienna [Gerard Smith] to Secretary of State, 29 December 1978, in Brzezinski Material, Cables File-24-6-22-8, JCPL.

¹¹⁰Feroz Hassan Khan. *Eating Grass: The Making of the Pakistani Bomb*. (Stanford, CA: Stanford University Press 2013), 132

the one hand, and the Gaullists, on the other, this may not have been unlikely.¹¹¹ Moreover, the reprocessing plant was not planned as a turnkey project but was meant to be constructed by Pakistan with French designs. Pakistan soon began to procure dual-use items for its centrifuges from Europe through the illicit smuggling network of its scientist A. Q. Khan, and obtained nuclear weapons assistance from China from the 1980s.¹¹² After the French withdrawal from the Pakistani deal, Paris remained uncomfortable with public acknowledgment of its decision, informing the Americans that France could not provide any 'official assurance of cancellation that US could use in Congressional consultations', as that could lead to 'trouble from the Gaullists',¹¹³ who complained that France was losing business owing to its new non-proliferation policy.¹¹⁴

In the South Korean track, American proliferation fears intensified in 1977 despite the cancellation of the reprocessing deal. After Carter's election, the United States began to suspect that the South Koreans were only partially playing along. Since President Carter promised to withdraw US forces from the Korean peninsula, South Korean fears of US abandonment grew, leading to a reconsideration of its earlier suspension of the nuclear weapons programme.¹¹⁵ The State Department believed at the time that the South Koreans were seeking to continue with their nuclear weapons-related activities.¹¹⁶ According to Washington, ROK was working to create a future nuclear weapons option by 'modifying its nuclear development programme to include as many aspects of the nuclear fuel cycle as can be developed with US approval and assistance'.¹¹⁷ A report from the American embassy in Seoul stressed that the South Koreans were increasingly focused 'on questions of

¹¹¹West Germany also decided to pass on blueprints to Brazil of reactors and reprocessing facilities in 1977. It is not known if Brazil's parallel nuclear weapons programme launched in 1978 used the blueprints. See William Glenn Gray, 'Commercial Liberties and Nuclear Anxieties: The US-German Feud over Brazil, 1975-7,' *The International History Review* 34 (3) (2012), 462, 465.

¹¹²For a history of Pakistan's nuclear weapons programme, see Khan. *Eating Grass: The Making of the Pakistani Bomb*, 132.

¹¹³Secret Telegram 08200 from the US embassy in Vienna to State Department, 13 September 1978, WCDA, <<http://digitalarchive.wilsoncenter.org/document/112841>>.

¹¹⁴Between the early 1950s and the late 1970s, France had signed nuclear cooperation agreements with 34 countries, and began to successfully compete with the US firms such as Westinghouse and General Electric. For a study on French nuclear cooperation until present times, see Mycle Schneider, *Nuclear France Abroad: History, Status and Prospects of French nuclear activities in Foreign countries* (Paris: Centre for International Governance Innovation, 2009). See also Benoît Pelopidas, 'French nuclear idiosyncrasy: How it affects French nuclear policies towards the United Arab Emirates and Iran,' *Cambridge Review of International Affairs* 25 (Mar. 2012), 143-69.

¹¹⁵Se Young Jang, 'The Evolution of US Extended Deterrence and South Korea's Nuclear Ambitions,' *Journal of Strategic Studies* 39 (4) (2016), 502-20.

¹¹⁶Jonathan D. Pollack and Mitchell B. Reiss, 'South Korea: The Tyranny of Geography and the Vexations of History,' in Kurt M. Campbell, Robert J. Einhorn and Mitchell B. Reiss (eds.), *The Nuclear Tipping Point: Why States Reconsider Their Nuclear Choices* (Washington DC: Brookings Institution Press 2005), 263.

¹¹⁷'South Korea: nuclear development program' (p.42-5), 1 June 1977, Brzezinski Material, Subject Files-48-1-3-8, JCPL.

nuclear weapons, altering long-standing normative taboo on this subject ...'.¹¹⁸

In 1978, as the South Koreans were considering the purchase of new power reactors, the Americans noted that they were 'looking toward France and Germany as potential suppliers'.¹¹⁹ The United States was not considered as a potential supplier due to its poor supplier credibility. In the words of diplomatic cable, 'The ROK fears the delivery of equipment contracted from a US firm may be blocked or delayed'.¹²⁰ For France, in the decades that followed, it became imperative to demonstrate at home and abroad that it could pursue the goal of nuclear non-proliferation without making financial compromises. The predominant concern for Paris after the adoption of the 1978 NNPA by the Carter administration in March 1978 was the preservation of the economic interests of the French nuclear industry, without risking a rupture with Washington.¹²¹ The Americans promised adequate commercial compensation to the French if controversial deals, like those with Pakistan and South Korea, were terminated, but it is not currently clear to what extent these commitments were carried out, and this question demands further research.¹²² Despite this promise, in 1980, the French told the Americans, while discussing the ongoing nuclear export to Iraq, that 'their [French] decision to halt transfers of reprocessing plants to South Korea and Pakistan ... have served to undermine their global image as a reliable supplier'.¹²³

Conclusion: the transformative shifts after May 1974

Our study leads us to conclude with four main observations on the evolution of the non-proliferation regime and US non-proliferation policy.

First, the failure of the four nuclear pledges outlined in this study underpins the depth of the transformative shift in the nuclear non-proliferation regime, which transpired in the wake of the Indian PNE between 1974 and 1978. The transformation was such that the nature of the technology offered and the degree of its perceived proliferation risk or 'sensitivity', were not consequential to the materialisation or termination of the pledge. This is because the effort to create universal

¹¹⁸'Koreans Intensify Discussion of Nuclear Option', United States Embassy. Korea (Republic). Confidential, Cable. 17 June 1977, collection: Nuclear Nonproliferation, DNSA.

¹¹⁹NSC memo for Brzezinski, evening report from East Asia, 14 April 1978 in: Brzezinski Material, Staff Evening Reports, File-10-6-12-0, JCPL.

¹²⁰Subject: "Noon notes" from the situation room for Dr. Brzezinski, 1 March 1978', Brzezinski Material, President's Daily Report, Box 5, Folder 5-3-7, JCPL.

¹²¹Georges Le Guelte, *Histoire de La menace nucléaire*, 87–92, 214.

¹²²Pouponneau, 2013.

¹²³'Memo for Brzezinski, subject: Paper on the Iraqi nuclear program, 21 November 1980', Staff Material, Middle East, 47-1-13-8, JCPL.

non-proliferation norms took precedence.¹²⁴ As a result, the transformation affected pledges involving 'sensitive technology' like the French plutonium reprocessing agreements as well as those that were considered much safer and much less proliferation prone, like the Egypt–Israel deal, which Brent Scowcroft had described at the time as having 'no real proliferation risks'. The Egyptian deal, for instance, was seen as safe not only by US policymakers but also by Israelis.

Second, the agreements were highly susceptible to the changing preferences of the domestic political coalitions and to the emergence of opposing factions both in France and in the United States. The four original pledges of assistance collapsed in one form or another, when new, more proliferation-cautious governments took office in Washington and Paris. The Ford administration in its final year adopted harsher policies compared to the Nixon years, while the Carter administration applied harsher and more stringent policies still, compared to the Ford era. A similar process took effect in France, where the Giscard government, once free to implement its policy, broke away from the previous Gaullist approach and was willing to implement much stronger policies against nuclear exports. Both Washington and Paris eventually favoured new and stricter non-proliferation efforts over and above their concerns of damaging their 'reliable supplier' credentials. Of the four original nuclear pledges, only the amended 1981 Egyptian agreement was not revoked, but that too never materialised.

Third, in order to salvage their reputation costs, both the United States and France in their capacity as nuclear suppliers preferred to manoeuvre the recipient states into terminating unwanted agreements, or otherwise rejecting them, instead of themselves reneging on promised assistance. The South Korean and the Egyptian cases were relatively straightforward successes from this aspect: the South Koreans agreed to the outright cancellation of the French contract while the Egyptians were willing to accept the amended agreement that cancelled the previous Ford-era agreement. From the American perspective, the gradual adoption of the 'comprehensive safeguards' condition, first in declaratory capacity by the Ford administration, and then by legislation during the Carter administration meant the *de facto* termination of the Israeli reactor pledge. In the Pakistani case, the French were forced to 'pull the plug' themselves, though it is still not clear how much technology was actually transferred to the Pakistanis.

Fourth, the French–American vitriol from the Gaullist era was replaced by a pragmatic approach of give and take, which characterised

¹²⁴This effort to create a universal approach was also described in: Clausen, 'Nonproliferation and the national interest', 127–154.

bilateral cooperation in non-proliferation in the ensuing years.¹²⁵ The cooperation between the United States and France on non-proliferation during the Ford–Carter years was unprecedented, which culminated into French participation in the NSG, and termination or renegotiation of contracts perceived as risky from the proliferation standpoint. Domestic political coalitions in both the United States and France had similar ‘proliferation-cautious’ preferences on nuclear exports, which facilitated their cooperation. By the early 1980s, the two nuclear suppliers would find themselves in closer cooperation over nuclear fuel shipments to India and South Africa.

Were the four aborted nuclear pledges signs of US non-proliferation success? The answer is a very conditional ‘yes’. The South Korean plutonium route was indeed blocked by the joint French–American effort, and was not replaced by an alternative plutonium route.¹²⁶ In the Pakistani case, the cancellation of the deal did not affect the outcome. Regardless of the blocked plutonium route, the Pakistanis were establishing an alternative, centrifuge enrichment route, which enabled them to eventually accumulate highly enriched uranium. While French nuclear ties with Pakistan were severed, these were replaced with Chinese nuclear assistance, illicit procurement through the A. Q. Khan network, and dual-use assistance from the Swiss and the West Germans.

Egypt’s failed bid to import safeguarded US reactors was neither a non-proliferation failure nor a success. Over the years, the Egyptians concluded several agreements with multiple suppliers. None of these materialised for various reasons. There is no evidence that the Egyptians were planning to use the US reactors as a launching pad for a weapons programme nor is there any evidence that in the following decades, they considered establishing a weapons programme. It is quite possible that even without the amendment of the agreement, the Egyptians would not have been able to translate the 1976 Ford-era contract to ‘reactors on the ground’.

The failure of the Israeli reactor deal was collateral damage but from a different angle. As opposed to the other three recipients, the Israelis were already in possession of a deliverable nuclear arsenal when they signed the conditional agreement in 1976. Carter’s decision to amend the agreement and not grant a presidential waiver had little to do with an effort to dissuade the Israelis to open up Dimona for inspection. No one in the administration

¹²⁵For a sociological theory-based explanation of the shift in French position on non-proliferation, see Florent Pouponneau and Frédéric Mérand, ‘Diplomatic Practices, Domestic Fields, and the International System: Explaining France’s Shift on Nuclear Nonproliferation,’ *International Studies Quarterly* (2017). See also: Benoit Pelopidas, ‘French Nuclear Idiosyncrasy: How It Affects French Nuclear Policies Towards the United Arab Emirates and Iran,’ 143–69.

¹²⁶As of early 2017, South Korea does not possess any independent means of uranium enrichment or plutonium reprocessing. See: South Korea Country Profile, <<http://www.nti.org/learn/countries/south-korea/nuclear/>>

believed that the Israelis would allow inspection of Dimona for a couple of power reactors, and the US move seemed more of a tactic to exact a political-economic tribute for Israel's nuclear posture.

As for policy implications, the study underlines that the signing of a contract – or the making of an official pledge to provide nuclear assistance – is not in itself a sign of non-proliferation failure. The pledge of nuclear assistance may never materialise, as happened in each of the four cases. The fact that a contract is negotiated and signed that pledges to provide nuclear assistance does not mean that the pledge itself can be coded as a gain for proliferation or a loss for non-proliferation. Nuclear assistance itself is not automatically a sign of proliferation, and hence, perhaps should not be coded as such in the literature. Until their completion, nuclear cooperation contracts are highly susceptible to interruptions, and a motivated non-proliferation actor could find windows of opportunity to stall and interrupt the process, as was the case with French assistance to Pakistan and South Korea. Future studies must explore the various stages of assistance, and not merely the nuclear cooperation agreement in order to accurately predict proliferation risks from nuclear assistance.

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