

Keeping the Bombs in the Basement

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U.S. Nonproliferation Policy toward
Israel, South Africa, and Pakistan

How has the United States behaved historically toward friendly states with nuclear weapons ambitions? Research has demonstrated the great lengths to which the United States went to prevent South Korea, Taiwan, and West Germany from acquiring a nuclear capability, using threats of abandonment to compel nuclear forbearance.¹ Yet in cases such as Israel, South Africa, and Pakistan, the United States did not prevent proliferation. At least in the cases of Israel and Pakistan, scholars have argued that the United States did not pursue its nonproliferation objectives for geostrategic or domestic political reasons.²

Drawing on declassified documents and interviews, this article reexamines the history of U.S. nonproliferation policy toward Israel, South Africa, and Pakistan. Based on the evidence, we conclude that the United States sought to prevent each of these states from acquiring nuclear weapons despite geopolitical constraints. Moreover, even after these countries acquired the capability to construct a nuclear device, the United States continued its nonproliferation efforts, brokering deals to prevent them from conducting nuclear tests, publicly declaring their capabilities, engaging in weaponization, transferring nuclear materials to other states, or some combination thereof. Moti-

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1. See Rebecca K.C. Hersman and Robert Peters, "Nuclear U-Turns: Learning from South Korean and Taiwanese Rollbacks," *Nonproliferation Review*, Vol. 13, No. 3 (November 2006), pp. 539–553; Robert Reardon, *Nuclear Bargaining: Using Carrots and Sticks in Nuclear Counter-Proliferation*, Ph.D. dissertation, Massachusetts Institute of Technology, 2010; Gene Gerzhoy, "Alliance Coercion and Nuclear Restraint: How the United States Thwarted West Germany's Nuclear Ambitions," *International Security*, Vol. 39, No. 4 (Spring 2015), pp. 91–129; and Nicholas L. Miller, "The Secret Success of Nonproliferation Sanctions," *International Organization*, Vol. 68, No. 4 (Fall 2014), pp. 913–944.
2. On Israel, see Francis J. Gavin, *Nuclear Statecraft: History and Strategy in America's Atomic Age* (Ithaca, N.Y.: Cornell University Press, 2012), pp. 105, 117. On South Africa, see Walton L. Brown, "Presidential Leadership and U.S. Nonproliferation Policy," *Presidential Studies Quarterly*, Vol. 24, No. 3 (Summer 1994), p. 571. On Pakistan, see Samina Ahmed, "Pakistan's Nuclear Weapons Program: Turning Points and Nuclear Choices," *International Security*, Vol. 23, No. 4 (Spring 1999), p. 186.

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vating these efforts was the desire of successive administrations to maintain the credibility of U.S. nonproliferation policy while minimizing the risk of reactive nuclear proliferation, or “nuclear domino” effects. In other words, much of the misunderstanding surrounding these cases stems from a failure to appreciate that nonproliferation policy does not end when a state acquires a capability to construct a nuclear device. Moreover, the United States has pursued this policy consistently, at least since the signing of the Nonproliferation Treaty (NPT) in 1968, in contrast to arguments that Presidents Richard Nixon and Ronald Reagan were not committed to nonproliferation.³

This article begins with a review of existing accounts of U.S. nonproliferation policy toward Israel, South Africa, and Pakistan. It then provides detailed case studies of the evolution of each country’s nuclear program, with a focus on U.S. nonproliferation efforts. After addressing the argument that U.S. opposition to proliferation in these cases was merely rhetorical, we conclude by discussing the implications of our findings for theory, policy, and historiography.

Existing Accounts of U.S. Nonproliferation Efforts

Numerous studies have documented the efforts of President John F. Kennedy’s administration to deny Israel a nuclear capability, but they tend to paint President Lyndon Johnson’s administration as much less enthusiastic about achieving this aim.⁴ Scholars often portray President Richard Nixon as privately endorsing an Israeli nuclear arsenal, laying the groundwork for a U.S. policy of neither acknowledging nor punishing Israel’s noncompliance with nonproliferation policies. As Avner Cohen writes, “Nixon and [National Security Adviser Henry] Kissinger accepted exceptions to the principle of nonproliferation, and believed that this might be a case where the U.S. national interest permitted a state friendly to the United States to build its own nuclear arsenal.”⁵ Francis Gavin argues, “Neither Nixon nor Kissinger thought halting nuclear proliferation merited sacrificing other geopolitical goals,” including in

3. On Nixon, see Brown, “Presidential Leadership and U.S. Nonproliferation Policy,” p. 564; and J. Michael Martinez, “The Carter Administration and the Evolution of American Nuclear Nonproliferation Policy, 1977–1981,” *Journal of Policy History*, Vol. 14, No. 3 (July 2002), p. 262. On Reagan, see Brown, “Presidential Leadership and U.S. Nonproliferation Policy,” p. 567; Jimmy Carter, “Text of Carter’s Speech Attacking Foreign Policy of Reagan Administration,” *New York Times*, December 18, 1981; and David Shribman, “Glenn Asks Action on Proliferation,” *New York Times*, January 10, 1984.

4. See, for example, Avner Cohen, *Israel and the Bomb* (New York: Columbia University Press, 1999), p. 193; John J. Mearsheimer and Stephen M. Walt, *The Israel Lobby and U.S. Foreign Policy* (New York: Farrar, Straus and Giroux, 2007), pp. 35–36; and Zaki Shalom, “Kennedy, Ben-Gurion, and the Dimona Project, 1962–1963,” *Israel Studies*, Vol. 1, No. 1 (Spring 1996), pp. 3–33.

5. Cohen, *Israel and the Bomb*, p. 336.

the case of Israel.⁶ According to John Mearsheimer and Stephen Walt, “The U.S. government has pressed dozens of states to sign the 1968 Nonproliferation Treaty (NPT), but American leaders did little to pressure Israel to halt its nuclear program and sign the agreement.”⁷ Shane Maddock argues that U.S. officials allowed Israel to acquire nuclear weapons without “protest.”⁸

Likewise, U.S. policy toward South Africa in the 1980s—in particular, Ronald Reagan’s decision to resume civilian nuclear cooperation with South Africa—was publicly criticized at the time. For example, nuclear expert Henry Sokolski argued at a 1982 Senate hearing that Reagan’s policy of nuclear engagement with South Africa “would send the wrong signal to both South Africa and other Western nuclear fuel exporters.”⁹ In a 1983 op-ed, future Secretary of Energy Daniel Poneman criticized Reagan’s resumption of nuclear trade with South Africa, among other countries, writing that it “encourages an open season in nuclear trade that could unravel the global consensus against nuclear proliferation.”¹⁰ And, when the U.S. delegation sought to downplay the issue of South African (and Israeli) proliferation at the 1985 NPT Review Conference, other delegations understood this to mean that the Reagan administration “did not entirely object to the nuclearization of either nation.”¹¹ Although subsequent scholarship has recognized that the administration did not fully abandon its nonproliferation objectives,¹² it is not widely known that the administration’s resumption of nuclear fuel shipments to South Africa was part of an effort to prevent it from testing a nuclear device.

Finally, existing accounts acknowledge that the United States sought to rein in Pakistan’s nuclear program in the 1970s. It is widely argued, however, that the Reagan administration ultimately facilitated Pakistan’s efforts to acquire the bomb—in particular, by waiving nonproliferation sanctions and providing massive amounts of economic and military aid to support the insurgent campaign against the Soviets in Afghanistan. Samina Ahmed, for example, argues that “in reaction to the Soviet military intervention, U.S. opposition to the Pakistani program began to ease and then finally disappeared as Washington

6. Gavin, *Nuclear Statecraft*, pp. 105, 117.

7. Mearsheimer and Walt, *The Israel Lobby and U.S. Foreign Policy*, p. 35.

8. Shane J. Maddock, *Nuclear Apartheid: The Quest for American Atomic Supremacy from World War II to the Present* (Chapel Hill: University of North Carolina Press, 2010), p. 8.

9. Judith Miller, “U.S. Easing Policy on Nuclear Sales to South Africa,” *New York Times*, May 19, 1982.

10. Daniel Poneman, “Risky Nuclear Trade,” *New York Times*, November 26, 1983.

11. Brown, “Presidential Leadership and U.S. Nonproliferation Policy,” p. 571.

12. See Frank V. Pabian, “South Africa’s Nuclear Weapon Program: Lessons for U.S. Nonproliferation Policy,” *Nonproliferation Review*, Vol. 3, No. 1 (Fall 1995), p. 1–19; and Peter Liberman, “The Rise and Fall of the South African Bomb,” *International Security*, Vol. 26, No. 2 (Fall 2001), pp. 45–86.

again focused on Pakistan's strategic significance in the region."¹³ Adrian Levy and Catherine Scott-Clark's 2007 book, *Deception*, is largely devoted to exposing so-called American complicity in the Pakistani nuclear weapons program "in return for [Pakistan] resisting Soviet advances."¹⁴ Likewise, Glenn Chafetz argues that the U.S. government "ignored evidence of Pakistan's efforts to acquire nuclear weapons" because of its strategic importance.¹⁵

In contrast to these accounts, we show that the United States pursued nonproliferation measures with Israel, South Africa, and Pakistan even within the context of geopolitical constraints. Successive U.S. administrations did not believe that an Israeli bomb was in the national interests of the United States; they were not indifferent to the South African nuclear program; and U.S. opposition to the Pakistani program never fully receded, even during the Soviet occupation of Afghanistan. Moreover, by examining the deals that the United States brokered to restrain each country's nuclear program after initial nonproliferation efforts failed, we seek to move beyond the existing literature, which has paid little attention to these deals or has explored them only in individual cases.¹⁶ We show that such agreements have been a common feature of U.S. nonproliferation policy across cases.

Israel: Preventing "Public Knowledge" of Israeli Nuclear Capabilities

Israel launched its nuclear weapons program in the late 1950s, although it was not until 1960 that the U.S. government began paying it serious attention. From 1961 to 1968, the Kennedy and Johnson administrations made repeated efforts, including threats of abandonment, to convince Israel to sign the NPT and forswear nuclear weapons. Following the failure of these efforts, the Nixon administration, for the first time in U.S. diplomatic history, brokered a deal to prevent nuclear tests by a friendly, second-generation proliferator. In the Nixon-Meir understanding of September 1969, Israel agreed not to conduct nuclear tests or to publicize its nuclear arsenal if the United States refrained from pressuring Israel to join the NPT. In addition, the United States would no longer link Israel's accession to the NPT to other negotiations. Scholars commonly describe this bargain as contradicting U.S. nonproliferation policy, a perception likely strengthened by Nixon's ambivalence on the NPT. In fact, the

13. Ahmed, "Pakistan's Nuclear Weapons Program," p. 186.

14. Adrian Levy and Catherine Scott-Clark, *Deception: Pakistan, the United States, and the Secret Trade in Nuclear Weapons* (New York: Walker, 2007), p. 4.

15. Glenn Chafetz, "The Political Psychology of the Nuclear Nonproliferation Regime," *Journal of Politics*, Vol. 57, No. 3 (August 1995), p. 756.

16. For a longer treatment of these deals, see Or Rabinowitz, *Bargaining on Nuclear Tests: Washington and Its Cold War Deals* (Oxford: Oxford University Press, 2014).

bargain was largely motivated by nonproliferation concerns: U.S. policymakers determined that keeping the Israeli bomb secret and untested would minimize the risk of reactive proliferation and limit the damage to U.S. credibility on nonproliferation.

ISRAEL AND THE KENNEDY ADMINISTRATION, 1961–63

Israel began its nuclear weapons program in the late 1950s with a series of secret agreements with France. The agreements provided for the construction of a nuclear reactor, cooperation on nuclear research, and the building of a plutonium reprocessing plant, to be located along with the reactor at Dimona.¹⁷ Although President Dwight Eisenhower received evidence in 1958 of a probable nuclear site at Dimona,¹⁸ it was only in 1960 that the U.S. government fully “woke up” to the problem.¹⁹

In his brief time in office, Kennedy opposed the Israeli weapons program and sought to bring it under U.S. control. In May 1961, meeting with Israeli Prime Minister David Ben-Gurion in New York, Kennedy warned that Egypt would follow suit if Israel developed a nuclear weapons capability.²⁰ Ben-Gurion affirmed that Israel would not produce nuclear weapons and that the facilities at Dimona were designed for desalinization.²¹ He hinted, however, that Israel might eventually need to develop nuclear weapons: “[W]e do not know what will happen in the future; in three or four years we might have need for a plant to process plutonium.”²² Ben-Gurion agreed to allow annual American “visits” to Dimona, a euphemism for inspections, but by 1963 the Kennedy administration had determined that tougher measures were necessary to halt the Israeli program.²³

In March 1963, the White House issued National Security Action Memorandum 231, instructing the State Department “to develop proposals for forestalling” the Israeli and Egyptian nuclear programs.²⁴ In May, Kennedy warned Ben-Gurion that U.S. support for Israel “would be seriously jeopard-

17. Michael Bar-Zohar, *Shimon Peres: The Biography* (New York: Random House, 2007), pp. 210–217.

18. Cohen, *Israel and the Bomb*, pp. 83–85.

19. Zaki Shalom, *Israel's Nuclear Option: Behind the Scenes Diplomacy between Dimona and Washington* (Brighton, U.K.: Sussex Academic Press, 2005), p. 11.

20. Memorandum of Conversation (Memcon), May 30, 1961, *Foreign Relations of the United States (FRUS) 1961–1963*, Vol. 17: *Near East, 1961–1962* (Washington, D.C.: Government Printing Office [GPO], 1994), pp. 134–141.

21. Cohen, *Israel and the Bomb*, pp. 106–108.

22. Memcon, May 30, 1961.

23. Cohen, *Israel and the Bomb*, pp. 110–111; Shalom, *Israel's Nuclear Option*, p. 34; and Jeffrey T. Richelson, *Spying on the Bomb: American Nuclear Intelligence from Nazi Germany to Iran and North Korea* (New York: W.W. Norton, 2007), pp. 257–259.

24. National Security Action Memorandum (Memo) No. 231, March 26, 1963, *FRUS 1961–1963*, Vol. 18: *Near East, 1962–1963* (Washington, D.C.: GPO, 1995), p. 435.

dized" absent a clear answer on the "question of Israel's efforts in the nuclear field."²⁵ In the same month, Kennedy approved an arms control initiative aimed at convincing Israel and Egypt to relinquish their nuclear weapons and advanced missile programs, offering Israel in return some sort of informal U.S. security guarantee.²⁶ The Kennedy administration was concerned that Israel's acquisition of a missile capability could contribute to Israel's nuclear weapons program. In April 1963, the Israeli government signed a contract with the French company Dassault Aviation, titled "Operation Jericho," for the production of the Jericho 1 short-range ballistic missile.²⁷

In a letter written to Prime Minister Levi Eshkol in mid-June 1963, Kennedy reiterated the threat to U.S.-Israeli relations posed by Israel's pursuit of nuclear weapons.²⁸ He demanded more stringent inspections at Dimona and warned again that "[the U.S.] government's commitment to, and support of, Israel would be seriously jeopardized" if Israel did not disclose its nuclear plans.²⁹ In August Eshkol agreed in principle to continued inspections, but evaded discussion of the details, including the frequency of future visits.³⁰ As Undersecretary of State George Ball wrote to Kennedy, "[A]lthough not entirely what we wanted, [Eshkol's reply] probably represents the most we can hope to get at this time from the Israelis."³¹ According to Cohen, the Israeli agreement to continued inspections, despite the vagueness of the terms, "greatly diminished" the Kennedy administration's sense of urgency regarding the nuclear issue.³²

25. Cohen, *Israel and the Bomb*, p. 128.

26. Memo from Robert W. Komer of the National Security Staff to President Kennedy, May 16, 1963, *FRUS 1961-1963*, Vol. 18, pp. 540-541. See also Memo by the Working Group on Near East Arms Limitation, undated, *FRUS 1961-1963*, Vol. 18, pp. 563-568. According to an editorial note, "Presumably this is the memorandum Komer forwarded to President Kennedy on May 31." See *ibid.*, p. 568 n. 1.

27. Avner Cohen, *The Worst-Kept Secret: Israel's Bargain with the Bomb* (New York: Columbia University Press, 2011), pp. 287-288. According to French sources, the company delivered fourteen complete Jericho 1 missiles to Israel. After 1967 the exports stopped, at which point Israel developed its own production capabilities. By 1971 it was reportedly capable of producing three to six missiles per month. See Nuclear Threat Initiative, "Country Profile: Israel—Missile" (Washington, D.C.: Nuclear Threat Initiative, February 2013), <http://www.nti.org/country-profiles/israel/delivery-systems/>; Duncan Lennox, ed., "Jericho 1/2/3 (YA-1/YA-3) (Israel), Offensive Weapons," *Jane's Strategic Weapon Systems*, January 2009, pp. 84-86; and William Beecher, "Israel Believed Producing Missiles of Atom Capability," *New York Times*, October 5, 1971.

28. The letter was originally drafted for Ben-Gurion, but was eventually sent to his successor after his resignation. See Shalom, "Kennedy, Ben-Gurion, and the Dimona Project, 1962-1963," p. 14.

29. Quoted in *ibid.*, p. 15.

30. Avner Cohen, "Israel and the Evolution of U.S. Nonproliferation Policy: The Critical Decade (1958-1968)," *Nonproliferation Review*, Vol. 5, No. 2 (Winter 1998), p. 10.

31. Memo from Acting Secretary of State Ball to President Kennedy, August 23, 1963, *FRUS 1961-1963*, Vol. 18, pp. 685-686.

32. Cohen, "Israel and the Evolution of U.S. Nonproliferation Policy," p. 12.

ISRAEL AND THE JOHNSON ADMINISTRATION, 1964–68

With the Vietnam War and the civil rights movement dominating his agenda, President Johnson initially paid less attention to the Israeli nuclear program.³³ But, contrary to previous accounts, the Johnson administration ultimately exerted intense pressure on Israel over its nuclear program, even threatening abandonment on several occasions. By March 1964, U.S. concern over the program had increased, as evidence mounted that Israel was seeking a missile capability. This information led U.S. National Security Adviser McGeorge Bundy to inform Israeli Deputy Prime Minister Abba Eban that “the one thing that might upset this increasingly close [bilateral] relationship would be US belief that Israel was moving in the direction of a nuclear deterrent.”³⁴ In June President Johnson met with Prime Minister Eshkol in Washington, calling on Israel to place the nuclear facilities at Dimona under safeguards and warning that “the U.S. is violently against nuclear proliferation.”³⁵

In February 1965, the Johnson administration offered Israel advanced tanks and weaponry in return for “a firm written reiteration of Israel’s intentions not to develop nuclear weapons” and a willingness to accept International Atomic Energy Agency (IAEA) safeguards at Dimona.³⁶ Israel refused to accept safeguards, and as a substitute, the United States and Israel signed a memorandum of understanding on March 10.³⁷ In it, the Israeli government reaffirmed its commitment, originally formulated by Deputy Defense Minister Shimon Peres to Kennedy a few years earlier, that “Israel will not be the first to introduce nuclear weapons onto the Arab-Israel area.”³⁸ The Israelis found this wording appealing because it allowed them to continue with their nuclear program while leaving the phrase “introduce nuclear weapons” open to interpretation.

In May 1965, the U.S. government renewed its efforts to convince Israel to agree to IAEA safeguards at Dimona. Reflecting the increased U.S. commitment to nonproliferation in the wake of the Gilpatric Committee report, which was completed in January and called for a much stronger U.S. nonproliferation policy,³⁹ a memo from Secretary of State Dean Rusk to President Johnson ar-

33. Shalom, *Israel’s Nuclear Option*, p. 69.

34. Memo for Record, March 5, 1964, *FRUS 1964–1968*, Vol. 18: *Arab-Israeli Dispute, 1964–67* (Washington, D.C.: GPO, 2000), p. 62.

35. Memcon, June 1, 1964, *FRUS 1964–1968*, Vol. 18, p. 154.

36. Memo from President Johnson to the Under Secretary of State for Political Affairs (Harriman) and Robert W. Komer of the National Security Council Staff, February 21, 1965, *FRUS 1964–1968*, Vol. 18, p. 346.

37. Telegram from the Embassy in Israel to the Department of State, March 11, 1965, *FRUS 1964–1968*, Vol. 18, pp. 398–399.

38. Shalom, *Israel’s Nuclear Option*, p. 117.

39. See Francis J. Gavin, “Blasts from the Past: Proliferation Lessons from the 1960s,” *International Security*, Vol. 29, No. 3 (Winter 2004/05), pp. 100–135.

gued that efforts to slow conventional and nuclear weapons programs “will be influenced by the example we set in dealing with Israel. We very much need a breakthrough on the problem of preventing proliferation. . . . So long as the Dimona reactor operates without publicly recognized safeguards, the credibility of our worldwide efforts to prevent proliferation is in doubt.”⁴⁰ Soon thereafter, President Johnson warned Prime Minister Eshkol in another letter that Israel’s resistance to safeguards might result in a Soviet-backed Egyptian nuclear program.⁴¹

By 1966, with Israel still rejecting IAEA safeguards, the United States again turned to the issues of military sales and aid. In a meeting with Israeli Foreign Minister Abba Eban in February, Secretary of State Rusk asserted that President Johnson wanted to grant Israel’s requests for economic assistance and arms sales while noting, “the only major question that could have a disastrous effect on U.S.-Israeli relations was Israel’s attitude on proliferation. . . . Israel should expect the U.S. to be extremely clear and utterly harsh on the matter of non-proliferation.” Rusk warned his Israeli counterpart “not to underestimate the total involvement of U.S.-Israel relations in this matter.”⁴² Within a few weeks of the Rusk-Eban meeting, the United States agreed to sell Israel forty-eight A-4 attack aircraft in exchange for a set of commitments, including one stating that the Israelis “reaffirm their promises not to go nuclear unless others do.”⁴³

As the NPT began taking shape in the summer of 1966, the United States tried again to get Israel to accept IAEA safeguards at Dimona, intensifying its threatening language to its harshest and most explicit level. In a meeting with an Israeli diplomat in July, Secretary of State Rusk warned that if Israel acquired a nuclear capability, “you will lose US support. . . . [N]othing would be more disastrous to GOI [government of Israel] than [to] enter nuclear weapon field.” He added, “[E]ither this card is in your deck, or it is not. If it’s not, then get it out of the way by accepting safeguards. . . . [I]f Israel is holding open the nuclear option, it should forget US support. We would not be with you.”⁴⁴ Rusk’s threat was so jarring that Foreign Minister Eban complained to the U.S. ambassador to Israel in September that “this suggestion of sanctions against

40. Memo from Secretary of State Rusk to President Johnson, May 10, 1965, *FRUS 1964–1968*, Vol. 18, p. 455.

41. Letter from President Johnson to Prime Minister Eshkol, May 21, 1965, *FRUS 1964–1968*, Vol. 18, pp. 463–464.

42. Memcon, February 9, 1966, *FRUS 1964–1968*, Vol. 18, p. 549.

43. Memo from the President’s Deputy Special Assistant for National Security Affairs (Komer) to President Johnson, February 22, 1966, *FRUS 1964–1968*, Vol. 18, p. 556.

44. Telegram from the Department of State to the Embassy in Israel, July 28, 1966, *FRUS 1964–1968*, Vol. 18, p. 623.

Israel [i.e., U.S. abandonment] was not in accord with the atmosphere of trust and good will that should prevail between good friends."⁴⁵

Around the same time, Israel found itself at a nuclear crossroads. For the first time, it was in a position to conduct a full-yield test.⁴⁶ The Israeli testing policy presumably weighed technological considerations, on the one hand, and political needs, on the other. Israeli decisionmakers knew that, much like India later did in 1974, Israel could theoretically conduct a test underground, possibly declaring it to be a peaceful nuclear explosion, without breaching any international norm or law. At the same time, the Israelis were deeply concerned about the potential effects of a test on relations with Washington. According to Cohen, Eshkol believed that a test would be a flagrant violation of the non-introduction formula of 1965.⁴⁷ Eshkol was also aware that the international community would view an overt test as an act of defiance, and that a test would work against Israel's interests by pushing the Arab states into a nuclear arms race, with Moscow's backing.⁴⁸

A report submitted by a team of American inspectors who conducted a "visit" to Dimona in April 1967 concluded that although Israel was not developing nuclear weapons, it was aiming to reach a point where it could assemble a nuclear weapon in short order.⁴⁹ On the eve of the 1967 Six-Day War, Israel assembled its first nuclear devices.⁵⁰ Before the war broke out, the Israeli leadership rejected a proposal by Peres to conduct a demonstration test as an act of deterrence,⁵¹ though contingency plans to detonate a nuclear device on a mountaintop in Sinai should the war escalate were reportedly prepared by the Israeli military.⁵²

After the war, the Johnson administration resumed pressure on Israel to join

45. Telegram from the Embassy in Israel to the Department of State, September 14, 1966, *FRUS 1964-1968*, Vol. 18, p. 638.

46. Cohen, *Israel and the Bomb*, p. 231.

47. Avner Cohen, "Crossing the Threshold: The Untold Nuclear Dimension of the 1967 Arab-Israeli War and Its Contemporary Lessons," *Arms Control Today*, Vol. 37, No. 5 (June 2007), p. 13.

48. *Ibid.*

49. Shalom, *Israel's Nuclear Option*, pp. 144-145.

50. Cohen, *Israel and the Bomb*, p. 274

51. Bar-Zohar, *Shimon Peres*, p. 284; Dan Margalit, *I Saw Them All* (Tel Aviv: Zmora Beitan, 1997), pp. 60-61; Avner Cohen, "Cairo, Dimona, and the June 1967 War," *Middle East Journal*, Vol. 50, No. 2 (Spring 1996), pp. 190-210; and Ami Gluska, *The Israeli Military and the Origins of the 1967 War: Government, Armed Forces, and Defence Policy 1963-1967* (Abingdon, U.K.: Routledge, 2007), pp. 33-37.

52. Amir Oren, "Hutey Barzel, Shney Bragim Ve'Ktsat Atom" [Iron strings, two screws, and a bit of atom], *Ha'aretz*, September 16, 2011. See also the contested memoirs of retired Brig. Gen. Itzhak Yaakov, according to whom Israel placed its nuclear weapons on alert in the first two days of the war with the aim of being able to deter Nasser from launching a chemical attack on Israel. Yaakov, *Adon Klum Baribu'a* [The memoirs of Mr. Zero Squared] (Tel Aviv: Yedioth Ahronoth and Chemed, 2011), pp. 203-209.

the NPT. When organizing a 1968 visit to Dimona, State Department officials stressed that Israel should not hope to enjoy special IAEA inspection arrangements.⁵³ Rusk continued to put pressure on Israeli officials to sign the NPT, and Israeli officials themselves believed that Israel's signature was a critical issue for the United States. Deputy Prime Minister Yigal Allon reportedly told members of the Israeli cabinet in September, "[F]or Dean Rusk, the NPT is a matter of personal obsession."⁵⁴

In October 1968, U.S. intelligence received evidence that Israel possessed nuclear weapons and that it was advancing rapidly to develop missile capabilities.⁵⁵ Around the same time, Rusk's continued pressure "brought home the message of an imminent crisis between the United States and Israel over the nuclear issue."⁵⁶ In November 1968, as U.S. and Israeli officials were negotiating Israel's request to purchase F-4 Phantom fighter-bomber jets, the Johnson administration sought to link any sale to Israel's joining the NPT. After some wrangling, the two sides agreed that the United States would sell the jets to Israel in return for its commitment "not to use" them "to carry nuclear weapons, and not to be the first to introduce nuclear weapons" to the region.⁵⁷ Israel's ambassador in Washington, Yitzhak Rabin, confirmed in his talks with Paul Warnke, assistant secretary of defense for international security affairs, that in Israel's view "an unadvertised, untested nuclear device is not a nuclear weapon," implying that possession of such a device does not constitute "introduction."⁵⁸ Maj. Gen. Mordechai Hod, who also attended the meeting, added that "introduction of a weapon could only mean after testing."⁵⁹

During the last two months of his term, President Johnson sought a clear resolution of the NPT issue, but Prime Minister Eshkol would say only that Israel was still considering it.⁶⁰ Johnson wrote a personal letter to Eshkol asserting that the U.S. "effort to prevent the spread of nuclear weapons . . . is at the heart not only of my own nation's security interests but also the security of

53. Rodger P. Davis, State Department Telegram 5181 to Tel-Aviv Embassy, Subject: Dimona Visit, June 27, 1968, file 1899, box 7, Nuclear Nonproliferation unpublished collection, National Security Archive (NSA), Washington, D.C.

54. Quoted in Cohen, *Israel and the Bomb*, p. 304.

55. Parker T. Hart to Secretary Dean Rusk, "Issues to Be Considered in Connection with Negotiations with Israel for F-4 Phantom Aircraft," October 15, 1968, in Avner Cohen, ed., *Israel Crosses the Threshold*, NSA Electronic Briefing Book (EBB) 189, doc. 2, <http://nsarchive.gwu.edu/NSAEBB/NSAEBB189/IN-02.pdf>.

56. Cohen, *Israel and the Bomb*, p. 309

57. Memcon, "Negotiations with Israel—F4 and Advanced Weapons," November 12, 1968, in Cohen, *Israel Crosses the Threshold*, doc. 3c, <http://nsarchive.gwu.edu/NSAEBB/NSAEBB189/IN-03c.pdf>.

58. *Ibid.*

59. *Ibid.*

60. Shalom, *Israel's Nuclear Option*, p. 167.

every nation in the world. As you know I am personally deeply committed to this task." Warning that Israel's failure to sign the NPT could lead other states in the region to build nuclear weapons, Johnson wrote that this failure would also "be a severe blow to my Government's global efforts to halt the spread of nuclear weapons."⁶¹ Still, Israel refused to join the treaty or accept IAEA safeguards.

ISRAEL AND THE NIXON ADMINISTRATION, 1969

In February 1969, Golda Meir became Israel's prime minister, one month after Richard Nixon assumed the presidency. Meir objected both to Ben-Gurion's policy of misleading Washington and to his agreement to allow inspections of the Dimona facilities.⁶² The Nixon administration was faced with a need to perform a delicate balancing act: on the one hand, the administration was under domestic political pressure to promote the NPT; on the other hand, Nixon and Kissinger were not fans of the treaty, and they knew that pressuring Israel on the nuclear front could cause domestic controversy.⁶³

Although not necessarily opposed to the principle of nonproliferation, Nixon was skeptical that the NPT would be effective; he resented its association with his Democratic predecessor; and both he and Kissinger worried that promoting the NPT could harm relations with U.S. allies.⁶⁴ At the same time, administration officials understood that an Israeli nuclear arsenal would be a serious threat to U.S. security interests in the Middle East. As Assistant Secretary of State for Near Eastern Affairs Joseph Sisco wrote to Secretary of State William Rogers in April 1969, an Israeli bomb, among other things, could encourage further nuclear proliferation, reduce support for the NPT, increase Arab resentment toward the United States, and raise the likelihood of a regional war.⁶⁵

Newly declassified documents published in March 2014 reveal the extent to which the Nixon administration was loath to see Israel become a nuclear power.⁶⁶ National Security Study Memorandum 40, for example, reveals

61. Quoted in Cohen, *Israel and the Bomb*, pp. 315–316.

62. Cohen, *Israel and Bomb*, p. 283.

63. Avner Cohen and William Burr, "Israel Crosses the Threshold," *Bulletin of the Atomic Scientists*, Vol. 62, No. 3 (May/June 2006), p. 25.

64. See Minutes of National Security Council Meeting, January 29, 1969, *FRUS 1969–1976*, Vol. E-2: *Documents on Arms Control and Nonproliferation, 1969–1972* (Washington, D.C.: GPO, 2007), doc. 5; and Conversation between President Nixon and His Assistant for National Security Affairs (Kissinger), June 13, 1972, *FRUS 1969–1976*, Vol. E-2, doc. 58.

65. Joseph J. Sisco to the Secretary, "Israel's Nuclear Policy and Implications for the United States," April 3, 1969, in Cohen, *Israel Crosses the Threshold*, doc. 7, <http://nsarchive.gwu.edu/NSAEBB/NSAEBB189/IN-07.pdf>.

66. For an analysis of these documents, see William Burr and Avner Cohen, Introduction to Burr

strong support from both the Departments of State and Defense for U.S. action against the program.⁶⁷ The study states, “The disadvantages to US global interests are such that a major US effort to induce Israel not to produce nuclear weapons is justified.”⁶⁸ It goes on to say that the United States “should make it clear to Israel that if it elects to pursue a weapons program, it will be imposing a major strain on US-Israel relations, with serious risk to US ability to continue to meet Israel’s conventional arms requirements.”⁶⁹

In June 1969, the administration contemplated pressuring Israel to join the NPT and make a no-testing commitment.⁷⁰ Following several meetings of a small group of high-level administration officials on July 19, Kissinger composed a six-page memo to Nixon,⁷¹ in which he asserted that Israel’s secret nuclear arsenal “would increase the potential danger in the Middle East, and we do not desire complicity in it.” Kissinger went on to make a distinction that would shape the United States’ approach to other nuclear-armed states: “In this case, public knowledge is almost as dangerous as possession itself. This is what might spark a Soviet nuclear guarantee for the Arabs, tighten the Soviet hold on the Arabs and increase the danger of our involvement. What this means is that, while we might ideally like to halt actual Israeli possession, what we really want at a minimum may be just to keep Israeli possession from becoming an established international fact.”⁷² The memo also noted that the group had agreed on three goals: (1) convincing Israel to sign the NPT, (2) securing Israel’s assurance that it would not “possess” nuclear weapons, and (3) getting a commitment that Israel would not produce Jericho missiles. In the first phase of negotiations, the memo recommended against an explicit linkage with arms sales; if, however, Rabin resisted agreeing to these restraints on Israel’s nuclear program, the memo recommended making this linkage clear.⁷³

and Cohen, eds., *Israel Crosses the Threshold II: The Nixon Administration Debates the Emergence of the Israeli Nuclear Program*, NSA EBB 485, September 12, 2014, <http://www2.gwu.edu/~nsarchiv/nukevault/ebb485/>.

67. National Security Study Memo No. 40, from Rodger P. Davis to Henry Kissinger, Subject: “Israeli Nuclear Weapons Program: Issues and Course of Actions,” Attached to a Cover Letter from 30 May 1969,” October 17, 1969, National Archives, Washington, D.C., pp. 10–35, <http://www.archives.gov/declassification/iscap/pdf/2009-076-doc1.pdf>.

68. *Ibid.*, p. 25

69. *Ibid.*, pp. 32–33.

70. Rodger Davies to Mr. Austin et al., “Review Group Consideration of Response to NSSM-40 June 26, 1969,” June 30, 1969, in Cohen, *Israel Crosses the Threshold*, doc. 9, <http://nsarchive.gwu.edu/NSAEBB/NSAEBB189/IN-09.pdf>

71. For a detailed analysis, see Cohen, *The Worst-Kept Secret*, pp. 13–16.

72. Memo from Henry Kissinger to President Nixon, July 19, 1969, National Security Council files, box 0612, Israeli Nuclear Program, Richard Nixon Presidential Library, Yorba Linda, California.

73. Memo, White House, Top Secret, Jul 19, 1969, document CK3100663086, reproduced in *Declassified Documents Reference System* (Farmington Hills, Mich.: Gale, 2014), <http://gdc.gale.com/products/declassified-documents-reference-system/>.

According to the longer report on which Kissinger's memo was based, "World-wide knowledge that the Israelis had nuclear weapons would almost certainly wreck the Non-Proliferation Treaty." The writers of the memo assumed "that it is impossible to deprive Israel of option to put together an operational nuclear capability," leaving the United States with two options: freezing Israel's nuclear program where it stood or—more likely to succeed—preventing the Israelis from publicly confirming its existence. Anticipating criticisms that would later emerge, the authors wrote: "We [the United States] would accept complicity in Israel's possession of nuclear weapons by saying in effect: We know what Israel has, but we will close our eyes to it." Nevertheless, the report concluded: "Saying that we want to keep Israel's possession of nuclear weapons from becoming an established international fact may come very close to describing what we really want in this case. Our interest is in preventing Israel's possession of nuclear weapons. But since we cannot—and may not want to try to—control the state of Israel's nuclear program and since Israel may already have nuclear weapons, the one objective we might achieve is to persuade them to keep what they have secret. This would meet our objective because the international implications of an Israeli program are not triggered until it becomes public knowledge."⁷⁴

In late July 1969, Rabin resisted U.S. requests that Israel sign the NPT, agree not to possess nuclear weapons, and not to produce Jericho missiles. As recommended by Kissinger, no linkage was made to arms sales in this meeting.⁷⁵ A month later, another meeting with Rabin resulted in the same lack of progress.⁷⁶

On September 26, 1969, visiting Prime Minister Meir and President Nixon reached an understanding that fulfilled the U.S. desire to keep the Israeli nuclear capability hidden. This became known as the "Nixon-Meir understanding," first reported in the press by Israeli journalist Aluf Benn on November 29, 1991.⁷⁷ The Nixon-Meir understanding transformed Israeli testing policy into a central issue in U.S.-Israel relations. Cohen's informed speculation as to the content of the talks leads him to conclude that Meir probably candidly disclosed Israel's possession of nuclear weapons to Nixon and guaranteed their status as a weapon of last resort. Nixon likely pressed Meir to follow the

74. Summary of intelligence information gained concerning Israel's nuclear capability and its impact upon U.S.-Israeli relations, Memo, Department of State, Top Secret, July 19, 1969, document CK3100665164, reproduced in *Declassified Documents Reference System*.

75. See Memo, Department of State, Top Secret, August 1, 1969, document CK3100668402, reproduced in *Declassified Documents Reference System*.

76. Cohen, *The Worst-Kept Secret*, p. 23.

77. Aluf Benn, "Afilu achrey Sipurey Va'anunu" [Even after Vanunu's stories], *Ha'aretz*, November 29, 1991.

1968 non-introduction commitment not to publicize Israel's capability by either testing a weapon or declaring its existence.⁷⁸ Nixon probably guaranteed that the United States would not pressure Israel to roll back its program and join the NPT if it kept a low profile; this entailed a non-testing and non-declaring guarantee. The pact brought an end to the visits to Dimona and to U.S. pressure on Israel to join the NPT.

In October 1969, Rabin met State Department officials to discuss Israel's nuclear status. He informed them that "[i]t is the view of the Government of Israel that introduction [of nuclear weapons] means the transformation from a non-nuclear weapon country into a nuclear weapon country," explaining that this understanding of introduction "conformed to the language used in the nuclear non-proliferation treaty."⁷⁹ Because the NPT uses nuclear tests to define nuclear weapons state status,⁸⁰ Rabin's clarification underlines that Israel was making a commitment not to test a nuclear weapon.

Because Nixon declined to link U.S. F-4 sales to Israel signing the NPT, Cohen concludes that the president was tolerant of Israeli proliferation, perhaps because it was consistent with the spirit of his July 1969 Guam doctrine policy, which called for U.S. allies to accept more responsibility in providing for their own defense.⁸¹ The ultimate outcome of the deal, however—Israel agreeing to keep its possession of nuclear weapons secret—was itself aimed at limiting the negative consequences of Israeli proliferation, one of which was its potential to spur reactive proliferation and undermine the NPT. Moreover, this approach was largely adopted because prior harsher policies had failed to prevent Israel from acquiring nuclear weapons. In line with prior administrations, the Nixon administration regarded the Israeli nuclear weapons program as contrary to U.S. national interests, and ultimately as an inevitability whose effects had to be limited.

South Africa: Linking Nuclear Fuel and Nuclear Tests

When South Africa took the first definitive steps toward building nuclear weapons in the 1970s, the United States urged restraint, ultimately threatening to cut off all ties unless South Africa refrained from testing a nuclear device.

78. Cohen and Burr, "Israel Crosses the Threshold," p. 28.

79. Memcon, Subject: "Israeli Nuclear Programs," October 15, 1969, attached to memo for the President, Subject: "Israel's Nuclear Program," from Elliot L. Richardson, October 17, 1969, National Archives, Washington, D.C., p. 1-3, <http://www.archives.gov/declassification/iscap/pdf/2009-076-doc1.pdf>.

80. "Treaty on the Non-Proliferation of Nuclear Weapons," July 1, 1968, United Nations (UN) Treaty Collection, <https://treaties.un.org/Home.aspx?lang=en>.

81. Cohen, *The Worst-Kept Secret*, pp. 23-28.

When Reagan entered office in 1981, South Africa had already acquired a rudimentary nuclear capability. In May 1981, the two parties reached an understanding whereby the United States would allow the shipment of nuclear fuel needed to start up South Africa's Koeberg power plants in exchange for South Africa agreeing not to test a nuclear device without first discussing it with the United States. Although disputed by opponents who sought harsher nonproliferation measures, the Reagan administration felt that nonproliferation was best served by reliably supplying nuclear materials, which would provide leverage over potential proliferators. Although congressional pressure forced the end of this approach in the mid-1980s, South Africa never overtly tested a nuclear weapon.

SOUTH AFRICA AND THE FORD ADMINISTRATION, 1974-76

When in the summer of 1974 Gerald Ford replaced Nixon in the White House, the United States had recently agreed to amend its nuclear cooperation agreement with South Africa and expand nuclear trade.⁸² The amendment contained a contract stipulating that American fuel shipments to the Koeberg nuclear power plants would continue for twenty-five years after their expected initiation in 1982. Additionally, agreements were signed that required IAEA safeguards on U.S.-supplied material and that South Africa send uranium to the United States to be enriched by American suppliers.⁸³ The Ford administration's willingness to expand civilian nuclear trade with South Africa, however, did not reflect a lack of concern about nonproliferation. Rather, the administration believed that such trade provided leverage that could be used to secure U.S. nonproliferation objectives.

By late 1974, U.S. intelligence had become aware of the military potential of the South African nuclear program. A Central Intelligence Agency report from September correctly judged that "South Africa would probably go forward with a nuclear weapons program if it saw a serious threat from African neighbors beginning to emerge."⁸⁴ This contingency materialized in the mid-1970s, when dramatic changes in Southern Africa's geopolitical

82. Statement Regarding the Amendment to the Agreement for Cooperation between the Government of the United States of America and the Government of the Republic of South Africa Concerning Civil Uses of Atomic Energy Signed at Washington on May 22, 1974, July 23, 1974, Document NP01372, Nuclear Non-Proliferation collection, Digital National Security Archive (DNSA), <http://nsarchive.chadwyck.com/home.do>.

83. Martha S. van Wyk, "Ally or Critic? The United States' Response to South African Nuclear Development, 1949-1980," *Cold War History*, Vol. 7, No. 2 (May 2007), p. 203.

84. Director of Central Intelligence, Memo, "Prospects for Further Proliferation of Nuclear Weapons," September 4, 1974, in Jeffrey Richelson, ed., *U.S. Intelligence and the South African Bomb*, NSA EBB 181, doc. 8, <http://nsarchive.gwu.edu/NSAEBB/NSAEBB181/sa08.pdf>.

landscape—combined with rising internal racial tensions, as exemplified by the 1976 Soweto riots—created what Pretoria regarded as a serious threat.⁸⁵ Although South Africa's minister of mines had authorized the development of peaceful nuclear explosives in 1971, it was not until 1974 that Prime Minister John Vorster authorized preparations for a nuclear test and not until 1977 or 1978 that the South African government fully explored the development of a nuclear arsenal.⁸⁶

Despite initially continuing with Nixon's relatively lax policies toward South Africa, the Ford administration was soon forced to end some aspects of nuclear cooperation with Pretoria. In 1974 South Africa completed the first stages of its "Y-plant," a pilot-scale enrichment facility, and refused to place the plant under international safeguards.⁸⁷ In light of this refusal, Congress became increasingly concerned with South Africa's nuclear development, criticizing the United States' continued fuel shipments of highly enriched uranium (HEU) to South Africa's Safari-1 research reactor.⁸⁸

The Ford administration objected to this criticism of its nuclear export policy. In a message to Congress attached to a report on the subject from May 1975, Ford declared: "[C]urrent laws provide ample authority to control the export and re-export of nuclear-related material, equipment and technology." Furthermore, "[t]he international safeguard system will detect and thus help to deter efforts to divert such materials by other nations."⁸⁹ At the same time, Secretary of State Kissinger stressed that these fuel shipments were part of a bilateral agreement, under IAEA safeguards, and that "we have full confidence in the ability of these safeguards to prevent diversion of nuclear material."⁹⁰ But in response to congressional pressure, the Ford administration suspended fuel shipments to Safari-1 in 1975.⁹¹

85. Pabian, "South Africa's Nuclear Weapon Program," p. 3.

86. Liberman, "The Rise and Fall of the South African Bomb," pp. 52–53.

87. Thomas B. Cochran, "Highly Enriched Uranium Production for South African Nuclear Weapons," *Science & Global Security*, Vol. 4, No. 2 (1994), pp. 161–176, at p. 163.

88. These concerns are quoted in a news item Kissinger refers to in Cable from Kissinger to U.S. Embassy, South Africa; U.S. Embassy, Finland; and U.S. Mission to the International Atomic Energy Agency, April 15, 1975, Document NP01404, Nuclear Non-Proliferation collection, DNSA, <http://nsarchive.chadwyck.com/home.do>.

89. Gerald R. Ford, "Appendix O: Message from President Gerald R. Ford to the Congress of the United States, Transmitting a Report on Nuclear Exports and Domestic and International Safeguards, May 6, 1975," in *Development, Use, and Control of Nuclear Energy for the Common Defense and Security and for Peaceful Purposes: First Annual Report to the United States Congress by the Joint Committee on Atomic Energy*, July 17, 1975, 94th Cong., 1st sess., House Report No. 94-366, p. 81.

90. Cable from Kissinger to U.S. Embassy, South Africa; U.S. Embassy, Finland; and U.S. Mission to the International Atomic Energy Agency.

91. Cochran, "Highly Enriched Uranium Production for South African Nuclear Weapons," pp. 161–176, at p. 163.

In May 1976, congressional scrutiny of the prospective U.S. sale of two commercial reactors led Pretoria to withdraw the tender for both the reactors and their nuclear fuel and to turn to France as a supplier of reactors.⁹² Displeased with this result, Ford administration officials thought that the deal could have created important leverage and that such deals “have a direct bearing on the receptiveness of other governments toward our views on nuclear nonproliferation.”⁹³ Significantly, the administration claimed that because France placed less stringent safeguards on its nuclear exports, the result was counterproductive to U.S. efforts to prevent South Africa from acquiring nuclear weapons.⁹⁴

SOUTH AFRICA AND THE CARTER ADMINISTRATION, 1977–80

Pretoria’s fears of isolation grew stronger as President Jimmy Carter, who entered office in January 1977, adopted a confrontational approach toward South Africa and its racial and nuclear policies. He supported limiting the export of nuclear fuel and technology and eschewed the distinction between peaceful and military nuclear technology.⁹⁵ He was also deeply concerned by the possibility of a South African nuclear bomb.⁹⁶

In August 1977, South Africa planned a cold test of a dummy device in the Kalahari Desert with a depleted uranium core. At that time, the Atomic Energy Board had assembled all of the nonnuclear components of a nuclear device, but there was still not enough enriched uranium to produce nuclear cores.⁹⁷ The weapons designers planned to conduct a fully instrumented “hot” nuclear test during 1978, assuming the cold test was successful.⁹⁸

The Soviet Union detected the test preparations and communicated this information to the Carter administration.⁹⁹ The United States, together with

92. Leonard S. Spector and Jacqueline Smith, *Nuclear Ambitions: The Spread of Nuclear Weapons, 1989–1990* (Boulder, Colo.: Westview, 1990), pp. 271–273; and Withdrawal of Application for Export of Special Nuclear Material to Republic of South Africa, June 1, 1976, Document SA00589, South Africa collection, DNSA, <http://nsarchive.chadwyck.com/home.do>.

93. Presentation on Resource Development in South Africa and U.S. Policy by Deputy Assistant Secretary Blake before the Subcommittee on International Resources, Food, and Energy of the House Committee on International Relations, May 25, 1976, Document SA00587, South Africa collection, DNSA, <http://nsarchive.chadwyck.com/home.do>.

94. Van Wyk, “Ally or Critic?” p. 206.

95. Martinez, “The Carter Administration and the Evolution of American Nuclear Nonproliferation Policy, 1977–1981,” pp. 264–265.

96. Van Wyk, “Ally or Critic?” p. 208.

97. Or Rabinowitz interview with Waldo Stumpf, November 17, 2010, Pretoria, South Africa; and Letter from Waldo Stumpf to Pik Botha, personal correspondence, May 24, 2010, private collection.

98. Mitchell Reiss, *Bridled Ambition: Why Countries Constrain Their Nuclear Capabilities* (Washington, D.C.: Woodrow Wilson Center Press, 1995), p. 10.

99. Israeli–South African Nuclear Cooperation, August 17, 1977, Document WM00205, Weapons of Mass Destruction collection, DNSA, <http://nsarchive.chadwyck.com/home.do>.

France, the United Kingdom, and West Germany, threatened to break diplomatic ties with Pretoria if it did not cancel the test. In addition, Paris threatened to cancel construction of the two nuclear plants in Koeberg.¹⁰⁰ The U.S. ambassador to South Africa, William Bowlder, wrote to the South African government that “the detonation of a nuclear device whether a nuclear weapon or a so-called peaceful nuclear explosive or any further steps to acquire or develop a nuclear explosive capability would have the most serious consequences for all aspects of our relations. . . . Under these circumstances you should know that we do not believe that South Africa could continue to count on help from the Western Powers in any field.”¹⁰¹

The strong response of the international community forced the South African government to back down. It sealed the two test shafts in the Kalahari with concrete and deserted the test site. Prime Minister Vorster gave assurances to President Carter that the nuclear program was for peaceful purposes and that “South Africa did not have, nor did it intend to develop, a nuclear explosive device.”¹⁰² According to two high-ranking nuclear officials, J.W. de Villiers and Waldo Stumpf, the government decided to “put the entire testing program on ice, on the shelf.”¹⁰³

On August 23, 1977, President Carter announced that his administration had halted South Africa’s nuclear test.¹⁰⁴ Vorster denied Carter’s declaration and was publicly embarrassed when the president refuted the prime minister’s claim.¹⁰⁵ Following the exposure of the test site, the UN Security Council unanimously adopted Resolution 418 on November 4, 1977, which imposed an arms embargo against South Africa.¹⁰⁶ Yet despite its strong stance against proliferation, the Carter administration opposed a resolution implementing economic sanctions, instead pushing for a softer embargo resolution for fear of losing all leverage. A complete end to nuclear cooperation “might convince South Africa that it has nothing to lose by proceeding to develop nuclear ex-

100. Larry Heinzerling, untitled report, Associated Press, August 23, 1977. See also Reiss, *Bridled Ambition*, pp. 10, 36.

101. Letter, U.S. Ambassador Bowlder to South African Foreign Minister Botha, August 18, 1977, South African Nuclear History collection, Wilson Center Digital Archive, <http://digitalarchive.wilsoncenter.org/document/114150>.

102. John Vorster, Letter from Prime Minister to President Carter, attached to letter from R.F. Botha to Secretary Vance, October 1977, file 137/10/02, Agreements between SA and USA re: Civil Uses of Atomic Energy collection, Department of Foreign Affairs Archive, Pretoria.

103. Reiss, *Bridled Ambition*, pp. 10–11.

104. Heinzerling, untitled report; and Jeffery T. Richelson, *America’s Secret Eyes in Space: The U.S. Keyhole Satellite Program* (New York: HarperCollins, 1990), p. 139.

105. J.D.L. Moore, *South Africa and Nuclear Proliferation: South Africa’s Nuclear Capabilities and Intentions in the Context of International Nonproliferation Policies* (London: Macmillan, 1987), p. 112.

106. Kenneth Mokoena, ed., *South Africa and the United States: The Declassified History* (New York: New Press, 1993), p. xxiv; and Barry Schweid, untitled report, Associated Press, November 4, 1977.

plisives.”¹⁰⁷ U.S. officials hoped they could use whatever remaining leverage they had to secure South Africa’s adherence to the NPT or acceptance of comprehensive international safeguards.¹⁰⁸ Thus, in the summer of 1977, the Carter administration reconfirmed that it would not provide fuel for South Africa’s reactors unless Pretoria accepted IAEA safeguards.¹⁰⁹

Motivated by South Africa’s advancing enrichment activities, the Carter administration launched a new initiative in 1978. The aim was to convince Pretoria to either join the NPT or agree to use fuel that was enriched to a lower level in Safari-1 (originally fueled from 1965 to 1975 by 93 percent American HEU) and to place all of its nuclear activities under IAEA safeguards.¹¹⁰ The initiative failed, causing Carter to ban all U.S. nuclear fuel shipments to South Africa’s Koeberg plants.¹¹¹

In September 1978, Defense Minister P.W. Botha succeeded Vorster as prime minister. Immediately upon entering office, he formed a high-level steering committee on South Africa’s nuclear weapons policy. In October 1978, the government ordered the nuclear program to switch from producing nuclear explosive devices to producing military devices; it decided to create a completely autonomous nuclear fuel cycle and build its own nuclear fuel production facility for both research and power reactors.¹¹² Throughout P.W. Botha’s time as prime minister, the program remained highly secretive.¹¹³

In September 1979, an American Vela satellite detected what appeared to be an atmospheric nuclear test in the South Atlantic, and U.S. officials quickly suspected South Africa might have conducted the test. In the early days after the so-called Vela incident, when Pretoria was still the main suspect, U.S. officials described a South African test as a discredit to U.S. nonproliferation.¹¹⁴ U.S. officials worried that a South African nuclear test could unleash a

107. Cyrus Vance, Cable for All African Diplomatic Posts, “October 31 Security Council Discussion of South Africa,” November 1, 1977, in Mokoena, *South Africa and the United States*, pp. 131–132.

108. Pabian, “South Africa’s Nuclear Weapon Program,” p. 4.

109. Joseph S. Nye, “U.S. Exports to South Africa: Statement to the Subcommittee on Africa of the House Committee on International Relations on 12 July 1977,” Department of State bulletin (Washington, D.C.: U.S. Department of State, August 22, 1977), pp. 236–241.

110. Cochran, “Highly Enriched Uranium Production for South African Nuclear Weapons,” p. 10.

111. Ronald W. Walters, *South Africa and the Bomb: Responsibility and Deterrence* (Lexington, Mass.: Lexington, 1987), p. 96.

112. Pabian, “South Africa’s Nuclear Weapon Program,” p. 5.

113. Interviews conducted by Or Rabinowitz with former Foreign Minister Pik Botha and former Finance Minister Barend du Plessis, Pretoria, South Africa, November 19–20, 2010.

114. Christine Dodson, National Security Council, Memo for: Secretary of State and Others, Subject: “South Atlantic Nuclear Event,” October 22, 1979, w/att: Discussion Paper, October 22, 1979, in Richelson, *U.S. Intelligence and the South African Bomb*, doc. 21, <http://nsarchive.gwu.edu/NSAEBB/NSAEBB181/sa21.pdf>.

proliferation cascade and ruin any hopes of restraining South Africa's nuclear program, stressing: "South Africa faces no significant impediment to establishing a nuclear weapons capability, if it is prepared to pay a political price. South Africa might then support nuclear weapons programs in other politically isolated states, such as Israel and Taiwan. The nonproliferation stakes could be high if the September event caused a rupture in our nuclear negotiations with South Africa."¹¹⁵ An official panel concluded that the event was most likely not a nuclear test, though their conclusion remains highly controversial.¹¹⁶

Nuclear historian Richard Rhodes and other experts believe that the event was most likely an Israeli test of some kind.¹¹⁷ An Israeli nuclear test, if officially confirmed by the White House, would have constituted a clear violation of the Nixon-Meir understanding, risked Israel's relations with the United States, and undermined its projected image as a responsible nuclear actor. Furthermore, both Israel and South Africa were signatories of the Partial Test Ban Treaty, which banned atmospheric testing. The Reagan administration decided in May 1985 to uphold the Carter verdict on the suspected test.¹¹⁸ Since then, no U.S. administration has shown any interest in reexamining the issue.¹¹⁹

By November 1979, South Africa had acquired enough HEU to complete a core for its first gun-type device.¹²⁰ South African scientists assembled a nuclear device, made sure the components were compatible, disassembled it, and stored its two parts separately.¹²¹ Around this time, scientists at Pelindaba conducted criticality tests on the gun-type device, which provided confidence that it would work as predicted by theoretical calculations.¹²²

115. Ibid.

116. The panel was chaired by Jack Ruina of the Massachusetts Institute of Technology. Its final report was the only one of several scientific and analytic reports on the Vela incident to reach this conclusion. See James Adams, *The Unnatural Alliance: Israel and South Africa* (New York: Quartet, 1984), p. 193.

117. As of 2015, most experts believe that the September 1979 event was actually an Israeli nuclear test, possibly of a tactical nuclear missile. Richard Rhodes cites an informed source who claims it was an Israeli tactical nuclear warhead. See Rhodes, *The Twilight of the Bombs: Recent Challenges, New Dangers, and the Prospects for a World without Nuclear Weapons* (New York: Vintage, 2010), p. 215. So does Seymour M. Hersh in Hersh, *The Samson Option: Israel's Nuclear Arsenal and American Foreign Policy* (New York: Random House, 1991), p. 271. Other possibilities are discussed in Director of Central Intelligence, Interagency Intelligence Assessment, "The 22 September 1979 Event," in Richelson, *U.S. Intelligence and the South African Bomb*, doc. 23, <http://nsarchive.gwu.edu/NSAEBB/NSAEBB181/sa23.pdf>.

118. "Evidence Shows S. Africa Tested A-Bomb in 79," *Jerusalem Post*, May 22, 1985.

119. David Albright and Corey Gay, "A Flash from the Past," *Bulletin of the Atomic Scientists*, Vol. 53, No. 6 (November/December 1997), p. 7.

120. Hannes Steyn, Richardt van der Walt, and Jan van Loggerenberg, *Arms Control and Disarmament: South Africa's Nuclear Weapons Experience* (Pretoria: Network, 2003), p. 92. According to Waldo Stumpf, the device was completed in 1980. Interview with Stumpf.

121. Interview with Stumpf.

122. Ibid.; and David Albright, "South Africa and the Affordable Bomb," *Bulletin of the Atomic Scientists*, Vol. 50, No. 4 (July/August 1994), p. 42.

SOUTH AFRICA AND THE REAGAN ADMINISTRATION, 1981-88

Under Reagan, the United States adopted a policy of “constructive engagement” with South Africa. The declared objectives of the policy were to increase the two states’ diplomatic dialogue, reduce the isolation of South Africa’s white elite from the international community, and persuade them to give up apartheid. The friendly tone toward Pretoria also stemmed from the administration’s concerns with the Soviet Union’s growing influence in Africa, combined with commercial and financial interests. The designer of this strategy, U.S. Assistant Secretary of State for African Affairs Chester Crocker, believed it would maximize Washington’s leverage over Pretoria: “It was important for the South Africans to maintain relations with Washington. When they saw Reagan coming they were hoping for a love in and an elopement, but they were not going to get that . . . this was a conditional relationship.”¹²³

This conditionality extended to the nuclear realm, where the administration sought to improve relations while ensuring that South Africa keep its nuclear weapons untested. New evidence suggests that during Reagan’s first year in office, the issue of a South African nuclear test played a major role in the context of the bilateral relationship. A test would have reflected poorly on Washington in its capacity as a nonproliferation advocate and image as a responsible nuclear supplier. According to Crocker, “A test would no doubt be an aggravation or an embarrassment; it would have required us to distance ourselves and criticize it.”¹²⁴ Dave Steward, a former diplomat and high-ranking official in the P.W. Botha government, explains: “(A test) would have had a very negative effect on our relations with Washington. It would have forced the Reagan administration to tighten the screws on South Africa. That was one of the main reasons why we never did a test—the value of our relations with the U.S. This would have put them in a difficult position. They would have had to be seen to be taking a strong action; this would have upset the geo-strategic game they were playing in Southern Africa.”¹²⁵

Under Reagan’s new policy, Washington was willing to allow or enable nuclear fuel shipments for South Africa’s Koeberg power plant. This willingness, however, was conditioned on, among other things, South African restraint in its nuclear weapons program. A State Department paper on nonproliferation policy from April 1981 provides early evidence of the U.S. government’s effort

123. Or Rabinowitz phone interview with Chester Crocker, Washington, D.C., December 10, 2010.

124. *Ibid.*

125. Or Rabinowitz interview with Dave Steward, Cape Town, South Africa, December 2, 2010. Steward was South Africa’s ambassador to the United Nations (1981–82), head of the South African Communication Service (1985–92), and director-general in the office of President F.W. de Klerk (1992–96).

to use nuclear fuel as a nonproliferation lever. According to the paper, "The most useful immediate step to prevent (or brake) South African proliferation would be its agreement to the proposition we and the French have put to them: interim French supply of fuel for the Koeberg reactors and a veto of UN sanctions which would undercut the arrangement in return for South African adherence to the NPT and full scope safeguards. . . . [I]f we are unable to conclude this arrangement . . . we would need to encourage the climate that would inhibit an overt test of an explosive device."¹²⁶

On May 15, 1981, Foreign Minister R.F. "Pik" Botha met President Reagan in the White House. Botha made clear that South Africa would not sign the NPT (the most expansive U.S. objective). As a result, nuclear tests became a bargaining chip in South Africa's bid to ensure delivery of nuclear fuel. Pik Botha first referred to this understanding in 1995.¹²⁷ According to him, the May 15 meeting with Reagan represented a pivotal moment: "I told Reagan that South Africa was not preparing or intending to explode a nuclear device. I further undertook on behalf of the South African government that such [a] device would never be exploded unless the U.S. government is informed beforehand, so that the U.S. government would be in a position to consider its actions and convey it to the South African government in advance. And that was the turning point."¹²⁸ According to Botha, the proposed non-testing formula paved the way for the deal on the nuclear fuel shipments: "[This] won me the day and soon after Koeberg got its fuel elements. We owe it all to Reagan and the conversation that day. . . . [This formula of] 'we will not do a test without first consulting with you' enabled him to allow the French to deliver the fuel component to Koeberg."¹²⁹

Botha's account of the meeting is corroborated by official South African and U.S. documents. According to the notes taken for the South African side by Ambassador Donald Sole, "On the nuclear issue he [Pik Botha] . . . emphasised that Koeberg would at all time be under complete international safeguards, but made it clear that South Africa cannot sign the Non-Proliferation Treaty. . . . [I]t would terminate the speculation about South Africa's possession of the bomb. This would mean that South Africa would be deprived of an important deterrent of major psychological value. South Africa was not prepar-

126. Special Assistant for NPI, NFAC, CIA, to Resource Management Staff, Office of Program Assessment et al., "Request for Review of Draft Paper on the Security Dimension of Non-Proliferation," April 19, 1981, Pakistani Nuclear History collection, Wilson Center Digital Archive, <http://digitalarchive.wilsoncenter.org/document/114233>.

127. "South Africa: Energy Minister's Statement Says No U.S. Law Broken in Obtaining Uranium," BBC Summary of World Broadcasts, January 12, 1995.

128. Interview with Botha.

129. *Ibid.*

ing or intending to explode a nuclear device but he made it clear that we could not afford publicly to surrender this option." In response, Reagan "indicated he was particularly struck by this last argument which had not occurred to him before. The President also reiterated briefly his commitment both to nuclear power and to promoting changes in the previous administration's policy" on nuclear exports.¹³⁰

Secretary of State Alexander Haig, who summed up Botha's visit in a report from May 20, 1981, wrote: "[W]e will seek relief for the South African Government on their Department of Energy contract and will make a best effort on fuel supply for their reactors within our legal and legislative constraints."¹³¹ Haig's summary is silent on the South African guarantee not to conduct a nuclear test.

In a public statement on July 16, 1981, Reagan tied the issue of nuclear exports to advancing nonproliferation: "We must re-establish this Nation as a predictable and reliable partner for peaceful nuclear cooperation under adequate safeguards. This is essential to our nonproliferation goals. If we are not such a partner, other countries will tend to go their own ways, and our influence will diminish. This would reduce our effectiveness in gaining the support we need to deal with proliferation problems."¹³²

The Reagan administration followed through on this policy commitment in 1982, after first enabling a "fuel swap," which saw South African nuclear fuel held by American companies being swapped for nuclear fuel held by French companies.¹³³ Significantly, the French were a part of the process and were not willing to ship the fuel without Washington's consent. "[U]ltimately, the U.S., through the State Department, gave the French the 'go ahead'" to ship the fuel.¹³⁴ Additionally, from 1982 to 1983, the Reagan administration authorized

130. Donald Sole, "Notes on the Meeting between South African Minister of Foreign Affairs R.F. Botha and U.S. President Reagan," May 15, 1981, South African Nuclear History collection, Wilson Center Digital Archive, <http://digitalarchive.wilsoncenter.org/document/116764>.

131. Alexander Haig, "Summing Up of Pik Botha Visit," May 20, 1981, Executive Secretariat, NSC: Records PA: Country file, African Affairs box 91340, South Africa, Vol. 1 (1/20/81–12/31/82), box 6, Ronald Reagan Presidential Foundation and Library, Simi Valley, California.

132. Statement by Reagan on nuclear nonproliferation, July 16, 1981, Speeches collection, Public Papers of Ronald Reagan, Reagan Library, <http://www.reagan.utexas.edu/archives/speeches/1981/71681a.htm>.

133. To conduct the swap, the South Africans sold South African enriched uranium held in the United States and bought enriched uranium held in France. This enabled the involved parties to bypass the ban against direct U.S. fuel shipments to South Africa. On the fuel swap, see "Five U.S. Utilities Relieve South Africa of Immobilized DoE SWU for Koeberg-1," *Nuclear Fuel* (news service), December 20, 1982.

134. Or Rabinowitz interview with Jack Edlow, Washington, D.C., September 23, 2014. Edlow negotiated the deal in his capacity as representative of Edlow International, one of the two U.S. companies involved in the deal. Edlow's account was corroborated by two officials of the second U.S. company involved in the deal, SWUCO Inc. See interview with Walt Wolf (former president of

the sale and shipment of dual-use nuclear components as well as service assistance for Koeberg.¹³⁵

Although it is impossible to definitively establish the weight attached to Botha's guarantee or whether South Africa would have tested in the absence of this linkage to nuclear supplies, the linkage itself—which was not publicized—is evidence of a sincere nonproliferation motivation on the part of the Reagan administration. Reagan's nonproliferation policy toward South Africa, however, had its critics in Congress, who saw it as capitulation.¹³⁶ In this context, Reagan's actions revived the sanctions debate in Congress.¹³⁷ On September 9, 1985, Reagan was pressured into signing Executive Order 12532, imposing additional trade sanctions on Pretoria, which included a complete cutoff in exports of nuclear materials.¹³⁸ The sanctions were an expression of Congress's rejection of apartheid, however, not a punishment for Pretoria's nuclear actions per se.¹³⁹ Also on September 9, the House of Representatives passed the Comprehensive Anti-Apartheid Act, barring any form of nuclear collaboration until Pretoria accepted safeguards. Approved by Congress in 1986, overriding Reagan's veto, the law came into effect in 1987.¹⁴⁰ Meanwhile, administration officials revived their own nonproliferation efforts, promising to "do everything possible to restore commercial and scientific nuclear cooperation after South African NPT accession."¹⁴¹ By 1989, anti-apartheid sanctions and other changes in the international environment had brought about a tectonic shift in how the future of the regime was perceived in Pretoria. Under the leadership of F.W. de Klerk, South Africa moved toward ending apartheid and rejoining the global community. It gave up its small nuclear arsenal in 1991, having never conducted a "hot" test.

Pakistan: Preventing a South Asian "Embarrassment"

The Ford administration was the first to put pressure on Pakistan to restrain its nuclear weapons program, followed by two rounds of sanctions during the

SWUCO), September 17, 2014; and interview with James P. Malone (former SWUCO executive), September 12, 2014.

135. Martha van Wyk, "Sunset over Atomic Apartheid: United States–South African Nuclear Relations, 1981–93," *Cold War History*, Vol. 10, No. 1 (February 2010), pp. 56–57.

136. *Ibid.*, p. 57.

137. Mokoena, *South Africa and the United States*, p. xxv.

138. Executive Order 12532—Prohibiting Trade and Certain Other Transactions Involving South Africa, September 9, 1985, *Code of Federal Regulations*, title 3, (1985), p. 387, <http://www.archives.gov/federal-register/codification/executive-order/12532.html>.

139. Spector and Smith, *Nuclear Ambitions*, p. 275.

140. Pabian, "South Africa's Nuclear Weapon Program," p. 7.

141. Liberman, "The Rise and Fall of the South African Bomb," p. 79.

Carter administration. Although Washington lifted these sanctions following the Soviet invasion of Afghanistan in December 1979, U.S. officials did not give up on their nonproliferation objectives. Contrary to the conventional wisdom, the United States attempted to use the leverage deriving from its massive aid packages in an effort to put limits on Pakistan's nuclear program, including a commitment not to test a nuclear weapon. Although U.S. policies proved insufficient to prevent Pakistan from acquiring nuclear weapons, they did succeed in deterring Pakistan from testing so long as American aid was flowing.

PAKISTAN AND THE FORD ADMINISTRATION, 1974-76

U.S. intelligence on Pakistan's nuclear weapons ambitions first emerged during the Ford administration. After covertly initiating a nuclear weapons program in the wake of its crushing military defeat by India in 1971,¹⁴² Pakistan reached a secret preliminary deal with the French firm Saint Gobain Nucleaire in March 1973 for the construction of a large reprocessing facility, to be located at Chashma; when completed, this facility would be able to extract plutonium for bombs from the spent fuel of Pakistan's Canadian-provided heavy water reactor, which was finished in 1972.¹⁴³ India's test of a nuclear device in May 1974 only increased Pakistan's sense of urgency.¹⁴⁴ A secret U.S. memo written a few weeks after the Indian test stressed American determination to ensure that "other nuclear threshold powers" as well as Pakistan, "not follow the Indian example."¹⁴⁵

By early 1975, the U.S. government had become increasingly concerned over Pakistan's nuclear activities. In January, Arms Control and Disarmament Agency official Robert Gallucci drafted a memo, in which he noted that Pakistan "may well have already decided to produce a weapon, and they have clearly decided to have the capability to build one."¹⁴⁶ Gallucci recommended linking U.S. arms sales, which had been suspended after the 1965 Indo-Pakistani War, to Pakistani restraint in the nuclear realm.¹⁴⁷

In a meeting with Prime Minister Zulfikar Ali Bhutto and several other high-ranking Pakistani officials in February 1975, Ford and Kissinger made that

142. Richelson, *Spying on the Bomb*, p. 328.

143. *Ibid.*

144. Reiss, *Bridled Ambition*, p. 185.

145. Memo from Sidney Sober to Henry A. Kissinger, May 31, 1974, Document PR01076, Presidential Directives, Part 2, DNSA, <http://nsarchive.chadwyck.com/home.do>.

146. State Department Background Paper, "Pakistan and the Non-Proliferation Issue," January 22, 1975, in Joyce Battle, ed., *India and Pakistan—On the Nuclear Threshold*, NSA EBB 6, doc. 20, <http://nsarchive.gwu.edu/NSAEBB/NSAEBB6/docs/doc20.pdf>.

147. *Ibid.*

linkage explicit. Kissinger discussed a pledge with the Pakistani foreign minister whereby Pakistan would promise “to observe safeguards and . . . not undertake any experiments outside the scope of the safeguards” as a means of expediting arms sales.¹⁴⁸ When the foreign minister raised the question of whether Pakistan could develop “peaceful nuclear explosives,” which is how India had characterized its nuclear devices, Kissinger forcefully responded: “We have found there is no way to distinguish between a peaceful explosion and weapons technology. I always tell the Indians when they talk about their peaceful explosion that it is nonsense.”¹⁴⁹ A few weeks later, Kissinger stated that “Pakistan has given us assurance not to go into nuclear explosives.”¹⁵⁰ On March 24, Ford lifted the arms embargoes on Pakistan and India, with several qualifications, including that the sales should not “restore the pre-1965 situation in which the US was a major regional arms supplier.”¹⁵¹

In 1976 U.S. intelligence learned of the Pakistani deal to buy a French reprocessing facility, in addition to efforts to obtain a heavy water production facility from West Germany. Marking the first time the United States put real pressure on Pakistan over its nuclear program, Undersecretary of State for Political Affairs Joseph Sisco pressed the Pakistani government to cancel the deals. Sisco informed the Pakistani ambassador of the administration’s “increasing apprehension” over these attempted acquisitions and warned that the response in Congress “could cause difficulties for both of us.”¹⁵² President Ford followed up with similar warnings, writing to Prime Minister Bhutto that Pakistan’s nuclear plans were of “deep concern to my Government” and that these plans “could erode” U.S. support for Pakistan.¹⁵³

In September 1976, the United States offered to sell Pakistan A-7 attack aircraft if it would cancel the reprocessing deal with France, while hinting at possible sanctions if it refused to do so. With the U.S. presidential election fast approaching, Kissinger warned the Pakistani ambassador: “[I]f the Democrats win, they would like nothing better than to make a horrible example of somebody. . . . [Y]ou will face an assault and they will attack you. Credit and arms

148. Memcon, February 5, 1975, *FRUS 1969–1976*, Vol. E-8: *Documents on South Asia, 1973–1976* (Washington, D.C.: GPO, 2007), doc. 189, p. 5.

149. *Ibid.*, p. 6.

150. Memo of Telephone Conversation, February 20, 1975, Document KA13314, Kissinger Telephone Conversations, DNSA, <http://nsarchive.chadwyck.com/home.do>.

151. National Security Decision Memo 289, March 24, 1975, *FRUS 1969–1976*, Vol. E-8, doc. 193, p. 1.

152. Telegram 40475 from the Department of State to the Embassy in Pakistan, February 19, 1976, 2317Z, *FRUS 1969–1976*, Vol. E-8, doc. 224, pp. 1, 3.

153. Letter from President Ford to Pakistani Prime Minister Bhutto, March 19, 1976, Nixon-Ford Administrations, *FRUS 1969–1976*, Vol. E-8, doc. 225, pp. 1–2.

sales will be much more difficult, even impossible.”¹⁵⁴ In October Kissinger warned Pakistani officials, “After November 2, if we are elected, Congress will act. If Carter is elected, Congress and the President will act against you.”¹⁵⁵ Following Carter’s victory, Kissinger made a final push in December to get Pakistan to cancel the deal, promising A-7s and additional inducements and warning the Pakistani ambassador: “[W]hen you see an express train coming down the track, it seems only prudent to get out of its way. I would hate very much to see Pakistan become the first object of a desire by a new Administration to score something.”¹⁵⁶

PAKISTAN AND THE CARTER ADMINISTRATION, 1977–80

As Kissinger predicted, the Carter administration was quick to impose sanctions on Pakistan for its nuclear activities. In July 1977, Pakistani Gen. Muhammad Zia-ul-Haq seized power from Bhutto in a coup. Two months later, an administration official traveled to Pakistan to deliver the message in person. Zia refused to capitulate, and “U.S. nuclear sanctions were applied and only food aid continued.”¹⁵⁷ U.S. officials worried that if Pakistan were to test a nuclear bomb, this “could well lead India—which does have that capability—to develop nuclear weapons on its own.”¹⁵⁸

By the summer of 1978, however, France had terminated the reprocessing deal.¹⁵⁹ In response, the United States informed Pakistan in October 1978 that its aid transfers would resume.¹⁶⁰ By early 1979, U.S. officials had become convinced that Pakistan was making serious efforts to obtain enrichment technology, which threatened again to trigger sanctions.¹⁶¹ Indeed, as early as 1974, A.Q. Khan, a Pakistani scientist working for a European nuclear con-

154. Memcon, September 11, 1976, *FRUS 1969–1976*, Vol. E-8, doc. 235.

155. Memcon, October 6, 1976, *FRUS 1969–1976*, Vol. E-8, doc. 236, p. 5.

156. Memcon, December 17, 1976, *FRUS 1969–1976*, Vol. E-8, doc. 239, p. 4.

157. Feroz Hassan Khan, *Eating Grass: The Making of the Pakistani Bomb* (Stanford, Calif.: Stanford University Press, 2012), p. 138.

158. Intelligence report, April 26, 1978, Document WM00212, Weapons of Mass Destruction collection, DNSA, <http://nsarchive.chadwyck.com/home.do>.

159. Richelson, *Spying on the Bomb*, pp. 328–329.

160. Memo to Chris [Warren Christopher] from Steve [Oxman], Enclosing Edits to Draft Cable to Islamabad and “Evening Reading” Reports to President Carter on Pakistan, excerpts, October 4, 1978, in William Burr, ed., *The United States and Pakistan’s Quest for the Bomb*, NSA EBB 333, doc. 18, <http://nsarchive.gwu.edu/nukevault/ebb333/doc18.pdf>.

161. John Despres, National Intelligence Officer for Nuclear Proliferation via Deputy Director for National Foreign Assessment [and] National Intelligence Officer for Warning to Director of Central Intelligence, “Monthly Warning Report—Nuclear Proliferation,” “Warning Report” attached, December 5, 1978, in Burr, *The United States and Pakistan’s Quest for the Bomb*, doc. 21, <http://nsarchive.gwu.edu/nukevault/ebb333/doc21.pdf>. See also John Despres, NIO for Nuclear Proliferation, to Interagency Intelligence Working Group on Nuclear Proliferation, “Monthly Warning

sortium in the Netherlands, had begun clandestinely acquiring centrifuge plans from his employer.¹⁶² Soon thereafter, Khan suggested to Pakistani leaders that they initiate a uranium enrichment program; Bhutto approved the plan in early 1975.¹⁶³

In response, U.S. officials warned Pakistan about possible sanctions. In March 1979, Deputy Secretary of State Warren Christopher visited Pakistan and informed Pakistani officials, “in clear unambiguous terms,” that nuclear sanctions were imminent.¹⁶⁴ Zia reportedly refused to accept safeguards and to forswear “peaceful” nuclear explosions but promised that the program would be devoted to peaceful purposes.¹⁶⁵ By late March, the United States had begun a process of suspending aid to Pakistan in accordance with the Symington amendment.¹⁶⁶

An interagency working group paper from the same month concluded that a Pakistani arsenal could have a domino effect, by demonstrating “even more forcefully than India—that nuclear weapons status is within reach of small, relatively unsophisticated nations notwithstanding the coordinated opposition of the supplier countries.”¹⁶⁷ In parallel, Carter sent a letter to allied capitals warning that Pakistan’s acquisition of nuclear weapons could lead to a South Asian nuclear arms race, the erosion of regional stability, and a greater likelihood of proliferation in the Middle East and elsewhere.¹⁶⁸ In early April, the U.S. government declared that it had suspended most forms of economic and military aid to Pakistan.¹⁶⁹

By 1979, preventing a Pakistani test had become a major U.S. priority. Ac-

Report,” excised copy, January 18, 1979, in Burr, *The United States and Pakistan’s Quest for the Bomb*, doc. 22, <http://nsarchive.gwu.edu/nukevault/ebb333/doc22.pdf>.

162. Richelson, *Spying on the Bomb*, p. 330.

163. *Ibid.*, pp. 329–330.

164. U.S. Embassy Islamabad Cable 2769 to State Department, “Nuclear Aspects of DepSec Visit Discussed with U.K. and French Ambassadors,” March 7, 1979, in Burr, *The United States and Pakistan’s Quest for the Bomb*, doc. 26A.

165. Khan, *Eating Grass*, p. 209.

166. Ambassador Pickering, Paul Kreisberg, and Jack Miklos through Mr. Newsom and Mrs. Benson to the Secretary, “Presidential Letter to President Zia on Nuclear Issues,” March 21, 1979, in Burr, *The United States and Pakistan’s Quest for the Bomb*, doc. 31, <http://nsarchive.gwu.edu/nukevault/ebb333/doc31.pdf>.

167. Anthony Lake, Harold Saunders, and Thomas Pickering through Mr. Newsom and Mrs. Benson to the Deputy Secretary, “PRC Paper on South Asia,” enclosing Interagency Working Group Paper, “South Asian Nuclear and Security Problems, Analysis of Possible Elements in a U.S. Strategy,” March 23, 1979, in Burr, *The United States and Pakistan’s Quest for the Bomb*, doc. 32A, <http://nsarchive.gwu.edu/nukevault/ebb333/doc32a.pdf>.

168. Paul H. Kreisberg to Mr. Newsom, “Presidential Letter on Pakistan Nuclear Program to Western Leaders,” March 30, 1979, in Burr, *The United States and Pakistan’s Quest for the Bomb*, doc. 33, <http://nsarchive.gwu.edu/nukevault/ebb333/doc33.pdf>.

169. William Burr, introduction to Burr, *The United States and Pakistan’s Quest for the Bomb*, <http://www2.gwu.edu/~nsarchiv/nukevault/ebb333/>.

According to Ambassador Thomas Pickering, who served as assistant secretary of state for oceans and international environmental and scientific affairs from 1978 to 1981: “[T]here was a tangible fear of a test; we knew about a test site, we knew the weapon preparations were going on, but the test was only one component.”¹⁷⁰ At the request of a policy review committee, the Carter administration established an interagency panel headed by arms control expert Gerard Smith. The committee determined that a penalty-oriented approach was inadequate to coax Zia to redirect his efforts, concluding that the “prospects are poor that any approach will be successful in deflecting Pakistan and India from continuing their current nuclear programs.”¹⁷¹ Nevertheless, Smith supported an all-out international public relations campaign against Pakistan’s efforts to acquire a bomb, arguing that it represented “the sharpest challenge to the international structure since 1945.” He argued, “If Pakistan persists, India is bound to develop nuclear weapons and then where does the process stop. It seems inevitable that the present broad consensus against weapons spread (more than 100 nations in NPT) will further erode. The prospect of ‘Moslem’ bombs is as likely as a German and Japanese bomb (consider what their jingos would make of these countries remaining as 3d class powers).”¹⁷²

At this point, President Carter began consideration of a new proposal suggesting that the administration should adapt the Nixon-Meir model and apply it to Pakistan. The official behind this proposal was diplomat Peter Constable, senior deputy in the Near East–South Asia Bureau. Constable’s proposal began with the bleak statement that U.S. nonproliferation efforts in South Asia “have come to a dead end,” suggesting it was time to treat South Asia “as a special case.”¹⁷³ According to Constable, Pakistan probably wanted “a full fuel cycle like India” and “might be willing to hold its nuclear capabilities at a stage short of actual weapons development.”¹⁷⁴ Constable’s proposal consisted of an “attempt to persuade the GOP [Government of Pakistan] to forego a Peaceful Nuclear Explosion,” and additional efforts to get India and China to agree to join a larger initiative.¹⁷⁵ Carter and Smith ultimately rejected

170. Or Rabinowitz interview with Ambassador Thomas Pickering, Washington, D.C., June 12, 2013.

171. Lake, Saunders, and Pickering through Newsom and Benson, “PRC Paper on South Asia.”

172. Memo from Gerard C. Smith, Special Representative of the President for Non-Proliferation Matters, to the Deputy Secretary, March 27, 1979, in Burr, *The United States and Pakistan’s Quest for the Bomb*, doc. 32C, <http://nsarchive.gwu.edu/nukevault/ebb333/doc32c.pdf>.

173. Peter D. Constable, U.S. Department of State Cable 145139 to U.S. Embassy India [repeating cable sent to Embassy Pakistan], “Nonproliferation in South [Asia],” June 6, 1979, in William Burr, ed., *New Documents Spotlight Reagan-Era Tensions over Pakistani Nuclear Program*, NSA EBB 377, doc. 1, <https://www.documentcloud.org/documents/347012-doc-1-6-6-79.html>.

174. *Ibid.*

175. *Ibid.*

Constable's plan, concluding that Pakistan had not yet reached the testing threshold and that such a bargain would damage U.S. credibility on nonproliferation.¹⁷⁶ According to Pickering, they rejected the plan because it "came at a time when we thought we had an opportunity to stop the program short, so going on a non-testing agreement would seem to be implied permission to get up to that line but not beyond."¹⁷⁷

In August 1979, *New York Times* correspondent Richard Burt reported that Carter administration officials had received unconfirmed reports that Pakistan was preparing an underground test site for a nuclear detonation. His sources claimed that the administration had discussed informally the option of attacking Pakistan's nuclear infrastructure, but that this plan was deemed too dangerous and politically provocative.¹⁷⁸ In a briefing in September for the General Advisory Committee on Arms Control and Disarmament, Charles Van Doren, assistant director of the Nonproliferation Bureau at the Arms Control and Disarmament Agency, stressed that the administration was becoming increasingly concerned with the possibility of a Pakistani nuclear test disguised as a peaceful nuclear explosion, adding that, because the *New York Times* story had forced the administration to declare that no attack plan was being actively considered, it essentially prevented such a plan from being discussed.¹⁷⁹

The administration soon decided to push again for a Pakistani commitment not to test, develop, or transfer nuclear technology. Anthony Lake, director of the policy planning staff at the State Department, floated a plan comprising carrots and sticks. The "sticks" involved threats by other states that contributed aid to Pakistan, while the "carrots" might include the sale of F-16 jets and waiving of the Symington amendment.¹⁸⁰ Pickering explains the push to reach a non-testing deal as follows: "People looked at nonproliferation as freezing and then rolling back capabilities. The test was an ultimate demonstration; it was seen as having deleterious effects beyond purely acquiring the elements and the capacity to assemble the device."¹⁸¹

176. Gerard C. Smith, Special Representative of the President for Non-Proliferation Matters, to the President, "Nonproliferation in South Asia," June 8, 1979, in Burr, *The United States and Pakistan's Quest for the Bomb*, doc. 36, <http://nsarchive.gwu.edu/nukevault/ebb333/doc36.pdf>.

177. Interview with Pickering.

178. Richard Burt, "U.S. Aides Say Pakistan Is Reported to Be Building an A-Bomb Site," *New York Times*, August 17, 1979.

179. Friday Morning Session, General Advisory Committee on Arms Control and Disarmament, excised copy, excerpt, September 14, 1979, in Burr, *The United States and Pakistan's Quest for the Bomb*, doc. 42, <http://nsarchive.gwu.edu/nukevault/ebb333/doc42.pdf>.

180. Anthony Lake, Director, Policy Planning Staff, to Secretary of State Vance, "The Pakistan Strategy and Future Choices," September 8, 1979, in Burr, *New Documents Spotlight Reagan-Era Tensions over Pakistani Nuclear Program*, doc. 2, <https://www.documentcloud.org/documents/347013-doc-2-9-8-79.html>.

181. Interview with Pickering.

In October 1979, Pakistani Foreign Minister Agha Shahi traveled to Washington to meet with Secretary of State Cyrus Vance. According to Shahi, Vance asked for an explicit Pakistani commitment not to test, to which Shahi replied that Pakistan “had not yet reached that stage” and that it would review the costs and benefits once it had achieved the necessary capability to explode a device.¹⁸² Vance also asked for a commitment on nuclear transfers, which he got, and on international inspections, which he did not.¹⁸³

The Soviet Union’s invasion of Afghanistan in the closing days of December 1979 drastically altered U.S.-Pakistan dynamics by necessitating Pakistani support in resisting the Soviet advance. In mid-January, it became public that the United States was planning to offer \$400 million in aid to Pakistan over two years. Zia declared in a press conference that the sum was “peanuts. . . . Pakistan will not buy its security with \$400 million.”¹⁸⁴ He also stated his desire that the 1959 U.S.-Pakistani cooperation agreement become a full-blown treaty, ensuring that “the freedom of Pakistan is guaranteed.”¹⁸⁵

As National Security Adviser Zbigniew Brzezinski and Deputy Secretary of State Christopher prepared to visit Pakistan in January 1980, Carter instructed them to “convey to Zia a sense of the breadth and firmness of the U.S. response to the Soviet invasion of Afghanistan.” In what would become the basis of U.S. nonproliferation efforts toward Pakistan over the next decade, Carter shifted the U.S. red line from the development of nuclear weapons to actual testing, asking Brzezinski and Christopher “[t]o seek assurances that the Zia government will not test a nuclear device and to impress upon Zia how dangerous a test would be to Pakistan’s security and to the new Western relationship we are seeking to develop.”¹⁸⁶ U.S. officials informed their British counterparts that during these talks they told the Pakistanis that “a test would have a fundamental effect on relations with the U.S.,” and that a decision not to test would diminish American “determination to seek constraints on the sensitive facilities.”¹⁸⁷ But on the test issue, Brzezinski “received no response.”¹⁸⁸ In-

182. Dennis Kux, *Disenchanted Allies: The United States and Pakistan, 1947–2000* (Baltimore, Md.: Johns Hopkins University Press, 2001), p. 241.

183. *Ibid.*

184. Cable from Barrington King to U.S. Department of State, January 18, 1980, Document NP01720, Nuclear Non-Proliferation collection, DNSA, <http://nsarchive.chadwyck.com/home.do>.

185. Kux, *Disenchanted Allies*, p. 241.

186. Memo from Jimmy Carter to Zbigniew Brzezinski and Warren Christopher, January 30 [1980], Document CO00459, CIA Covert Operations, 1977–2010 collection, DNSA, <http://nsarchive.chadwyck.com/home.do>.

187. Telegram 1135 from Washington Embassy, March 18, 1980, FCO 37/2370, Commonwealth Office and Foreign and Commonwealth Office: South Asia Department: Registered files (S and FS Series), Records of the Foreign and Commonwealth Office and Predecessors, National Archives, Kew, United Kingdom.

188. Michael Pakenham Letter from Washington Embassy to Robert Alston, Joint Nuclear Unit, February 7, 1980, FCO 37/2370, Commonwealth Office and Foreign and Commonwealth Office:

stead, the Pakistanis insisted that “the vulnerability of their position requires a higher level of assistance.”¹⁸⁹ Having made no progress and lacking diplomatic leverage, the State Department sought to send more food aid to Pakistan in an attempt to fill the void, hoping that this “could help us bridge this awkward period when we have nothing definitive to say regarding our future relations.”¹⁹⁰ Zia ultimately refused Carter’s offer of aid, hoping to achieve a better deal from presidential candidate Ronald Reagan, correctly betting that he would win the November 1980 election.

PAKISTAN AND THE REAGAN ADMINISTRATION, 1981–88

Improving ties with Pakistan was high on the Reagan administration’s agenda as a means to counter Soviet expansionism. Yet the administration also wanted constraints on Pakistan’s nuclear program. In March 1981, an intra-agency group recommended that the two countries enter into “a new security relationship” that could help “influence Pakistani nuclear decision making.”¹⁹¹ Soon thereafter, the U.S. ambassador to Islamabad, Arthur Hummel, was recalled to Washington to assist in putting together a five-year aid package to Pakistan, worth \$3.2 billion.¹⁹²

In a visit to Washington in April 1981, a high-ranking Pakistani delegation led by Foreign Minister Shahi and Gen. K.M. Arif, a close adviser to Zia, discussed the new security relationship and aid package with U.S. Secretary of State Haig. During the visit, a bilateral agreement was reached that would serve as the foundation for the revival of the U.S.-Pakistani alliance in years to come.¹⁹³ The agreement had two main aspects. First, the United States would fund Pakistani-trained Afghan mujahideen in their fight against the Soviets. In return, the Pakistanis would continue their nuclear program but would refrain from testing.¹⁹⁴ In essence, the Reagan administration was implementing Constable’s 1979 proposal to adopt the Nixon-Meir model in the Pakistani case.

South Asia Department: Registered files (S and FS Series), Records of the Foreign and Commonwealth Office and Predecessors, National Archives, Kew, United Kingdom.

189. Cable from Cyrus R. Vance to U.S. Embassy, Saudi Arabia, February 5, 1980, Document NP01731, Nuclear Non-Proliferation collection, DNSA, <http://nsarchive.chadwyck.com/home.do>.

190. Harold Saunders, Action Memo from NEA to Deputy Secretary Warren Christopher, Title: “Additional Food Aid for Pakistan,” confidential, April 2, 1980, file 1980, box 2, Nuclear Non-proliferation unpublished collection, NSA.

191. Action Memo from Nicholas A. Veliotos to William P. Clark, March 7, 1981, Document AF01116, Afghanistan collection, DNSA, <http://nsarchive.chadwyck.com/home.do>.

192. Shahid Jarved Burki, “Pakistan under Zia, 1977–1988,” *Asian Survey*, Vol. 28, No. 10 (October 1988), p. 1096.

193. Kux, *Disenchanted Allies*, p. 257.

194. Farzana Shaikh, *Making Sense of Pakistan* (New York: Columbia University Press, 2009), p. 197.

In his memoir's description of the April 1981 meeting, Arif wrote that Haig was sympathetic to Pakistan's nuclear program: "It was also explained [by Arif] that Pakistan would neither compromise on her nuclear programme nor accept any external advice on internal matters. General Haig stated that it was for Pakistan to solve her internal affairs. He assured us that Pakistan's nuclear programme would not become the linchpin of the new relationship."¹⁹⁵ Dennis Kux's account mostly corroborates Arif's account, while adding that Haig made clear that testing a bomb would endanger U.S. cooperation with Pakistan.¹⁹⁶

According to Feroz Khan, the deal contained several conditions, the most crucial being that Pakistan would not conduct a hot test.¹⁹⁷ Zia reportedly issued four secret directives to Pakistan's nuclear establishment as a result of his pledge to President Reagan that he would "never embarrass his friend." In addition to not conducting hot tests, the other directives placed limitations on uranium enrichment and technology transfers.¹⁹⁸

As Feroz Khan explains it, the political circumstances in Pakistan were somewhat analogous to the Israeli political circumstances in the context of the Nixon-Meir understanding. For Washington to help Islamabad, Islamabad needed to help Washington first—by not testing.¹⁹⁹ Ambassador Pickering's view of the price of the deal was similar: "One of the ways we paid for the mujahideen was an inability to use drastic measures to stop the Pakistani nuclear program. To some extent this represented the Israeli connection, which was kind of emotional and political in a real sense but it played some of the same role in the motivational factor. . . . At the end it made sense, if you thought that you could not block it anywhere else—you would try to block a testing program."²⁰⁰ After the April 1981 visit was concluded, a State Department cable that summarized the talks explained: "We made clear that we are concerned about Pakistan's nuclear program and that the explosion of a nuclear device would make it very difficult to maintain our support."²⁰¹

In September 1981, the Reagan administration concluded the five-year, \$3.2 billion aid deal with Pakistan and agreed to sell Pakistan forty F-16

195. Khalid Mahumud Arif, *Working with Zia: Pakistan's Power Politics 1977–1988* (Oxford: Oxford University Press, 1995), p. 341.

196. Kux, *Disenchanted Allies*, p. 257.

197. Or Rabinowitz phone interview with retired Brig. Gen. Feroz Hassan Khan, former director of arms control and disarmament affairs, Strategic Plans Division, Joint Services Headquarters, August 20, 2010.

198. Khan, *Eating Grass*, p. 214.

199. Interview with Khan.

200. Interview with Pickering.

201. Cable from Alexander M. Haig Jr. to U.S. Embassy, France, April 25, 1981, Document AF01172, Afghanistan collection, DNSA, <http://nsarchive.chadwyck.com/home.do>.

fighter-bombers. Congress granted Pakistan a six-year exemption from the Symington amendment to allow disbursement of the aid; at the same time, however, it strengthened legislation to cut off aid to any new nuclear state that tested a device.²⁰² Although the president could waive these sanctions, Congress could also reimpose the ban.²⁰³

In the years that followed, the United States grew increasingly alarmed by Pakistan's nuclear progress. For example, in preparatory staff papers composed before a meeting between Reagan and Zia in December 1982, Secretary of State George Shultz argued that there was "overwhelming evidence that Zia has been breaking his assurances" on Pakistan's nuclear weapons program, but he also emphasized Pakistan's strategic importance.²⁰⁴ Shultz stressed that the April 1981 agreement was unclear on how far Pakistan was allowed to progress before the testing threshold: "Last year we received assurances from Zia that Pakistan would not manufacture nuclear weapons, not transfer sensitive nuclear technology, and not 'embarrass' us on the nuclear issue while we are providing aid. (We both understood this clearly to mean that Pakistan would not test a nuclear device; it was left ambiguous as to what it meant short of a test.)."²⁰⁵

A 1986 memo reveals that in the December 1982 meeting, Reagan presented Zia with a list of explicit nuclear constraints: Pakistan must not assemble or test a nuclear device; it should not transfer any kind of technology for nuclear explosive devices; and it should not violate international safeguards agreements or carry out unsafeguarded plutonium reprocessing. The memo also quotes a "non-paper" given to the Pakistanis in May 1984 stating that the United States "would be obligated to terminate security assistance if Pakistan assembles or tests a nuclear device" and stressing that these points were "made by President Reagan in his December 1982 meeting with President Zia."²⁰⁶ By 1986, however, it had become clear that "Pakistan's decade-long pursuit of nuclear weapons continues apace despite U.S. efforts to stop it."²⁰⁷

202. Spector and Smith, *Nuclear Ambitions*, pp. 92–93

203. "Congress Widens Role in Arms Sales," *New York Times*, January 2, 1982.

204. Secretary of State to President Reagan, "How Do We Make Use of the Zia Visit to Protect Our Strategic Interests in the Face of Pakistan's Nuclear Weapons Activities?" November 26, 1982, in Burr, *New Documents Spotlight Reagan-Era Tensions over Pakistani Nuclear Program*, doc. 16, <https://www.documentcloud.org/documents/347090-doc-16-11-26-82.html>.

205. *Ibid.*

206. Director, Arms Control and Disarmament Agency, to Assistant to the President for National Security Affairs, "Pakistan's Nuclear Weapons Programmes and U.S. Security Assistance," June 16, 1986, in Burr, *New Documents Spotlight Reagan-Era Tensions over Pakistani Nuclear Program*, doc. 20, <https://www.documentcloud.org/documents/347039-doc-20-6-16-86.html>.

207. *Ibid.*

Moreover, apart from refraining from testing, Zia seemingly violated all of the other nuclear commitments to which he had agreed.²⁰⁸

Meanwhile, the Chinese decided to assist Pakistan's nuclear program by supplying it with nuclear and missile-related assistance, including the delivery in 1981 of a CHIC-4 bomb design and HEU for two bombs.²⁰⁹ A news report in March 1984 claimed that China had hosted a Pakistani nuclear test at its Lop Nor test site.²¹⁰ If true, such assistance would have voided Pakistan's need to conduct its own test. China's assistance to Pakistan meant that during the 1980s the Reagan administration was facing a huge challenge, as another major nuclear power, China, was endeavoring to offset U.S. efforts.

Chinese assistance notwithstanding, there were a number of reasons why the United States would still want to prevent an indigenous Pakistani test. In a June 1981 assessment, the State Department Bureau of Intelligence and Research identified a range of potential negative consequences, including an escalation in Pakistan's nuclear arms race with India: "It is difficult to be optimistic that a stable, long-term mutual deterrence relationship would be established. . . . Under nuclear arms race conditions, a crisis that results in military hostilities would always have a chance of escalating to a nuclear exchange." The report also warned that South Asian proliferation "would weaken international efforts to prevent horizontal proliferation within Southwest Asia as well as outside the region," and that India and Pakistan might be tempted to supply sensitive nuclear technology to countries in the Middle East for security or financial reasons.²¹¹

By December 1984, Pakistan was ready to conduct a hot nuclear test, but Zia ordered his scientists to wait.²¹² According to an assessment by Robert McFarlane, a former Reagan national security adviser, losing U.S. support by testing was not cost efficient in Zia's view: "Losing in terms of the criticism he [Zia] would suffer from his military and the country at large was simply not worth it. It was to him a very pivotal relationship, strategic. Posing a risk or any breach in it was simply not worth it."²¹³ The following year, Congress

208. A.Q. Khan started to build his nuclear export network in the mid-1980s and arranged the first deal with Iran around 1987. See Gordon Corera, *Shopping for Bombs: Nuclear Proliferation, Global Insecurity, and the Rise and Fall of the A.Q. Khan Network* (Oxford: Oxford University Press, 2006), p. 59.

209. Khan, *Eating Grass*, p. 188.

210. Cable from Harry G. Barnes Jr. to U.S. Department of State, March 27, 1984, Document NP02123, Nuclear Non-Proliferation collection, DNSA, <http://nsarchive.chadwyck.com/home.do>.

211. Bureau of Intelligence and Research, U.S. Department of State, "India-Pakistani Views on a Nuclear Weapons Option and Potential Repercussions," June 25, 1981, Wilson Center Digital Archive, <http://digitalarchive.wilsoncenter.org/document/114242>.

212. Levy and Scott-Clark, *Deception*, p. 112.

213. Or Rabinowitz interview with Robert McFarlane, Washington, D.C., June 11, 2013.

adopted the Pressler amendment, making continuation of aid to Pakistan conditional upon the president certifying every year that Pakistan did not have a nuclear device and that continued assistance would help to prevent this eventuality.²¹⁴ In addition, Congress enacted the Solarz amendment, which banned “aid to any non-nuclear state found to have smuggled items from the United States for use in a nuclear explosive device.”²¹⁵

Even when evidence emerged that Pakistan was smuggling dual-use components out of both the United States and Europe, the White House and Central Intelligence Agency went to great lengths to downplay the intelligence, preventing the Solarz amendment from being triggered.²¹⁶ Pakistan tested only in 1998, eight years after the United States reimposed sanctions, when President George H.W. Bush refused to certify that Pakistan did not possess a nuclear device.

Was the United States Willing to Bear Real Costs?

Skeptics might argue that U.S. opposition to the Israeli, South African, and Pakistani nuclear programs was merely cheap talk and that the United States was unwilling to bear significant costs in its nonproliferation efforts. U.S. policies toward all these states, however, involved significant costs.

In the case of Israel, the United States’ insistence to link the provision of F-4 and A-4 aircraft to Israel’s commitment not to introduce nuclear weapons into the Middle East demonstrated this commitment. The American effort to prevent Israel from acquiring nuclear weapons played a significant role in the genesis of the massive arms transfer relationship that continues to this day.²¹⁷ Although the threats of abandonment made with varying degrees of explicitness by Kennedy, Rusk, and Johnson were not executed, it is quite possible that the United States did not follow through on these threats precisely because Israel was careful to avoid crossing the threshold that might have spurred the United States to carry one of them out, given that Israel’s arsenal remained “unadvertised” and “untested.”

The U.S. decision to impose sanctions on South Africa from 1975 until 1982 similarly reflected a commitment to nonproliferation. Moreover, although it was not apparent at the time, we now know that Reagan’s decision to permit

214. Reiss, *Bridled Ambition*, p. 186.

215. Spector and Smith, *Nuclear Ambitions*, p. 94.

216. Vipin Narang, *Nuclear Strategy in the Modern Era: Regional Powers and International Conflict* (Princeton, N.J.: Princeton University Press, 2014), p. 72.

217. See Douglas Little, “The Making of a Special Relationship: The United States and Israel, 1957–68,” *International Journal of Middle East Studies*, Vol. 25, No. 4 (November 1993), pp. 563–585.

fuel shipments was part of a quid pro quo understanding at least partly based on South Africa's agreement to notify the United States before making a decision to test.

Finally, U.S. opposition to the Pakistani nuclear program was clearly more than rhetorical, at least for the 1974–79 period, when the U.S. government twice imposed sanctions. During the 1980s, U.S. policymakers remained opposed to Pakistan acquiring a nuclear bomb, which explains their repeated efforts to set red lines for its program. At the same time, policymakers in the United States were loath to terminate aid to Pakistan given its importance in the campaign against the Soviets in Afghanistan. Importantly, however, the aid package allowed the United States to achieve what it had tried and failed to achieve previously—namely, a Pakistani commitment not to test. U.S. policymakers had concluded that the United States' sanctions policy had failed prior to the Soviet invasion; in this sense, the changing international situation facilitated a more effective nonproliferation policy.

Conclusion

Contrary to the conventional wisdom, the historical evidence suggests that the United States has engaged in nonproliferation efforts even in the face of geopolitical constraints, as in the Israel, South Africa, and Pakistan cases. Moreover, once these states achieved a basic weapons capability, or when U.S. policymakers determined their programs were too costly or impossible to derail, the United States did not give up on its nonproliferation objectives but rather concluded deals to limit the effects of their proliferation by barring tests and open declaration or weaponization. U.S. opposition to these countries' nuclear programs was more than rhetorical; although geopolitical constraints certainly affected U.S. nonproliferation policy in each case, these constraints did not prevent U.S. policymakers from pursuing nonproliferation aims and bearing significant costs. This basic commitment to nonproliferation was upheld even under Nixon and Reagan, presidents who were less committed to the NPT than Johnson and Carter. While Nixon and Reagan had a preference for different policy tools, such as creating leverage through continued nuclear exports, they nonetheless sought to prevent additional states from acquiring and testing nuclear weapons, in line with the fundamental logic of U.S. nonproliferation policy.

In terms of policy implications, the evidence in this article suggests that it may be worthwhile to reconsider what is meant by "success" in nonproliferation. Although preventing additional states from acquiring nuclear weapons capabilities is certainly the primary goal, policymakers have perceived value

to limiting the consequences of proliferation beyond this threshold—in particular, by preventing testing, public declaration, weaponization, and transfer of sensitive materials. These behaviors are consistent with Ariel Levite’s concept of nuclear restraint, “whereby a state undertakes a policy or external commitment (commonly made to the United States) that, at least initially, falls short of nuclear rollback but nonetheless keeps it from proceeding with some prominent nuclear activities.”²¹⁸

Some observers might argue that preventing nuclear testing is inconsequential. As described above, both South Africa and Pakistan acquired unsecured stockpiles of weapons-grade enriched uranium in the 1980s. It could be argued that for the international community, knowledge of this possession may have been almost as good as an explosion of a device. After all, in 1945 “Little Boy,” the uranium-based, gun-type design that was used on Hiroshima, was considered simple enough to be deployed without ever being tested.²¹⁹ Likewise, Israel’s possession of nuclear weapons has been an open secret for decades.

Nevertheless, efforts to convince emerging nuclear powers to engage in nuclear restraint are important for a number of reasons. First, because reactive proliferation or “nuclear domino effects” can be driven by domestic political and prestige motivations in addition to security motives,²²⁰ U.S. policies that prevent public testing and declaration may lessen the pressures for reactive proliferation. At the same time, a non-tested, nonweaponized arsenal could reduce pressure for reactive proliferation simply because the nuclear threat would be less acute.

Second, U.S. efforts to prevent nuclear tests demonstrate to potential proliferators that nonproliferation barriers will remain even after the acquisition of a rudimentary capability, thus maintaining the credibility of the nonproliferation regime and reducing the expected benefits of a nuclear weapons program. If the United States opposed states’ nuclear weapons programs and then acquiesced once they achieved a limited capability, such states could become convinced that they would only have to endure a limited period of pressure before enjoying the full benefits of nuclearization.

Third, preventing states from testing or weaponizing makes it harder for them to adopt a nuclear posture of asymmetric escalation, which requires a

218. Ariel E. Levite, “Never Say Never Again: Nuclear Reversal Revisited,” *International Security*, Vol. 27, No. 3 (Winter 2002/03), p. 68.

219. Richard Rhodes, *The Making of the Atomic Bomb* (New York: Simon and Schuster, 1986), pp. 700–740.

220. Nicholas L. Miller, “Nuclear Dominoes: A Self-Defeating Prophecy?” *Security Studies*, Vol. 23, No. 1 (January 2014), pp. 33–73.

reliable threat to use tactical nuclear weapons on the battlefield. Without transparent weaponization and tests, such a threat would lack credibility; as opposed to relatively simple first-generation designs, tactical nuclear weapons are more complicated and generally require testing before deployment.²²¹ Preventing states from adopting a posture of asymmetric escalation is beneficial for the United States because such a posture could (1) reduce the capacity of the United States to intervene militarily in the proliferating country, (2) increase the risk of inadvertent nuclear use, and (3) facilitate conventional aggression.²²²

There are also a few implications for current historiography. First, the historical evidence in this article debunks the myth that Israel has received unique treatment regarding its nuclear weapons program, as is suggested by scholars such as John Mearsheimer and Stephen Walt.²²³ Our study shows that the Reagan administration was willing to reach similar deals to avert nuclear tests with other Cold War partners that did not enjoy the backing of the American Israel Public Affairs Committee on Capitol Hill. Although the Israeli deal has lasted the longest, it is not a singular phenomenon in the diplomatic record of the United States. If Israeli policymakers believe that Israel's strategic nuclear understandings with Washington are important, they may want to stop fueling ongoing diplomatic friction with Washington resulting from Israel's Palestinian policy, in general, and settlement expansion, in particular.²²⁴ While the U.S. interest in preventing Israel from testing will likely continue, it is possible that a reduction of U.S. leverage stemming from deteriorating relations could someday lead Israel to conclude that it has little to lose from violating its pledge to the United States.²²⁵

In the South African case, future research will have to ascertain the degree to which the Reagan-Botha talks of May 1981 shaped Reagan's policy on France's nuclear fuel exports. The evidence above supports the notion that American

221. Thomas B. Cochran and Christopher E. Paine, *The Role of Hydronuclear Tests and Other Low-Yield Nuclear Explosions and Their Status under a Comprehensive Test Ban* (Washington, D.C.: Natural Resources Defense Council 1995), p. ii.

222. See Narang, *Nuclear Strategy in the Modern Era*.

223. See Mearsheimer and Walt, *The Israel Lobby and U.S. Foreign Policy*.

224. Israeli concerns over U.S. willingness to continue the diplomatic protection afforded to Dimona were voiced as recently as May 2015 in the days preceding the conclusion of the 2015 NPT review conference in New York. See Jay Solomon, "Israel Frets as U.N. Works to Arrange Mideast Nuclear Conference," *Wall Street Journal*, May 21, 2015, <http://www.wsj.com/articles/israel-frets-as-u-n-works-to-arrange-mideast-nuclear-conference-1432255451>.

225. A report titled "Project Daniel," submitted by a group of experts to Israeli Prime Minister Ariel Sharon in 2003, proposed transforming Israel's deterrence posture from opaque to overt by testing a nuclear device if Israel were faced with a nuclear-armed Iran. See Louis René Beres, "Israel's Uncertain Strategic Future," *Parameters*, Vol. 37, No. 1 (Spring 2007), pp. 37–54.

willingness to give the “go ahead” to the French to send fuel was indeed linked to Botha’s “no surprise test” guarantee, but more research is needed to establish the guarantee’s exact impact. Similarly, declassifying the protocols of the meetings that U.S. officials held with their Pakistani counterparts in April 1981 and December 1982 is required for researchers to be able to more definitively analyze the nuclear red lines drawn by Reagan in the Pakistani context.

Finally, in terms of implications for political science theory, the evidence lends support to an emerging body of scholarship that emphasizes the role of the superpowers in preventing the proliferation of nuclear weapons, whether through sanctions,²²⁶ security guarantees,²²⁷ sponsorship and enforcement of the NPT,²²⁸ or supply-side controls.²²⁹ The cases explored in this article suggest that these findings can be extended to include the role of the United States in limiting the adverse consequences of proliferation once a state has succeeded in acquiring a limited capability.

226. Miller, “The Secret Success of Nonproliferation Sanctions.”

227. Philipp C. Bleek and Eric B. Lorber, “Security Guarantees and Allied Nuclear Proliferation,” *Journal of Conflict Resolution*, Vol. 58, No. 3 (April 2014), pp. 429–454.

228. Andrew J. Coe and Jane Vaynman, “Collusion and the Nuclear Nonproliferation Regime,” *Journal of Politics*, forthcoming.

229. Matthew Kroenig, *Exporting the Bomb: Technology Transfer and the Spread of Nuclear Weapons* (Ithaca, N.Y.: Cornell University Press, 2010).