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Predicting Nuclear Proliferation: A Declassified Documentary Record

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The inability of U.S. weapons inspectors to discover any of the weapons of mass destruction (WMD) that Iraq was believed to possess prior to the 2003 Gulf War has made the American public—not to mention scores of foreign governments and populations—deeply suspicious of the Bush administration's motives for going to war against Saddam Hussein's Iraq. It also has called into question the quality and objectivity of U.S. intelligence assessments concerning WMD proliferation. Although it is far too early to judge whether American intelligence agencies accurately estimated Iraq's WMD stockpile and production capabilities,^[1] the declassification of several Cold War-era Central Intelligence Agency (CIA) and Defense Intelligence Agency (DIA) estimates of nuclear proliferation trends offers interesting insights into what previous U.S. governments believed—and ultimately did—about the international spread of nuclear weapons.

During the Cold War, U.S. intelligence agencies devoted the overwhelming portion of their collection and analytical efforts to assessments of the military capabilities and political intentions of the Soviet Union and its Communist allies.^[2] But when information became available in the early 1960s indicating that the People's Republic of China was nearing the production of nuclear weapons, the U.S. government and its various intelligence agencies became more seriously interested in understanding the motivations and capabilities of other countries to acquire nuclear weapons.

Department of Defense Proliferation Assessment

Because of growing concern about nuclear proliferation, President John F. Kennedy warned the American public in March 1963 that fifteen to twenty-five states might obtain military nuclear capabilities by the 1970s, the likely result of which would be international instability, reduced opportunities for nuclear disarmament, an increased chance of accidental war, and heightened prospects for global powers to become entangled in regional conflicts.^[3] President Kennedy based this pessimistic forecast on a secret study that Secretary of Defense Robert McNamara had given the president one month earlier. In this document, McNamara expected that by 1973 eight new states might acquire nuclear weapons—China, Sweden, India, Australia, Japan, South Africa, Germany, Israel—and that, shortly thereafter, many more countries could go nuclear as the cost of acquiring nuclear weapons "may come down by a factor of 2 to 5 times."^[4]

[Secretary McNamara's 1963 nuclear proliferation estimates](#) are reproduced in the following table.

Table 1 Country Nuclear Weapons Capabilities

	<i>Estimated Number of Years Before...</i>			
<i>Country</i>	<i>First Test</i>	<i>Aircraft</i>	<i>IRBM</i>	<i>Nuclear Arms Motivation</i>
France	done	1964	1969	high
West Germany	4-5	6	7	moderate

Italy	5-6	7	8	low
Belgium	unclear	unclear	unclear	low
Netherlands	unclear	unclear	unclear	low
Canada	1-2	6	7	very low
Sweden	2-3	5	8	unclear
Switzerland	unclear	unclear	unclear	low
Japan	5-6	6	8	very low but depends on China
India	4-5	5	8	low but depends on China
Israel	2-3	1968	1968	moderate to high
United Arab Republic	over 10	over 10	over 10	moderate to high
Brazil	over 10	over 10	over 10	low
Australia	unclear	unclear	unclear	low
Norway	unclear	unclear	unclear	low
China	0-1	1970	1972	high
East Germany	USSR prohibits			unclear
Czechoslovakia	USSR prohibits			unclear
Poland	USSR prohibits			unclear

NIE 4-63

The CIA, the intelligence organizations of the Departments of State and Defense, and the National Security Agency (NSA) prepared the first of many National Intelligence Estimates (NIEs) on nuclear proliferation in June 1963. The document, entitled "Likelihood and Consequences of a Proliferation of Nuclear Weapons Systems," or NIE 4-63, concluded that "eight countries [the identities of which are excised, but presumably are the same countries listed by Secretary McNamara], in addition to France, have the physical and financial resources to develop an operational nuclear capability (weapons and means of delivery) over the next decade (1)." Stating that it was likely that only Communist China actually had started a weapons program, the document assessed that India, Japan, and a few other countries threatened by China "almost certainly" will "continue development of their peaceful nuclear programs, some to a point which would significantly reduce the time required to carry through a weapons program."^[5]

Much more disconcerting was the CIA's subsequent discovery, based on newly available satellite imagery, that China had "a much more ambitious advanced weapons program than we had earlier thought possible."^[6] China's imminent development of nuclear weapons, coming on the heels of France's entry into the nuclear club after its detonation of a fission device in February 1960, and information that Israel also could build nuclear bombs from the plutonium separated at its secret Dimona reprocessing facility,^[7] created a growing perception in Washington of a worldwide nuclear proliferation crisis.

Heightened concern about the growing risk of nuclear proliferation led the Kennedy administration to undertake three new nonproliferation measures, two of which were designed to influence the motivations of states that might have an interest in acquiring nuclear arms. First, Washington moved to ban tests of nuclear explosives in the atmosphere, an idea that Indian Prime Minister Jawaharlal Nehru first

advocated in 1954. U.S. officials calculated that a partial test ban would be "a necessary, but not a sufficient, condition for keeping the number of nuclear countries small" by making nuclear weapons development by an aspiring nuclear state more costly and less legitimate.^[8] Although the U.S. Joint Atomic Energy Intelligence Committee assessed that "the cost of underground testing is not likely to be a deterring factor in a national decision to develop nuclear weapons,"^[9] the CIA reported that "a limited test ban treaty would be a political and psychological deterrent to the acquisition of nuclear weapons," except for China, France, and Israel. India also was seen as a special case: "Nehru has announced that India will adhere to the treaty. But once China explodes a device, and particularly after Nehru is gone, India will be under strong domestic pressure to embark on a weapons program."^[10]

Second, because many countries of proliferation concern were located in Europe, Kennedy pushed for an Atlantic multilateral nuclear force (MLF) as a means to dull German and other European appetites for independent nuclear forces.^[11] U.S. officials also hoped that as the European Community acquired more and more political authority from its constituent nation-states, even Britain and France would consider placing their nuclear forces under central European Community control.^[12] In the end, the MLF proposal was not implemented.

The third major nonproliferation challenge confronting U.S. policymakers at the time was how to mitigate the impact of China's impending nuclear arsenal on its neighbors. Some administration officials were so disturbed by the prospect of China armed with nuclear weapons that they considered preventive military strikes against Chinese nuclear facilities. One idea was to conduct these strikes jointly with the Soviets, but Moscow rejected this proposal.^[13] Another plan was to conduct covert strikes against the Chinese nuclear establishment, possibly with the Chinese nationalists.^[14] But because of key gaps in U.S. intelligence about China's nuclear program, the possibility of serious military escalation, domestic political considerations, and the assessment that "the significance of (China's nuclear) capability is not such as to justify the undertaking of actions which would involve great political costs or high military risks,"^[15] the White House under John F. Kennedy and then Lyndon B. Johnson decided to deal with the Chinese nuclear problem through diplomatic channels.^[16] As Secretary of State Dean Rusk later recalled, there was some discussion about taking military action against China, but the idea "never got anywhere when it reached the top levels of policy."^[17]

NIE 4-66

The next National Intelligence Estimate on nuclear proliferation was prepared in January 1966. The task of "[The Likelihood of Further Nuclear Proliferation](#)," or NIE 4-66, was to assess the capabilities of various countries to acquire nuclear weapons and to estimate the likelihood that some countries will cross the nuclear weapons threshold in the next decade. Although several passages of the publicly available version of this document remain secret (that is, they were excised when the text was otherwise declassified in July 2001), the main conclusions are clear—and generally very insightful.

NIE 4-66 predicted that the only country likely to undertake a nuclear weapons program in the next several years (after 1966) was India. In addition, Pakistan, Egypt and South Africa were singled out as the countries most likely to want nuclear weapons in the next decade; but all three were assessed to require "substantial outside help" to obtain them.^[18]

As it turns out, India had been operating a covert nuclear bomb development program for over a decade prior to the publication of the NIE. Although Prime Minister Indira Gandhi did not authorize Indian scientists to conduct a nuclear explosive test until May 1974, India would have been able to produce nuclear explosives a few years earlier if the government had authorized a crash production and testing program.^[19] Because the half dozen or so paragraphs devoted to India are excised, it is not possible to judge the accuracy of the NIE's more detailed assessment of the Indian case.

Although Egypt is not now regarded as a likely candidate for nuclear weapons, Egyptian President Gamal Abdal Nasser threatened to develop nuclear explosives when concern grew over Israel's nuclear activities

in the early 1960s. [20] Nasser approached the Soviet Union and China with requests for nuclear arms, but both requests were denied. After suffering defeat in the June 1967 War, Egypt then abandoned its quest for nuclear weapons and Nasser's successor, President Anwar Sadat signed the Nuclear Nonproliferation Treaty (NPT) in July 1968, with the hope that Israel would follow suit. [21]

The NIE was on the mark with its estimate of South Africa's motivation for acquiring nuclear weapons, but it underestimated that country's ability to build a nuclear arsenal on its own. Having developed a technical "peaceful nuclear explosion" program in the 1960s, South Africa embarked on a crash nuclear bomb program in 1973 and managed to produce six air-deliverable nuclear weapons before the government terminated the bomb program in 1989 and dismantled the existing weapons and associated production equipment. [22]

The final statement of NIE 4-66 is particularly insightful: the problem of nuclear proliferation may grow worse because the United States and the Soviet Union "may not be prepared to give nonproliferation priority over other policy objectives (7)." In other words, intelligence is only as good as the policies that are pursued because of its findings. Nonproliferation became a top U.S. policy priority during the Johnson presidency. As a result the pace of nuclear proliferation slowed considerably.

1985 Nuclear Proliferation Estimate

When the National Intelligence Council re-examined the issue of nuclear proliferation in 1985, it assessed that the problem was no longer as dire as policymakers and intelligence analysts feared in the 1960s. According to the declassified NIC memorandum on "The Dynamics of Nuclear Proliferation: Balance of Incentives and Constraints," issued in September 1985, the main reason for the improved proliferation picture "is that the incentives that Third World nuclear decision makers perceive for making choices that lead toward nuclear proliferation have not been as strong as once thought. In addition, to the extent that the incentive structure has changed in the last decade, movement has almost uniformly been in the direction of raising the costs of developing a weapon or explosive capability and diminishing the expected gains." [23]

There were many causes for the observed change in proliferation incentive structure. The nuclear power industry had lost much of its earlier attractiveness, and the nuclear nonproliferation regime had developed into a strong force against proliferation, especially because the two superpowers (and other nuclear suppliers) joined efforts to lead and manage it.

There were four clear differences in the way the Intelligence Community treated the problem of nuclear proliferation in the 1985 assessment as compared to previous estimates:

- First, the understanding of likely proliferators changed. Estimates conducted in the 1960s pointed to the potential of advanced industrial countries to go nuclear, whereas the 1985 study placed the proliferation threat only among developing countries.
- Second, the understanding of what constitutes nuclear proliferation changed over time. The focus in the earlier estimates was almost entirely on the development of a weapons capability. In the 1980s, the emphasis was much broader: on the actual or potential proliferation of sensitive nuclear materials and facilities that might contribute to an explosive (or weapon) capability but do not individually represent that capability.
- Third, there were different views of the effectiveness of the international nonproliferation regime. For example, the 1966 NIE assessed that the international nuclear safeguard system was likely to detect any significant diversion of sensitive nuclear material or equipment. After India managed to produce and test a nuclear explosive device in 1974 using ostensibly peaceful nuclear facilities, the intelligence community became more pessimistic about the credibility of the international safeguard system and the likelihood of undetected diversions of nuclear materials for military uses.

- Fourth, despite the shift in proliferation incentive structures noted above, the latter estimate was much more pessimistic about the inevitability of the spread of nuclear weapons capabilities. For example, a 1982 NIE on proliferation, referenced in the 1985 document, discussed the future proliferation problem in a tone "more of *when* rather than *if* (8)."

Many more conclusions could be drawn about this handful of declassified intelligence assessments, but rather than this author attempting to make them, these documents are offered for other scholars and analysts to draw their own conclusions; and to use this declassified material as a tool to put into better perspective the current debate about U.S. intelligence policymaking on international WMD proliferation.

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References

1. Although U.S. intelligence agencies produced dozens of assessments of Iraq's WMD capabilities prior to the initiation of hostilities, the document that generated the greatest public controversy is the October 2002 National Intelligence Assessment on *Iraq's Weapons of Mass Destruction*. For an unclassified description of its contents and a defense of its methodology and judgments, see the "[Statement by Director of Central Intelligence George J. Tenet on the 2002 National Intelligence Estimate \(NIE\) on Iraq's Continuing Programs for Weapons of Mass Destruction](#)," 11 August 2003. Stuart Cohen, the then acting Chairman of the body that prepared this report, the National Intelligence Council (NIC), provided another public defense of this document against more recent criticism in "[Iraq's WMD Programs: Culling Hard Facts from Soft Myths](#)," 28 November 2003.
2. For background, see Raymond L. Garthoff, "Estimating Soviet Military Intentions and Capabilities," in [Watching the Bear: Essays on CIA's Analysis of the Soviet Union](#), ed. Gerald K. Haines and Robert E. Leggett (Washington, D.C.: Center for the Study of Intelligence, 10 December 2003). For declassified CIA documents on this subject, see Gerald K. Haines and Robert E. Leggett, eds., [CIA's Analysis of the Soviet Union, 1947-1991](#) (Washington, D.C.: Center for the Study of Intelligence, 2001).
3. Press Conference, 21 March 1963, *Public Papers of the Presidents of the United States: John F. Kennedy, 1963* (Washington, D.C., U.S. Government Printing Office [GPO], 1964), 280; *New York Times*, 23 March 1963.
4. U.S. Defense Secretary Robert McNamara to President John F. Kennedy, "The Diffusion of Nuclear Weapons with and without a Test Ban Agreement," memorandum, 12 February 1963, [Digital National Security Archive](#) (DNSA), document no. NP00941.
5. CIA, "Likelihood and Consequences of a Proliferation of Nuclear Weapons Systems," NIE 4-63, 28 June 1963, document available at the [CIA's Freedom of Information Act \(FOIA\) Electronic Reading Room](#), hereafter referred to as CIA-FOIA.
6. CIA, "Communist China's Advanced Weapons Program," SNIE 13-2-63, 24 July 1964, 1, DNSA, document no. CH00015.
7. On Washington's early conduct toward the Israeli nuclear program, see Avner Cohen, *Israel and the Bomb* (New York: Columbia University Press, 1998), 195-217; and Seymour M. Hersh, *The Samson Option: Israel's Nuclear Arsenal and American Foreign Policy* (New York: Random House, 1991), 47-58.
8. McNamara to Kennedy, "The Diffusion of Nuclear Weapons with and without a Test Ban Agreement." Secretary McNamara later discussed the nonproliferation logic of the test ban in a congressional testimony: "With testing limited to the underground environment, the potential cost of a nuclear weapons program would increase sharply for all signatory states. And since testing underground is not only more costly but also more difficult and time-consuming, the proposed treaty would retard progress in weapons development in cases where the added cost and other factors were not sufficient to preclude it altogether. One of the great advantages of this treaty is that it will have the effect of retarding the spread of nuclear

- weapons." *Nuclear Test Ban Treaty*, Hearing, Committee on Foreign Relations, U.S. Senate, 88th Congress, 1st session (Washington, D.C.: GPO, 1963), 108.
9. Joint Atomic Energy Intelligence Committee, "The Test Ban and Nuclear Proliferation," 3-64, April 1964, 3, CIA-FOIA..
 10. CIA, "Presentation to the Joint Chiefs of Staff," 30 July 1963, 14, CIA-FOIA.
 11. Secretary of State Rusk argued that the MLF provided "some protection against the further spread of nuclear weapons on a national basis." ACDA, *Documents on Disarmament*, 1964, 140.
 12. Bunn, *Arms Control by Committee*, 64.
 13. Acting JCS chairman Curtis LeMay generally opposed U.S. military action to take out China's nuclear facilities, but he was intrigued by the possibility of U.S. military forces working together with Soviets. He speculated that Soviet cooperation could "well be the difference between escalation and quick acquiescence by the Chicoms." LeMay to McNamara, "Study of Chinese Communist Vulnerability," memorandum, 29 April 1963; cited in William Burr and Jeffrey T. Richelson, "Whether to Strangle the Baby in the Cradle," *International Security* 25, no. 3 (Winter 2000-01), 69.
 14. Burr and Richelson, "Whether to Strangle the Baby in the Cradle," 72-3.
 15. Robert Johnson, "An Exploration of the Possible Bases for Action against the Chinese Communist Nuclear Facilities," Policy Planning Council paper, 14 April 1964, *Foreign Relations of the United States, 1964-1968, vol. 30: China* (Washington, D.C.: GPO, 1998), 39-40.
 16. In a 15 September 1964 discussion about the Chinese nuclear program, Secretary of State Dean Rusk, CIA Director John McCone, Defense Secretary Robert McNamara, and McGeorge Bundy, National Security Advisor to President Johnson, concluded (as recorded in Bundy's notes): "We are not in favor of unprovoked unilateral U.S. military action against Chinese installations at this time. We would prefer to have a Chinese test take place than to initiate such action now. If for other reasons we should find ourselves in military hostilities at any level with the Chinese Communists, we would expect to give very close attention to the possibility of an appropriate military action against Chinese nuclear facilities." Cited in Glenn T. Seaborg, with Benjamin S. Loeb, *Stemming the Tide: Arms Control in the Johnson Years* (Lexington, Mass.: D.C. Heath and Company, 1987), 111-12.
 17. Rusk said this to the former AEC chairman Glenn Seaborg. Cited in *ibid.*, 112.
 18. The document refers to Egypt as the United Arab Republic, the name it took when President Gamal Abdal Nasser created a political union with Syria in 1958, and continued to use until 1971 even though Syria withdrew from the union in 1961.
 19. For background on India's nuclear weapons program, see Peter R. Lavoy, *Learning to Live with the Bomb: India, the United States, and the Myths of Nuclear Security* (New York: Palgrave Macmillan, forthcoming, 2004).
 20. The declassified text of NIE 4-66 contains no information about the status of Israel's nuclear program (except for one sentence indicating that the United States and the Soviet Union might be able "restrain further proliferation" by cutting off economic and military aid to countries such as India or Israel [p. 7]).
 21. For background, see Nuclear Threat Initiative (NTI), [Egypt: Nuclear Overview](#).
 22. For background, see NTI, [South Africa: Nuclear Overview](#).
 23. NIC, "The Dynamics of Nuclear Proliferation: Balance of Incentives and Constraints," NIC M 85, September 1985, CIA-FOIA.