Unveiling South Africa’s Nuclear Past

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Research into South African apartheid-era nuclear weapons history has been severely hampered by longstanding secrecy laws, not to mention the destruction of most policy records. The recent declassification and release of a 1975 Defence Force memorandum recommending the acquisition of nuclear weapons, however, shows that important documents have survived. This document sheds new light on military attitudes about nuclear acquisition, and about the extent of the South African-Israeli alliance. It confirms that Israel had offered South Africa missiles, and may have offered nuclear warheads as well. While the release of the 1975 document is promising, the Promotion of Access to Information Act, 2000 and the convening of an interdepartmental Classification and Declassification Review Committee in 2002 do not thus far represent a decisive shift toward greater openness on apartheid-era history. The state’s incentives for disclosure, controlled to avoid nuclear technology leakage, include the benefits of the lessons of the past to the global non-proliferation regime, contributing to South Africa’s prestige and foreign policy agenda, and enhancing the country’s democratic transparency.

The apartheid-era South African nuclear weapons programme, which built and then dismantled six and one-half Hiroshima type bombs, is a rarity in international history. However, more than a decade after the programme’s exposure, the historical record of this case remains remarkably thin. A battery of secrecy laws was utilised during the programme’s lifetime to conceal the existence of South Africa’s nuclear arsenal. But although the need for concealment evaporated with De Klerk’s decision to dismantle the programme, secrecy laws obstructing fuller public disclosure have largely persisted into the democratic era. While there has been no formal, high-level articulation of official nuclear secrecy policy or justifications, officials of two successive African National Congress-led governments have expressed strong objections to further disclosures beyond those made in 1993–1994.

The costs of perpetual secrecy are considerable. As one of the few states to acquire a nuclear weapons arsenal and the only state ever to destroy one, the South African case presents an unusual opportunity to study the causes and processes of nuclear acquisition and disarmament. South Africa’s nuclear history is thus a potentially valuable source of lessons for global non-proliferation policy. The case also bears important lessons in nuclear safety and control procedures, which could help other small nuclear powers, such as India and Pakistan, to secure their own arsenals. The value of the South African experience became more widely recognised when, in February 2003, Pretoria dispatched a team of diplomats and former weapons officials to advise Iraq on verifiable disarmament.

The South African government appears to be ambivalent and internally divided about greater openness on apartheid-era history, but there are signs of movement. The new South African constitution, which enshrines access to information as a fundamental right, the Promotion of Access to Information Act (PAIA) of 2000, and the establishment in 2002 of
an interdepartmental Classification and Declassification Review Committee aimed at addressing apartheid victims' demands for access to records, have all set the stage for greater disclosure. In response to a PAIA request, the Defence Department recently declassified the first nuclear weapons policy document ever released to the public. But many documentary requests have been rejected or delayed arbitrarily, and the government has yet to put in place the infrastructure and resources needed to implement PAIA properly.

We begin by discussing the status of South African nuclear history and secrecy, including the limited nature and inaccuracies of the De Klerk-era disclosures. Massive shredding of the documentary records under De Klerk has severely constrained the potential for future archival research. But there is evidence that important records survived, notably the recent declassification and release of a March 1975 Defence Force memorandum recommending the acquisition of nuclear weapons. We briefly analyse the significance of the document, as it sheds new light on military attitudes about nuclear acquisition and about the extent of the South African–Israeli alliance. It provides confirmation that Israel had offered South Africa Jericho missiles by that date, and evidence that Israel at least implied it might furnish nuclear warheads as well. This disclosure and other recent signs of greater openness potentially represent a shift from laws and policies formerly prohibiting the release of additional information about South Africa's nuclear history.

We then turn to the incentives for the South African state to adopt greater transparency in this sphere. The South African government may be realising that disclosures would benefit the global non-proliferation regime, would support South Africa's international prestige and foreign policy agenda, and would enhance South Africa's democratic transparency. As shown by the example of the exposure of Project Coast, apartheid South Africa's secret chemical and biological weapons programme, disclosure can be controlled to maximise the benefits and minimise the risks. We conclude by briefly considering steps that could be taken to promote a more effective disclosure process.

**Nuclear Secrecy and Revelations**

**A Story Partly Told**

At a December 1992 press conference, African National Congress (ANC) representatives demanded that the National Party government 'admit the full extent of its nuclear weapons programme and weapons-grade uranium stockpile now' and fully disclose all of the programme's present and past activities.\(^1\) In March 1993, under domestic and international pressure, South African President F. W. de Klerk announced that his government had already dismantled a top secret nuclear weapons programme and six and one-half Hiroshima-type bombs. Nuclear and armaments officials then disclosed a limited amount of information about the programme's present and past activities.\(^1\) In March 1993, under domestic and international pressure, South African President F. W. de Klerk announced that his government had already dismantled a top secret nuclear weapons programme and six and one-half Hiroshima-type bombs. Nuclear and armaments officials then disclosed a limited amount of information about the programme. The head of the Atomic Energy Corporation, Dr Waldo E. Stumpf, published brief overviews, while additional details were reported in a spate of interview-based articles published in 1993–1995.\(^2\) Subsequent studies reported some addi-

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tional historical detail, but historical knowledge – particularly about South African nuclear
decision-making – remains fragmentary. 3

Many observers remained dissatisfied with the extent and credibility of these disclo-
sures. Roger Jardine, then the ANC’s science adviser (and now Board Chairperson of the
Nuclear Energy Corporation of South Africa) called De Klerk’s March 1993 speech
‘another can of “neither lie nor the full truth” ’. He disputed De Klerk’s claims that the
South African bombs were built without foreign assistance, that South Africa never tested
nuclear weapons, and that the whole nuclear programme cost only R700–R800 million.
‘Only a democratic government that carries the credibility, moral authority and respect of
all South Africans throughout the continent’, Jardine wrote, ‘will be able to convincingly
show this dark chapter’. 4 Abdul Minty, then Director of the World Campaign against
Military and Nuclear Collaboration with South Africa, and now Deputy Director-General of
Foreign Affairs and Chief of the Nonproliferation Council, also criticised De Klerk’s
denials of foreign assistance. 5

Yet over a decade later, much of South Africa’s nuclear history remains hidden. The
most authoritative official published account does not exceed 20 pages in length. 6 The
common claim that the whole story – save for proliferation sensitive information – was
fully told in 1993–1994 is questionable in light of repeated revelations disproving or filling
gaps in the official picture. For instance, De Klerk asserted in 1993 that ‘at no time did
South Africa acquire nuclear weapons technology or materials from another country, nor
has it provided any to any other country, or co-operated with another country in this
regard’. 7 However, a secret 1988 court judgment, leaked to the South African press in 1994,
revealed clandestine imports from Israel of tritium useful for boosting nuclear bomb yield. 8
De Klerk-era accounts also held that the official nuclear strategy’s last resort was a
‘demonstration through an underground nuclear test’. 9 Insiders subsequently admitted that
at least two subsequent steps were envisioned had an underground test failed to achieve its
desired deterrent or coercive effect: an above-ground demonstration, followed by a threat
of tactical use. 10 Moreover, the weapons themselves, originally described as crude gravity
bombs, were in fact sophisticated video-guided glide bombs, similar to an Israeli system. 11

These omissions could have resulted from officials’ incomplete knowledge about the
programme’s history. The secretive and compartmentalised nature of the programme
throughout its lifetime meant that some of the Atomic Energy Corporation and Armscor

Weapons: A Cultural Perspective on Nuclear Proliferation and Rollback in South Africa’ (PhD thesis,
University of London, 2003); H. Steyn, R. van der Walt, and J. van Loggerenberg, Armament and
6 Stumpf, ‘South Africa’s Nuclear Weapons Programme’
8 The case concerned charges that a retired South African Air Force pilot, who had ferried some of the materials,
had attempted to blackmail the government. W. E. Burrows and R. Windrem, Critical Mass: The Dangerous
9 W. Stumpf, ‘South Africa’s Nuclear Weapons Program: From Deterrence to Dismantlement’, Arms Control
10 Liberman, ‘Rise and Fall of the South African Bomb’, p. 56.
11 Known as the H2, the South African system was also used for precision conventional bombing in the Angolan
War. Ibid., p. 54; Steyn, Van der Walt, and Van Loggerenberg, Armament and Disarmament, p. 74.
officials responsible for the 1993–1994 disclosures were unfamiliar with many historical policy details. Dr Waldo Stumpf, the author of the most detailed account, had conducted a review of the weapons programme for De Klerk in 1989, but had not been intimately involved in it until then. The scientists, engineers, and managers who made the 1993–1994 disclosures had had limited exposure to political decision-making, which may explain why, ironically, more technological than political history was released. They might also have omitted details because they did not recognise their significance to scholars and the non-proliferation community, or because of political incentives to conceal the past. Whatever the reason, claims that the story has been fully told must be treated with scepticism.

Indeed, a book published in 2003 by three veterans of South Africa’s nuclear weapons programme revealed additional previously undisclosed historical details. While the authors were vague on many policy matters, they disclosed new information about the structures set up to manage the programme, including the involvement in explosives research of the National Institute for Defence Research of the Council for Scientific and Industrial Research, a body that co-ordinated defence research by academic scientists. The book also revealed some new details about safety, security, and reliability, as well as command and control.

Archive Destruction and the 1975 Armstrong Memorandum

The ultimate potential of historical research on South African nuclear history is sadly limited by the wholesale destruction of programme documentation ordered by De Klerk. Technical documents reportedly were all destroyed between mid-1990 and mid-1991, followed by the policy documents in 1993. Leslie Gumbi, of the South African Department of Foreign Affairs and Nonproliferation Council, recently stated that ‘it’s not to say that the new government does not want to give out information. But when it comes down to it, we’re left with almost nothing’.

However, it is premature to give up hope. The Department of Defence’s release of the first declassified South African nuclear weapons policy document in September 2003 suggests that other documents may have survived the 1990–1993 records destruction campaign. The destruction effort was apparently focused on records starting from the formal launch of the nuclear weapons programme in early 1978, which would have left untouched earlier documents discussing the peaceful nuclear explosives programme or the need for a nuclear deterrent. The South African National Defence Force (SANDF), the Nuclear Energy Corporation of South Africa (NECSA, the successor to the Atomic Energy Corporation), and the Department of Foreign Affairs have all now acknowledged, in response to PAIA requests, the existence of archives with potentially relevant documents. Both the military and NECSA have confirmed that none of the case files on individuals involved in the programme was destroyed.

It is likely that records and reports concerning the dismantling of the programme were

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13 Steyn, Van der Walt, and Van Loggerenberg, Armament and Disarmament.
14 Sources differ on whether the documents were destroyed before or after De Klerk’s March 1993 speech; compare Reiss, Bridled Ambition, pp. 18–19, 23–24, to L. J. Van der Westhuizen and J. H. le Roux, Armscor: A Will to Win (Bloemfontein, Institute for Contemporary History, University of the Orange Free State, 1997), p. 184.
16 Correspondence from A. J. Buys to Peter Liberman, 3 November 2003.
also retained, as these would have been important to the International Atomic Energy Agency (IAEA) verification inspections. These would include at a minimum South Africa’s declarations to the IAEA required for joining the Nonproliferation Treaty and implementing safeguards.\(^7\) Other deliberately preserved documents include De Klerk’s official dismantling order, the auditor’s final report on the dismantling, and the operating and production records of the uranium enrichment plant.\(^8\)

Some documents might have survived inadvertently; IAEA inspectors reportedly found technical documents that were supposed to have been destroyed.\(^9\) The extensive web of structures involved both directly and indirectly in the programme also makes it unlikely that the instruction to destroy documents would have reached everyone effectively. Documentation concerning multi-purpose technologies, such as delivery systems, would likely have been retained for operational reasons. Records at lower levels of the technological administrative structure – for example, worker safety and environmental issues in uranium mining – were undoubtedly saved.

However, the first document released was from the upper rather than lower echelons of the apartheid state, and sheds light on an issue of great historical importance: early military thinking about whether South Africa should acquire nuclear weapons. In September 2003 the Department of Defence declassified and released a memorandum dated 21 March 1975, from Chief of the Defence Staff (Lt-Gen. R. F. Armstrong) to the Chief of the South African Defence Force (Admiral H. H. Biermann) about ‘The Jericho Weapon System’.\(^10\) It argued that a significant nuclear threat to South Africa had emerged, justifying the acquisition of a nuclear weapons capability. The threat envisaged was that a hostile African nation might acquire a nuclear weapon from China, and that a United States pursuing East–West détente could not be counted upon to come to South Africa’s aid. Armstrong contended that the vulnerability of aircraft to modern air defences, as demonstrated in the 1973 Yom Kippur War, warranted a missile or other stand-off delivery system, such as a guided glide bomb. He concluded:

> In spite of the considerable cost involved in acquiring even a limited number of missiles with the JERICHO weapon system, in view of the potential threat which faces the RSA in the foreseeable future, the possession of such a system will greatly add to our ability to negotiate from a position of strength.\(^11\)

This memorandum is significant mainly for what it reveals about Israeli–South African military collaboration and the strategic thinking of certain high-level South African Defence Force (SADF) officers at the time. It does not appear to mark a turning point in South Africa’s quest for a nuclear arsenal. Prime Minister John Vorster had already decided in 1974 to proceed with developing nuclear explosives and a test site, although this was still purportedly aimed at commercial ‘peaceful nuclear explosives’. The government officially decided to acquire nuclear weapons only in 1977 or 1978.\(^12\) In addition, while Armscor did eventually acquire Israeli missile technology for a collaborative missile development programme in the 1980s, no evidence has surfaced of off-the-shelf acquisition of Jericho

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18 Reiss, Bridled Ambition, pp. 18–19. The dismantling order is cited in a recent Armscor-commissioned (but still unpublished) history; Van der Westhuizen and Le Roux, Armscor: A Will to Win, p. 181.
19 Reiss, Bridled Ambition, p. 40, n. 70.
20 The document is available to the public at the South African History Archive, based at the University of the Witwatersrand. (Reference AL 2878, A 3.1.1.) Particulars about SAHA and its nuclear history programme, other freedom-of-information initiatives, and collections can be accessed online at www.wits.ac.za/saha/.
22 Liberman, ‘Rise and Fall of the South African Bomb’, pp. 50–53; Steyn, Van der Walt, and Van Loggerenberg, Armament and Disarmament, p. 43.
missiles as the memorandum recommends. Instead, as mentioned earlier, South Africa adopted a video-guided glide bomb as its primary nuclear delivery system.

Still, this document lends credibility to prior claims, long treated with scepticism, that Israel offered missiles and nuclear warheads to South Africa sometime in the mid-1970s.23 No source of the proffered Jericho missile is mentioned, but the only known missile by that name is built and deployed by Israel.24 The memorandum also states that ‘In considering the merits of a weapon system such as that offered, certain assumptions have been made ... That the missiles will be armed with nuclear warheads manufactured in the RSA or acquired elsewhere’.25 There were no other plausible suppliers of nuclear warheads to South Africa besides Israel. Moreover, the memorandum’s language about acquiring ‘missiles with the JERICHO weapon system’ implies a warhead already associated with the Jericho missile.26

The second significant implication of the Armstrong memorandum is its reflection on the strategic thinking of at least one or two high-level military officers at the time. No evidence had previously surfaced of pre-1977 SADF interest in acquiring nuclear weapons. Limited interview research had indicated that the uniformed services had at best a tepid interest in nuclear weapons, due to cost concerns. The primary military champion of the nuclear weapons programme when it was officially approved in 1977–1978 was not the top military brass, but a staff officer, Brigadier (later Brig.-Gen.) John F. Huyser.27 The endorsement, two years earlier, of a nuclear weapons programme by the Chief of the Defence Staff, a man who had previously served as Chief of the South African Air Force, suggests wider as well as earlier military interest.

Armstrong’s strategic rationale for acquiring nuclear missiles also differed from the arguments used later to justify the programme, as a deterrent against a Soviet-backed attack from Angola or Mozambique. If the deterrent failed, South African strategists aimed to try to blackmail the United States into intervening on Pretoria’s side by progressively threatening to disclose, test, or use on enemy targets, its nuclear capability.28 But the Armstrong memorandum refers neither to the Soviet Union nor a blackmail strategy, and predates the Soviet aid and Cuban troop deployments to Angola that preoccupied later South African military threat assessments.29


26 Ibid., p. 3.

27 Liberman, ‘Rise and Fall of the South African Bomb’, pp. 53, 63–68. Huyser had a reputation within the SADF as a prodigious producer of studies and memoranda, most of which were not taken very seriously. Liberman telephone interview with Gen. H. de V. du Toit (Chief of Staff: Intelligence, 1974–1977), 27 October 2003. But Huyser appears to have been a favoured adviser of the then-Defence Minister and later Prime Minister PW. Botha, perhaps because he (along with Magnus Malan) was also a member of the defence committee of the secret nationalist Afrikaner Broederbond society. I. Wilkins and H. Strydom, The Super-Africans (Johannesburg, Jonathan Ball, 1978), p. A52.


Instead, Armstrong argued that ‘there is a danger that an enemy assuming an African identity such as terrorist organisations, or an OAU “liberation army” could acquire and launch against us a tactical nuclear weapon. China appears to be the most likely nuclear power to associate herself with such an adventure’.

The memorandum claimed that ‘the psychology underlying terrorism, modern revolutionary theory and Red Chinese doctrine would not preclude the use of nuclear weapons against the RSA’, and referred to a study of the nuclear threat by the SADF Director of Strategic Studies that apparently drew similar conclusions. Otherwise the memorandum explained neither why China would transfer nuclear weapons, nor addressed the dilemmas even the most ruthless ‘terrorists’ would face in targeting their own country with nuclear weapons.

The memorandum also neglected to explain how South African nuclear weapons would deter the elusive ‘terrorists’. It simply asserted that ‘should it become generally known that the RSA possesses a nuclear weapon and that we would use it if we were subjected to a nuclear attack, such a deterrent strategy could be used as a positive weapon in our defence’. Presumably, the strategy would be analogous to the conventional strategy Pretoria adopted of punishing neighbouring states for harbouring ANC bases. Such a strategy, however, would have raised a host of additional political liabilities, none of which were addressed in the memorandum.

Another interesting element in Armstrong’s analysis is his dim view of the prospects for Western support. Western solidarity had been undermined, the memorandum argues, by East–West détente, multipolarity, nuclear proliferation, and ‘divergent interests and political systems’. The apartheid state’s fears of western abandonment and betrayal, typically traced to the late-1975 US withdrawal of support for anti-Marxist forces in Angola, were clearly already percolating through the military establishment.

The overall paranoia, unexamined questionable assumptions, and illogic of the document, suggests a generally poor quality of strategic analysis at high levels in the SADF at the time. One possible explanation is a hysterical reaction to the sudden dissolution of Portuguese rule in Angola and Mozambique in 1974 and the ensuing loss of white-ruled buffer states. Another is that this document represented a post hoc effort to rationalise a strategic programme sought for other reasons.

Nuclear Secrecy Laws and Policies

The release of the Armstrong memorandum, unless merely the result of conscientious administrators acting on their own initiative, indicates a new, more favourable attitude toward historical transparency on the part of the current South African government. So too does the government’s acquiescence to the recent publication of a memoir of the programme by three former officials. The Truth and Reconciliation Commission (TRC), the 1996 Constitution, and the 2000 Promotion of Access to Information Act, all represent great strides toward openness from the secretive practices of the National Party-ruled state. But anachronistic apartheid-era secrecy laws remain in place, despite many good reasons for the new South Africa to pull back the curtains on nuclear history.

The disclosure of technical, proliferation-sensitive information – anything that could aid foreign states or actors in developing nuclear weapons or fissile materials – is prohibited under South Africa’s Non-Proliferation Treaty obligations. The disclosure of non-sensitive information by current and former programme employees, with the possible exception of

31 Ibid., p. 2.
32 Ibid., pp. 1–2.
Atomic Energy Board/Corporation employees, is also prohibited, by a web of secrecy laws carried over from the apartheid-era.

The basic research, fissile material production, original explosives design, and preparation for an underground test site were conducted by the Atomic Energy Board (AEB), which was renamed the Atomic Energy Corporation (AEC) in 1982, then the Nuclear Energy Corporation of South Africa (NECSA) in 2001. The Nuclear Energy Act 46 of 1999, like prior enabling legislation, ‘prohibits the disclosure of any information about Corporation activities with respect to “restricted matter” (i.e., radioactive materials, etc.) if that activity is not yet public without authorisation by the chief executive officer’. (Unsurprisingly, it was the then-CEO of the AEC, Dr Waldo Stumpf, who authored one of the most detailed historical accounts of the programme.) One could, however, argue that all non-technical AEB/AEC/NECSA information about the nuclear weapons programme has already been de facto declassified by the March 1993 disclosure, making public knowledge the ‘activity’ of building nuclear weapons.

No such loopholes exist in the secrecy laws governing the Department of Defence, the Defence Forces, and Armscor. The Defence Minister’s permission is also required for the disclosure of secret or confidential information acquired from the South African Defence Force (now the South African National Defence Force), which became increasingly involved in the nuclear programme in the 1980s, under the Defence Act 44 of 1957, Section 118. Armscor, the state arms procurement and production agency, was assigned responsibility for weapons design, production, delivery systems, and storage in 1978. Its governing legislation, the Armaments Development and Production Act 57 of 1968, Section 11A, prohibits ‘the disclosure of information relating to the acquisition, supply, marketing, manufacture, etc. of armaments except on written authority of the [Defence] Minister’.

Nuclear programme personnel were required to sign supplementary oaths pledging to comply with these non-disclosure laws, during and after their employment. An additional, broader secrecy law, the 1982 Protection of Information Act, limits disclosures by all current and former government employees. It is so broad, however, that legal scholars consider it unconstitutional and ripe for judicial challenge.

The PAIA was enacted in 2000 to implement the 1996 Constitution’s right of access to information. It provides a mechanism for citizens to request the declassification and release of specific records, although it has no jurisdiction over information in other forms, such as oral testimony or memoirs. The PAIA overrides all more restrictive acts, but Section 41 provides state agencies with the discretionary power to deny access to records whose disclosure would harm the defence, security, or international relations of the country, or that are covered by diplomatic confidentiality agreements. Refusal is not mandatory, so agencies can release such information voluntarily.

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33 Some early research may also have been conducted within the Council for Science and Industrial Research.
35 Several former nuclear programme officials have taken this position; Steyn, Van der Walt, and Van Loggerenberg, Armament and Disarmament, p. xvi.
38 Section 46 provides for a public interest override of discretionary refusal in certain circumstances. Disclosure in response to a PAIA request is mandated when the harm to defence or diplomacy is outweighed by public interest in disclosures that would reveal a breach of law or ‘imminent and serious public safety or environmental risk’. I. Currie and J. Klaaren, The Promotion of Access to Information Act Commentary (Cape Town, Siber Ink Publications, 2002), pp. 107–110.
The ANC-led government has not yet articulated a clear policy on the declassification of non-technical nuclear programme records, and indeed on other aspects of apartheid-era history. The government has shown considerable reluctance in the face of a number of efforts from individuals, non-governmental organisations, and even public commissions to expose the past. An example relevant to nuclear programme history is the case of the apartheid-era chemical and biological weapons programme. The TRC began investigating Project Coast in 1997 after police discovered four trunks belonging to Dr Wouter Basson, the former head of the programme, containing thousands of pages of Project Coast documents. Many of these documents were highly classified and all of them were supposed to have been destroyed after being copied onto optical disks for secure storage. TRC investigators helped to draw up an inventory of these documents, but were then barred from consulting them by the National Intelligence Agency (NIA). Intelligence officials argued that TRC investigators lacked the necessary security clearances, and that a TRC inquiry would jeopardise ongoing criminal investigations and expose weapon scientists to foreign recruitment and personal danger. They relented only after the Office of Serious Economic Offences, which was investigating allegations of Project Coast corruption, offered to give the TRC access to their copies of the documents. The Defence and Foreign Affairs ministries, the NIA, and the Surgeon-General later sought to block public hearings on the programme. Only the political independence and authority of the TRC, and evidence of Project Coast’s human rights violations (particularly assassinations using chemical and biological poisons), enabled the hearings to proceed openly. The state also held Basson’s bail application hearing in camera, but the transcript was declassified after a legal challenge by the Freedom of Expression Institute.

Different perspectives within the state on disclosure in general appear to be emerging. It is perhaps no coincidence that the first nuclear history document ever to be released, the Armstrong Memorandum, stemmed from a PAIA request to Defence, which has generally followed a more progressive approach to the implementation of PAIA than has Armscor, the NIA, and the National Archives. Referring to the secrecy provisions of the Armscor, Defence, and Protection of Information laws, an Armscor official recently asserted that ‘the South African nuclear programme is still classified except for the information provided by the then President of South Africa, Mr F. W. de Klerk to Parliament on 24 March 1993’. This is highly regressive since Armscor officials in 1993–1994 had disclosed many more details than were revealed in De Klerk’s brief speech.

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41 Summaries of the trial evidence are available at http://ccrweb.ccr.uct.ac.za/cbw/cbw_index.html; the bail hearing transcript is available at http://www.fxi.org.za/.
42 V. Harris, ‘Using the Promotion of Access to Information Act: The Case of the South African History Archive’, paper presented at the Workshop on Transactions of Public Culture, University of the Western Cape, Cape Town, January 2003. However, this represents an apparent recent change of attitude on the part of the DoD regarding nuclear history. A public affairs official stated as recently as early 2002 that ‘All information regarding this subject that could be declassified and made available was done so when the programme was disclosed ... the remainder of the information is still sensitive and classified and still warrants protection ... More information in this regard will not be made available for public scrutiny. The DoD considers this matter as closed’. Unsigned e-mail from Department of Defence Information Centre to Peter Liberman, 8 February 2002.
43 Correspondence from L. P. ‘Bertus’ Celliers, Manager: Corporate Communications, to Peter Liberman, 22 July 2002.
44 See the sources cited in footnote 2. Armscor successfully obtained a gag order from the Supreme Court in 1994 to prevent sixteen former employees from discussing their work, reportedly seeking to extort additional pension benefits; ‘Supreme Court Stops Former Nuclear Scientists from Revealing Information’, South African Press Association, 29 March 1994.
Nuclear science officials appear just as reluctant to open the books. The Department of Minerals and Energy’s Chief Director for Nuclear Policy has contended that ‘unless new information comes to light, the Department considers the issues involving the Nuclear Weapons Programme as having been closed’.45 A NECSA representative wrote recently that ‘NECSA is committed ... to overcoming the secrecy that surrounded nuclear development in South Africa’s Apartheid past’.46 But NECSA’s negotiation of a non-disclosure agreement with its former head Dr Waldo Stumpf in 2001, binding him to perpetual secrecy as part of the financial settlement upon his departure, does not exactly inspire confidence in its commitment to openness.47

The South African Council for the Nonproliferation of Weapons of Mass Destruction, an interdepartmental body responsible for overseeing South Africa’s non-proliferation policies, has indicated a somewhat greater receptivity to information requests:

Declassification can only be considered if the information is in a tangible form that can be considered against the possible proliferation impact if such information is to be released...

The Council would be in a position to scrutinise any information to make a recommendation on the declassification of it, if requested to do so. However, Cabinet in conjunction with the Department of Defence will have to decide on any declassification of information as the project was originally classified by Cabinet in the previous Government.48

While leaving the door open to declassification in principle, the requirement of Cabinet approval in practice will be a daunting barrier to declassification via this route. The reference to any information ‘in a tangible form’, however, leaves the door open for memoirs or transcribed oral histories to be submitted to the Nonproliferation Council for declassification review, something that cannot be easily accomplished using the PAIA.

The South African government is currently reviewing criteria for the classification and declassification of secret state information. In late 2002, the Minister of Intelligence convened a Classification and Declassification Review Committee, including officials from all relevant departments as well as outside experts, with the purported aim of responding more efficiently to the growing demand for access to surviving apartheid-era documents, particularly by the victims of human rights abuses and their families.49 There is cause for scepticism, however, that this initiative will significantly liberalise secrecy policy. It is led by the NIA, which has consistently taken an obstructionist position. Besides its efforts to obstruct the TRC inquiry into Project Coast, mentioned earlier, the NIA also illegally took possession of 34 boxes of sensitive TRC records, concealed their whereabouts, and then blocked access to them.50 NIA has also sought to obstruct access by the Hefer Commission – investigating certain apartheid-era spy allegations – to state documents.51 The Review Committee missed at least two self-imposed deadlines to release its findings. Some fear that, far from its originally declared mission of systematising the disclosure of apartheid-era records, it may develop into a gatekeeping mechanism aimed at preventing ‘ad hoc’ disclosures under PAIA.

45 Letter from T. B. Maqubela, Chief Director: Nuclear, Department of Minerals and Energy to Verne Harris, 31 July 2002.
47 The non-disclosure agreement was described in an e-mail from W. E. Stumpf to Verne Harris, 4 June 2002.
48 Memorandum from D. J. van Beek to V. Harris, 1 July 2002.
Government-wide, PAIA implementation has also been fundamentally handicapped by a failure to deploy adequate resources. The Human Rights Commission, which has important monitoring and public education functions in relation to the Act, is unable to do more than token work in fulfilling this mandate because of resource constraints. Very few records manuals have been published by either public or private bodies, as is required by the Act. Even those agencies committed to implementation are crippled by resource problems. For instance, the SANDF is only able to release an average of three files a day with current resources. The inadequacy of this capacity is immediately apparent when considering that just one current request – from the Swiss National Science Foundation researching Swiss collaboration with the apartheid government – involves the declassification of about 1,400 SANDF files. In many cases the state agencies concerned have not made the deployment of resources a priority. But ultimate responsibility goes back to the highest reaches of Government, which has not put in place the infrastructure required to make PAIA an effective access instrument.\(^5^2\)

**Incentives for Greater Openness**

Despite significant governmental reluctance, the declassification and release of the Armstrong memorandum, as well as several less significant Foreign Affairs Department records, suggests a new openness to nuclear declassification. The explanation for this movement lies in the positive incentives for declassification. The primary incentive for secrecy over the nuclear weapons programme during the apartheid era ended with the decision to dismantle it. Even unrepentant nuclear powers have found controlled declassification to have beneficial consequences for promoting sound policymaking, public trust, and environmental and health quality.\(^5^3\) South Africa has compelling foreign policy and domestic political incentives for greater historical transparency, including promoting global non-proliferation and gaining international prestige. These incentives outweigh the risks that disclosures revealing foreign state support for South Africa’s nuclear weapons programme would irritate the foreign countries involved, as the diplomatic fallout would be minor, fading with time.

**Non-proliferation Knowledge**

A primary reason for permitting inquiry into nuclear history is to develop useful knowledge for global non-proliferation policy and responsible nuclear custodianship. As Roger Jardine, J. W. de Villiers, and Mitchell Reiss argued in 1993, ‘the story of South Africa’s acquisition and subsequent dismantlement of its nuclear arsenal holds vital lessons’.\(^5^4\) Much global nuclear weapons history remains shrouded in secrecy, particularly that of the undeclared or new nuclear states, i.e. Israel, India, Pakistan, and North Korea. The scarcity of knowledge about the politics of proliferation heightens the value of information, however marginal. Although much of every case is unique, as an isolated state with limited economic resources, apartheid South Africa resembles current and future nuclear acquisition (and perhaps disarmament) aspirants. Its nuclear policies were surely shaped by factors that will influence the nuclear policies of other governments in the future. Learning why and when states seek to acquire nuclear arsenals – or show nuclear restraint – can help

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policymakers develop policies to dissuade potential proliferators.\(^{55}\) Information about how states have managed to acquire foreign technologies and materials is also useful, for improving export control regimes.\(^{56}\)

Verification of non-proliferation or disarmament agreements is another matter where historical information could bear valuable lessons for the future.\(^{57}\) The International Atomic Energy Agency (IAEA) gave South Africa high marks for its co-operation with their verification of the dismantling of the weapons programme.\(^{58}\) Thus, as Jardine and others argued, ‘The manner in which South Africa dismantled its weapons, joined the NPT [Nuclear Non-Proliferation Treaty], co-operated fully with the IAEA [International Atomic Energy Agency] and accepted comprehensive safe-guards on its nuclear facilities may serve as a useful future model’.\(^{59}\)

Indeed, in early 2003 South Africa’s transparent disarmament process was recalled favourably by US, IAEA, and South African officials – albeit with different motives – as a standard by which to assess the verifiability of Iraqi disarmament.\(^{60}\) While US officials aimed to pressure the UN Security Council to authorise war on Iraq, South African President Thabo Mbeki sought to give the verification process more time to work. Pointing out that UN inspectors had required two years to verify South Africa’s disarmament, Mbeki offered the mediating services of the former foreign minister who had handled NPT negotiations in the early 1990s, and then dispatched the deputy foreign minister and a team of weapons experts to advise Iraq on disarmament and verification.\(^{61}\) While war was not averted, a more detailed picture of South Africa’s disarmament and verification experience would be useful for future verification efforts, for instance if North Korea should decide to disarm.

For those states that have already acquired nuclear arsenals and cannot be convinced to give them up, nuclear history can provide lessons about safe and secure procedures to avoid theft, accidental or unauthorised use, as well as the avoidance of nuclear postures that heighten the risk of accident or war. Studies of how state officials think about deterrence, formulate nuclear doctrine, and devise command and control systems, have led to proposals for enhanced civilian control over these vital matters.\(^{62}\) Research in US declassified documents revealed hushed-up incidents of bomber crashes and false-attack warnings, suggesting a need for greater concern about nuclear accidents and for improved safety mechanisms.\(^{63}\)

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\(^{57}\) For example, K. C. Bailey, The UN Inspections in Iraq: Lessons for On-Site Verification (Boulder, Westview Press, 1995); Von Baecckmann, Dillon, and Perricos, ‘Nuclear Verification in South Africa’.


\(^{59}\) De Villiers, Jardine, and Reiss, ‘Why South Africa Gave up the Bomb’.


Promoting global arms control has been an explicitly prominent goal in the foreign policy of the new South Africa.\(^{64}\) The ANC had advocated an African nuclear-weapon free zone before taking power. One of the earliest foreign policy decisions of the first democratically elected South African government authorised the Department of Foreign Affairs to be ‘an active participant in the various non-proliferation regimes and suppliers groups’ and ‘to support nuclear non-proliferation and to influence African states and Non-Aligned Movement members to support non-proliferation, while ensuring that access to advanced technologies were not denied to developing states’.\(^{65}\) A 1998 Department of Foreign Affairs strategic planning report stressed the government’s intention to ‘continue playing a leading role internationally in disarmament and the non-proliferation of weapons of mass destruction as well as conventional weapons, especially small arms’ as a means ‘to safeguard South Africa’s sovereignty and enhance its capability to promote the well-being of its citizens and to contribute towards regional and global peace and security’.\(^{66}\)

Given South Africa’s interest in non-proliferation, and its ongoing commitment to the Non-proliferation Treaty, it is understandably concerned about the potential risks of releasing information that could assist other nations or terrorists in building weapons of mass destruction. But clear distinctions can be drawn between technological weapon and materials information, which pose a proliferation hazard, and information about nuclear weapons policy, policymaking, and safety procedures, which do not. Systematic declassification reviews can, indeed, reduce proliferation dangers by identifying insufficiently protected sensitive documents. This in fact occurred in a recent US declassification initiative, resulting in improved information security.\(^{67}\)

The technical requirements for distinguishing proliferation-sensitive from non-sensitive material are not very demanding. Dr Andre Buys, a former South African nuclear official, has recommended ‘instituting a process of controlled declassification. A panel of experts should be appointed to evaluate the proliferation value of the information and advise the government on declassification or not’.\(^{68}\) Other nations’ nuclear declassification guidelines would be helpful in the preparation of South African guidelines.\(^{69}\) According to Roger Heusser, former director of the Office of Nuclear National Security Information of the US Department of Energy, a dozen South African experts, if backed by the government, could ‘accomplish the release of a mountain of documents’.\(^{70}\) The decimation of archival holdings under De Klerk has undoubtedly left much less than a ‘mountain of documents’. In addition, dismantlement left South Africa with a surplus of nuclear weapons experts, many

\(^{64}\) Its top foreign policy goals are trade, development, and regional stability.


\(^{66}\) Cited in Shelton, ‘South Africa’s Nuclear Weapons Experience’. While arms control was mentioned in the Department of Foreign Affairs’ 2002 strategic planning report, however, the report’s emphasis was on regional conventional arms rather than global non-proliferation aims. It is unclear whether this represents a downgrading of non-proliferation among South Africa’s foreign policy priorities. See Department of Foreign Affairs (RSA), Strategic Plan 2002–2005 (November 2002) [accessed from http://www.dfa.gov.za/department/strat-plan.htm].


\(^{68}\) A. Buys, ‘Statement on Secrecy and Disclosure About South Africa’s Past Nuclear Weapons Programme’, paper presented at the conference on Unlocking South Africa’s Nuclear Past (see conference website).


\(^{70}\) Correspondence from Roger N. Heusser to Peter Liberman, 5 November 2002.
of whom are still employed by Armscor or breakaway subsidiaries such as Denel, who could advise the Government on the proliferation implications of declassification.

The disclosure of nuclear material or technology suppliers might theoretically present a proliferation risk. The passage of time is likely to make information about specific providers obsolete, but caution should be exercised in disclosing such information. However, information about illicit trade can help identify legal loopholes and patterns of traffic, as well as help mobilise political action against it. Revealing weapon scientists’ identities could make them more vulnerable to recruitment by proliferating countries, although public awareness might instead deter covert recruitment efforts. Nevertheless, this risk could easily be met by excising scientists’ names from any documents released or interviews conducted.

The case of the exposure of Project Coast shows that a controlled nuclear programme declassification and history initiative would not only be beneficial but also administratively feasible. Far more information has been disclosed about Project Coast than about the nuclear weapons programme, through the avenues of documentary declassification, oral testimony at TRC hearings and the Basson trial, and a quasi-official history in the form of the TRC’s final report on Project Coast. The report was not written by professional historians, nor did it benefit from full access to relevant state documentation. It did, however, provide the most detailed and authoritative account publicly available as well as a valuable resource for researchers.

The relatively complete disclosure of Project Coast has provided valuable lessons about the origins of chemical and biological weapons programmes and the opportunities for the misuse of state funds in covert military projects. Project Coast’s use of front companies to conceal state involvement in illicit weapons research, development, and production also suggests strategies for identifying similar deceits in the future. Another lesson is that instruction in medical and scientific ethics, as well as in relevant international law, might help discourage scientists from participating in such projects.

The process by which Project Coast was disclosed also provides reassurance about the feasibility of safe, controlled nuclear declassification. After the initial governmental resistance mentioned earlier, a workable compromise was reached under which a small group of TRC and government personnel reclassified the documents into three categories: (1) documents that could not be discussed or released by the TRC because they contained details of chemical or biological weapons technology or involved confidential diplomacy; (2) documents containing sensitive information that could be used as evidence but not released to the public; and (3) documents not containing classified information that were declassified. Most of the documents fell into the last category and were released to the public.

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71 Albright, Preventing Illegal Exports.
72 We are thankful to André Buys for these points.
73 Truth and Reconciliation Commission, Final Report, volume 2 (Cape Town, CTP Printers, 1998), chapter 6-C.
74 Gould and Folb, Project Coast, pp. 225, 92–95.
76 Project Coast violated the Biological Weapons Convention, ratified by South Africa in 1975; Gould and Folb, Project Coast, pp. 7–9.
77 Burgess and Purkitt, Rollback, pp. 68–72; Gould and Folb, Project Coast, pp. 224–226, 228, 231. The full TRC records theoretically are accessible by formal PAIA requests from the National Archives, but this process has not yet been tested.
Project Coast personnel were instructed not to reveal details of chemical and biological weapons production that would pose a proliferation threat, but otherwise were to answer all questions posed by the TRC investigators. TRC legislation superseded their prior security oaths. Concerned that Project Coast personnel might reveal sensitive information in public TRC hearings, the government arranged to monitor the proceedings and, if necessary, block the release of any proliferation or diplomatically sensitive information. This improvised system worked imperfectly, however, bogging down the hearings with legal motions and delays. Information was improperly released just once, ironically by the Surgeon-General, Dr Knobel, who passed out classified documents to the media on the first day of the hearing.\[^78\]

No reports have arisen alleging that the disclosures about the programme may have led to any transfer of sensitive weapons material or know-how. In fact, police and TRC investigators uncovered sensitive, secret documents that were supposed to have been destroyed; most of these had been kept by Basson, possibly intended for illicit sale or extortion.\[^79\] Nor have there been any reports that the disclosure of the identities of former programme employees has led to foreign recruitment efforts. Thus, the exposure of Project Coast appears to have been a clear net benefit to the global chemical and biological non-proliferation regime.

**Non-proliferation Diplomacy and Other Foreign Policy Objectives**

Prestige from being the sole nuclear power to disarm has helped South Africa to take a leadership role in NPT diplomacy, and a progressive approach to nuclear history would only bolster its prestige in this arena. A South African proposal broke a deadlock at the 1995 NPT Review and Extension Conference, leading to a compromise agreement for the indefinite extension of the treaty while committing the nuclear weapon states to reduce their arsenals.\[^80\] Along with several other middle powers, South Africa advanced aggressive nuclear disarmament proposals at the United Nations and the 2000 NPT Review Conference.\[^81\] South Africa also took a leadership role in negotiating the African nuclear-weapons-free zone treaty, and more recently has been actively involved in preliminary negotiations on a global treaty halting the production of fissile materials, dismantling facilities, and neutralising existing stockpiles.\[^82\]

South Africa’s arms control status and expertise also lent prominence to Mbeki’s criticisms of the US push to war against Iraq in 2003. But its moral authority was not helped by limits to public disclosure about its own nuclear history and verification process, as at least one news story pointed out.\[^83\] Of course, greater transparency would also promote South Africa’s broader image as a constitutional democracy and arms control leader, which

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\[^79\] Gould and Folb, *Project Coast*, pp. 222–224; Burgess and Purkitt, *Rollback*, pp. 66–68. This suggests that the inquiries may have actually enhanced the security of truly dangerous information.


\[^83\] Lelyveld, ‘S. Africa Provides Cautionary Tale’. 
would help – if intangibly – South Africa achieve a wide range of foreign policy goals, such as a seat on the UN Security Council, preferential trade agreements, foreign investment, etc.

Disclosures involving foreign involvement in the apartheid-era nuclear weapons programme could have negative diplomatic consequences. If De Klerk was right that no foreign governments or scientists aided the bomb programme, the offers mentioned in the Armstrong memorandum notwithstanding, then further disclosures could not embarrass any foreign government. However, even if foreign governmental involvement had taken place clandestinely, the passage of time and changes in foreign governments should minimise any embarrassment that disclosures now would cause to current foreign governments. Diplomatic repercussions might also be smoothed by an acceptance of responsibility on the part of foreign governments for their past collaboration with a pariah state. It would be a different story if the foreign involvement had blatantly violated international undertakings, such as the Nuclear Non-Proliferation Treaty. But this is unlikely. Israel, the only state seriously suspected of such assistance, never signed the NPT. Of course, many South Africans would welcome as 'just deserts' the exposure and embarrassment of foreign collaborators with the apartheid state – a form of international truth and reconciliation.

Disclosures of apartheid South Africa's covert illegal acquisitions of sensitive technology from foreign companies would probably be welcomed by foreign governments, for it would assist them to enforce their own export control laws over their own firms. Exposing apartheid-era business relationships between Armscor and covert foreign suppliers would probably disturb those foreign firms. But with the passage of time and the termination of South Africa's nuclear arms illicit foreign procurement practices, there is probably negligible commerce with these suppliers that would be put at risk.

South Africa's Domestic Objectives

Access to information is generally and increasingly considered a hallmark of modern liberal democracy. Twenty-six countries have adopted new laws promoting access to information in the last decade alone. South Africa's 1996 constitution is the only one in the world that enshrines access to information as a fundamental right. South African citizens, journalists, scholars, and non-governmental organisations are increasingly seeking information from the government under PAIA.

However, in South Africa and beyond, questions on the purpose, scope, and dismantling of the nuclear programme remain the subject of public speculation. Although denied by every programme employee and official, prominent journalists charged that the programme

84 Less inflammatory, but possibly still sensitive for other governments, would be the disclosure of confidential diplomatic meetings. During the TRC's inquiry into Project Coast, defence, foreign affairs, military, and intelligence agencies objected that a public TRC would harm the government's international relationships, due to confidential communications from Britain and America on Project Coast in 1993-1995. This was ultimately resolved by an agreement between the TRC and relevant government departments that these documents could be used by the TRC but not circulated to the public media. British and American officials subsequently described the content of the talks in interviews, so it is unlikely that their governments would have objected to such disclosures; Gould and Folb, Project Coast, pp. 210-213, 225; Burgess and Purkitt, Rollback, p. 67.

85 It would be highly embarrassing to Israel if South African disclosures revealed that the 22 September 1979 flash in the South Atlantic was in fact an Israeli or joint Israeli-South African test. For a recent review of the debate over the September 1979 episode, see D. Albright and C. Gay, 'A Flash from the Past', Bulletin of the Atomic Scientists, 53, 6 (November/December 1997), pp. 15-17. Both countries had joined the Limited Test Ban Treaty banning above-ground nuclear tests, so the test would have violated international law. If any documentation survived, they might theoretically be subject to mandatory disclosure if public interest in exposing this illegality is judged to outweigh the diplomatic costs of doing so.

86 Such views have been expressed to the authors in off-the-record discussions with South African officials.

produced advanced miniaturised bombs and that, even after 1991, right-wing officials or employees had hidden away components or whole bombs for nefarious purposes. Suspicions remain that the nuclear bombs were built to be used domestically against anti-apartheid revolutionaries, rather than the avowed purpose of deterring Soviet-backed external threats. Further release of information would help resolve and allay these old divisive controversies and uncertainties. It would also contribute to the public’s general trust in the current government and its commitment to transparency.

The failure of the state to make the TRC archives fully and promptly available to the public has fostered speculation that ANC officials fear the domestic political fallout from the exposure of colleagues with compromised pasts. This issue was brought to the fore by recent allegations against the national prosecutor, Bulelani Ngcuka and the ensuing Hefer Commission proceedings. However, these concerns are unproblematic for disclosing nuclear history, except insofar as it would create a precedent and stoke demand for declassification in police and intelligence spheres as well.

Unveiling the Nuclear Past

South Africa has made important strides toward a fuller disclosure of its apartheid-era nuclear history. The Promotion of Access to Information Act of 2000 provides a potential avenue for requesting documents, if not individual testimony. The government retains wide discretion in withholding information involving national security and diplomacy, regardless of its actual sensitivity. The appointment of the Classification and Declassification Review Committee in 2002, with the avowed aim of systematising the release of apartheid-era records, has been an encouraging sign. The September 2003 declassification and release of the Armstrong memorandum is the most promising sign to date that the government, or at least the Defence Department, is taking a conscientious attitude toward declassification.

In addition to realising the new South Africa’s constitutional right of access to information, these movements can be understood in light of the government’s incentives for greater nuclear historical transparency. The potential benefits for global non-proliferation policy, for South Africa’s foreign policy aims, and for South African citizens’ trust in the government outweigh the minuscule risks of technological leakage and the limited potential diplomatic repercussions. The oft-made claim that all useful history has already been disclosed does not appear sustainable in light of the limited disclosures, and incomplete shredding efforts, of the De Klerk government. At the same time, the current South African government is understandably preoccupied with more pressing priorities, may face foreign pressures to let sleeping dogs lie, and is probably anxious about a disclosure process that could ripple into areas of even greater domestic political and diplomatic sensitivity.

PAIA requests are currently the only way for scholars, journalists, and other interested non-governmental actors to conduct historical research into the nuclear programme. For its part, the state can facilitate this process by promoting conscientious and adequately resourced implementation of the PAIA process in all relevant departments.

Two other approaches, with much greater potential for illuminating this history, would require new laws or policies. The state should offer an amnesty to former programme employees who violated secrecy laws by keeping their own copies of secret documents, in return for their turning in the documents now. This would likely result in the recovery of historically significant, and possibly proliferation-sensitive, documents. While the state

89 Public distrust of the environmental and health safety practices of US nuclear production facilities was a prime motivation for the US declassification initiative in the 1990s. See Heusser, ‘From Secrecy to Openness’.
took great care to keep track of its records, officials sometimes violate strict and time-consuming secrecy regulations, whether to facilitate working at home, to preserve documents for posterity, or for more self-interested reasons. Wouter Basson's four trunks of documents, which he had stashed in an associate's garage, are an obvious example. If some valuable secret programme documents have survived only in private hands, an amnesty could enrich the archives, for the benefit of the state as well as the public, once the documents have been declassified.

A still more valuable historical resource is the recollections of South African officials, scientists, and other programme employees. In South Africa, nuclear policy records were never very detailed to begin with, owing to the high level of secrecy surrounding the nuclear programme, as well as to the characteristic brevity of governmental record-keeping at the time. The subsequent destruction of records has only made matters worse. Conducting interview research and facilitating new oral histories and memoirs will be an invaluable method of recording this important history.

Unfortunately, former officials who could undoubtedly shed new light on the programme are discouraged from doing so by the laws and oaths binding them to secrecy. Rather than submitting their book for official clearance, the three programme veterans used their own discretion in avoiding disclosing information that would open them to state prosecution. It is likely that this self-censorship approach led to the omission of significant but non-sensitive information. Former officials are probably also hesitant to grant interviews, or discuss formerly taboo topics in interviews that they do grant, for the same reasons. Declassification procedures for oral history or memoirs are not provided for in the PAIA, although they could conceivably be orchestrated by the Nonproliferation Council as mentioned above. But the possibility that the NPC would reject a request to review or to declassify a submitted memoir, for a reason unrelated to the sensitivity of its content, would surely discourage anyone from putting much effort into preparing the memoir in the first place.

Unrecorded memories are a wasted asset. Numerous knowledgeable officials have died in recent years, others are quite elderly, and still others have moved on. Scholars, activists, and parliamentarians should press for legislation that would annul apartheid-era secrecy oaths while prohibiting disclosures of weapons technology information. An informal version of this approach appears to have worked well in permitting Project Coast employees to testify in the TRC process and in the Basson trial. At a minimum, the state should conduct its own oral history initiative to preserve the history for internal use by the South African state and possible future declassification.

91 Gould and Folb, Project Coast, p. 224.
93 Conversation between Verne Harris and authors Hannes Steyn, Richard van der Walt, and Jan van Loggerenberg, Pretoria, July 2003.
As it stands, many of the valuable lessons South Africa's nuclear experience holds for other countries remain unshared as a result of official secrecy. Its own citizens remain in the dark about a highly significant dimension of the country's history. A systematic information declassification programme, incorporating the controlled release from secrecy undertakings of apartheid scientists and other operatives, and taking heed of non-proliferation obligations, would be a fitting expression of the country's constitutional commitment to freedom of information. Given the uneven progress and divisions within the government over declassification, further transparency will depend on increased political will from the top, and continued requests and pressure from scholars, journalists, and other actors in civil society.

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