

British dilemma and hypocrisy in the NPT regime *vis-à-vis* South Africa¹

Lucky E Asuelime
University of Zululand
lucky4real14@gmail.com

Anna-Mart van Wyk
Monash South Africa
anna-mart.vanwyk@monash.edu

Abstract

The international non-proliferation regime has focused on developing strategies to halt the development of nuclear technology, particularly in developing regions. This however did not stop South Africa from developing six and a half nuclear bombs, because the activities of the five (nuclear) superpowers (the US, Britain, Soviet Union, France and China) in providing some level of unilateral technological assistance to other countries undermined the efficacy of this strategy. Particularly, this article stresses the hypocrisy of British participation in the NPT as far as South Africa was concerned. The article also (subtly) focuses on the preponderance of cultural, strategic and economic links with Britain which contribute to an environment for nuclear proliferation in South Africa. The above provide a context for British government co-operation with South Africa in nuclear technology.

Keywords: Britain; South Africa; Technology denial; Nuclear technology; Non-proliferation; Nuclear proliferation; IAEA; Cold War; NPT.

Introduction

Technology is one of two necessary conditions for the nuclear proliferation process, the other being motivation. The article highlights the overall (especially economic) relationship between Britain and South Africa, despite growing discomfort over apartheid, followed by some discussion of a few ways in which Britain (and Germany) occasionally gave South Africa some technological help furthering the latter's nuclear project. Another objective of this article is to understand the role played by Britain in the early development of a nuclear South African state and the inevitability of technological collaboration between states that have cultural, strategic and economic links. The article describes

¹ The majority of the archival documents referred to in the text consulted are obtained from the National Archives of the United Kingdom, Kew, London (hereafter NAUK), The files contain predominantly the Foreign and Commonwealth Office files (Hereafter FCO); The authors also acknowledge the Nuclear Proliferation International History Project (NPIHP), Housed by the Woodrow Wilson Center in New York and supported by the Carnegie Corporation of New York for their support in the development of this research.

the British development of a complacent approach towards apartheid South Africa's nuclear capabilities. It renders an investigation of British diplomatic and inter-departmental relations and decision-making between agencies in the nuclear departments of Britain and South Africa. It explores British nuclear diplomacy with regards safeguards against South African proliferation and the politics of adherence to the Nuclear Proliferation Treaty (NPT). Specifically, this article makes a historical foray into the special relationship during the period of heightened international concern about allegations that South Africa was building a nuclear weapon in its basement or at least possessed the technological components to produce one at short notice. It traces the development of their unique nuclear technological politics and relationship that tended to undermine "technology denial" as a viable non-proliferation effort.

The authors of this article employ a critical-descriptive methodology to discuss the evidence available in the British archive, and to provide a historical perspective on the extent to which British diplomatic, economic, political and cultural relations with South Africa undermined efforts to use technological denial as a strategy for controlling South Africa's nuclear industry and thereby bringing to fore the mismatch in British rhetoric and actual actions with regards to its commitment to the Nuclear Proliferation Treaty (NPT). We find that South African decision-makers during the apartheid era based their policies on the anticipated reactions of the international community, and in many cases on the reactions emanating from Whitehall. South Africa constantly interpreted British silence and reluctance to stop their nuclear development as a sign of consent and approval.

The following segments analyse the British position on the question of nuclear technological collaboration with South Africa - despite the latter's rumoured nuclear detonation in a decade of intense Cold War politics. This is also juxtaposed with the backdrop of criticisms emanating from the International Atomic Energy Agency (IAEA) and other African countries (particularly Nigeria) towards nuclear proliferation in Africa vis-à-vis South Africa.

Literature perspectives on nuclear histories and politics

Scholarship in the field of nuclear history and politics of South Africa and Britain is replete. However, there are fewer that focus on the interplays

of South African and British relations in the uranium field.² Findings are gaining prominence but still deserve more attention in the overall need to understand a larger nuclear and cold war historiography in relation to (South) Africa and British relations.³ Gabriel Hecht's *Being Nuclear* provides a reliable source on British/United States interest in Africa's uranium. Contributions to the debate around Africa's uranium as a major source of fuel for nuclear power and atomic weapons, including the bomb dropped on Hiroshima only gained prominence in 2002, when the US and British governments claimed that Iraqi leader Saddam Hussein "sought significant quantities of uranium from Africa" (later specified as the infamous "yellowcake from Niger").⁴ This prompted interest predominantly among African researchers to investigate the early histories of the nuclear age; uranium politics; early Cold War with the United States, South Africa, British and the Soviet Union nexus.⁵

Though there were literature on the histories and politics on uranium between Britain and South Africa in the 20th century,⁶ a larger percentage of these works focus more on nuclear armament phase of South Africa's broader relations but with the United States in the center of the equation. Also most of them have focused largely on technological denial strategy as a means to halting nuclear proliferation – being a solution with its own problems.

What is technology denial?

In the 68 years of the existence of nuclear weapons, many states have considered proliferation.⁷ Most of these states have failed or decided that

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- 2 LE Asuelime, Commonwealth, "Bargains and influence: British: Atomic relations vis-à-vis South Africa, 1955-1956", *Journal of Southern African Studies*, 42(4), 2016, pp. 675-686; "Uranium politics of gatekeeping: Revisiting the British government's policy vis-à-vis South Africa, 1945-1951", *Historia*, 58(1), May 2013, pp. 33-50; "Churchill's British atomic relations with Malan's government in South Africa, 1951-1954?", *New Contree*, 71, December 2014, pp. 137-151; LE Asuelime & S Francis, "Drivers of nuclear proliferation: South Africa's incentives and constraints", *Journal for Contemporary History*, 39(1), June 2014, pp. 55-68.
 - 3 D Albright, *South Africa's secret nuclear weapons*, Institute for Science and International Security (ISIS) report, May 1994; JW de Villiers, R Jardine and M Reiss, "Why South Africa gave up the bomb", *Foreign Affairs*, 72(6), 1993, pp. 98-109; R Betts, "A diplomatic bomb for South Africa?", *International Security*, 4(2), 1979, pp. 97-101.
 - 4 G Hecht, *Being nuclear: Africans and the Global Uranium Trade* (Johannesburg: Wits University Press, 2012). p. 1.
 - 5 W Taya, *Progress or proliferation? South Africa's nuclear future* (Washington DC, Center for Strategic and International Studies, 2008).
 - 6 I Drummond, *British economic power and the empire* (London, George Allen & Unwin, 1972); D Lilienthal, *The journals of David E. Lilienthal, 2, The Atomic Energy Years, 1945-1950* (New York, Harper & Row, 1964); R Ovendale, "The South African policy of the British labour government, 1947-1951", *International Affairs*, 59, 1983, p. 50; M Gowing, "Britain, America and the bomb", D Dilks (ed), *Retreat from power: Studies in Britain's foreign policy of the twentieth century*, 2 (London, Macmillan 1981); R Ovendale, *The English-speaking alliance: Britain, the United States, the dominions and the Cold War, 1945-51* (London, Allen & Unwin, 1985).
 - 7 A 2008 Congressional Research Service report lists 17 states with an active or defunct nuclear weapons program. See PK Kerr, "Nuclear, biological, and chemical weapons and missiles: Status and trends", *CRS report for congress*, RL30699 (available at <http://www.fas.org/sgp/crs/nuke/RL30699.pdf>, as accessed on 20 February 2017).

their efforts were not worth the considerable costs.⁸ A few have succeeded in the face of significant obstacles. Nine states are believed to have nuclear weapons: the United States, Russia, China, United Kingdom, France, India, Pakistan, Israel, and North Korea.⁹ The Treaty on the Non-proliferation of Nuclear Weapons (NPT) serves as the basis for the international nuclear non-proliferation regime. The Treaty allows only five states – the United States, Russia, China, United Kingdom, and France – to have nuclear weapons.¹⁰ An assortment of other international treaties and agreements, both legally binding and voluntary, work to fill the NPT's gaps. Much of the non-proliferation regime relies heavily on technology denial to accomplish its goals.¹¹

In other words, in the non-proliferation sense, technology denial describes the international community's practice of seeking to prevent potential proliferators from acquiring the technology necessary to develop, build, and maintain nuclear weapons and their delivery systems. For example, the Nuclear Suppliers Group (NSG) is a collection of states that regulates the export of nuclear technologies, such as uranium enrichment or plutonium reprocessing components that can aid in the development of nuclear weapons. Export control and technology transfer agreements restrict the flow of the most sensitive nuclear technology, while the IAEA safeguards existing nuclear material to prevent its diversion.¹² When the international community believes a non-nuclear state is attempting to acquire nuclear weapons, the United Nations Security Council or individual states can impose further restrictions on technology transfers, theoretically broadening the limits on technologies the proliferation-prone state can acquire externally.¹³

8 PK Kerr, "Nuclear, biological, and chemical weapons and missiles...".

9 HM Kristensen and RS Norris, "Status of world nuclear forces", Federation of American Scientists (available at <http://www.fas.org/programs/ssp/nukes/nuclearweapons/nukestatus.html>, as accessed on 19 February 2017). Note also that South Africa is not included since it has dismantled its six and half nuclear stockpile.

10 2005 Review conference of the parties to the treaty, "Treaty on the non-proliferation of nuclear weapons", 2–27 May 2005 (available at <http://www.un.org/en/conf/npt/2005/npttreaty.html>, pp. 1-8, as accessed on 1 February 2017).

11 E Turpen, "Achieving non-proliferation goals: Moving from denial to technology governance", *Policy Analysis Brief*, The Stanley foundation, June 2009 (available at <http://www.stanleyfoundation.org/publications/pab/TurpenPAB609.pdf>, as accessed on 19 December 2016).

12 HD Sokolski, *Best of intentions: America's campaign against strategic weapons proliferation* (Westport CT, Praeger, 2001), p. 63.

13 For example, the security council imposed sanctions on the Democratic People's Republic of Korea (DPRK) following the state's nuclear test in 2006. Resolution 1718 bans transfers of 'all items, materials, equipment, goods and technology... which could contribute to DPRK's nuclear-related, ballistic missile related or other weapons of mass destruction-related programmes'. See United Nations Security Council, 'security council condemns nuclear test by Democratic People's Republic of Korea, Unanimously adopting resolution 1718 (2006)' (available at <http://www.un.org/News/Press/docs/2006/sc8853.doc.htm>, as accessed on 19 December 2016).

In the South African case for example, the authors of this article find strong links and transfers of nuclear technology from Britain heading in the direction of Southern Africa. The following segment highlights a case of the inefficiency of a non-proliferation strategy that focuses solely on technology denial. The following section thus describes the environment in which to situate the British disposition towards meeting South Africa's nuclear technology needs.

British-South African affinities

For most white South Africans, the post-war commonwealth meant little more than the association with Britain and her empire. It would seem that by 1960, many white South Africans had come to believe that their security in the world depended on nothing but their own gritty determination. A referendum on becoming a republic was held in South Africa on 5 October 1960. The Afrikaner-dominated right-wing National Party, which had come to power in 1948, was avowedly republican, and regarded the position of Queen Elizabeth II as head of state as a relic of British imperialism. The National Party government subsequently organised the referendum on whether the then Union of South Africa should become a republic. The vote, which was restricted to whites, was approved by the voters. The Republic of South Africa was constituted on 31 May 1961.¹⁴

Despite South Africa no longer being in the Commonwealth after becoming a republic, some white South Africans continued to welcome the ties with the Crown and with British imperial power. For a certain number, cultural affinity played a part in this. Of more significance was the perception held by whites of British ancestry, as well as by Afrikaners, that the only power that could act as a guarantor of their security – external as well as internal, political as well as economic – was Britain.¹⁵

For Britain and its government, the significance of the post-war Commonwealth was the connection it provided with those parts of the empire, which had advanced in constitutional status to the point of equality with Britain. Regardless of how Commonwealth relationships were perceived in constitutional theory, in practice they continued to be recognizable, even at the end of the Second World War, as imperial relationships characterized

¹⁴ See also South Africa, "5 October 1960: Proclamation of the Republic", *Direct Democracy* (German) (available at <http://www.sudd.ch/event.php?lang=en&cid=za011960>, as accessed on 11 November 2016).

¹⁵ TD Moodie, *The rise of Afrikanerdom: Power, apartheid, and the Afrikaner civil religion* (Berkeley, University of California Press, 1975), p. 277; NM Stultz, *Afrikaner politics in South Africa, 1934-1948* (Berkeley, University of California Press, 1974), pp. 300-313.

by some measure of economic or strategic dependence.¹⁶ The Commonwealth was a means of sustaining a British world system, a system in which nominally independent overseas territories had always been much less important than the constitutionally dominant one.¹⁷ To a certain extent, at least, the Commonwealth was an extension of British power, and was regarded as such internationally.¹⁸ The integrity of the Commonwealth and Britain's leadership of it, were demonstrations of Britain's fitness to sustain a world system and play a world role. At the end of the war, that system, though shaken by the conflict and squeezed by the growing influence of other powers, seemed as valuable as ever to Britain. This was especially so with respect to the pursuit of the two aims which were to dominate post-war British policy – economic recovery and containing communism.¹⁹

After the Second World War, the maintenance of the connection with South Africa continued to be regarded by Britain as essential. However, against these attractive forces was the repulsion generated by distaste for the policies of racial discrimination upheld by successive South African governments. These introduced a contradiction into their relationship with Britain. In a period when the international community clamoured for strict sanctions and isolation of South Africa due to its apartheid system, British firms justified their involvement in South Africa by claiming to foster economic change and providing employment.²⁰ British involvement in South Africa is substantial. Whilst it was impossible to put a precise figure on the value of British involvement at the time, due to capital appreciation, it is generally accepted to have been in the region of 2 billion pounds. In 1972 Britain's exports to South Africa were worth 308 million pounds and imports from South Africa 296 million pounds. The following year, Britain's exports to Africa totalled 532 million pounds and imported goods were worth 647 million pounds. Clearly South Africa remained Britain's largest single trading partner and investment area on the continent of Africa. Over 500 British companies had subsidiaries or associated companies in South Africa. Of South Africa's

16 J Darwin, *Britain and decolonization: The retreat from empire in the post-war world* (London, Macmillan, 1988), p. 269.

17 J Gallagher and R Robinson, "The imperialism of free trade", *Economic History Review*, New Series, 6(1), 1953, pp. 1-15.

18 Problems at the war's end over dominion representation in international deliberations seem a clear enough demonstration of this. See N Mansergh, *Survey of Britain commonwealth affairs: Problems of wartime co-operation and post-war change, 1939-1952* (Oxford, Oxford University Press, 1958), pp. 32-34.

19 RF Holland, *European decolonization, 1918-1981: An introductory survey* (London, Macmillan, 1985), pp. 37-69.

20 2 December 1968 – The UN General Assembly had requested all States and organisations to suspend cultural, educational, sporting and other exchanges with the racist regime and with organisations or institutions in South Africa which practice apartheid.

100 leading companies in 1971, 12 were wholly owned and 25 partly owned by British companies. British companies invested in South Africa despite apartheid and perhaps also because of it.²¹

Over the past decades, South Africa has offered one of the best rates of return on capital of anywhere in the world. The more attractive investment opportunities offered in South Africa, a country with modern communications and a predominantly non-unionized cheap labour force, have clearly had an influence on the investment pattern of British companies with a subsequent impact on employment in Britain. The Labour Party in their 1973 manifesto considered that the country's involvement in South Africa was both a dangerous and an unhealthy involvement in Southern Africa, an involvement that by its very nature meant Britain benefitted from the fruits of apartheid. The Labour Party in the same manifesto suggested Britain's economic involvement in South Africa should have been reduced and they itemized lines of action to be followed by the next Labour government in relation to South Africa. They included the termination of all export credits, loans and guarantees to South Africa; the ending of the policy of exchanging trade missions; the termination of the Ottawa agreements;²² the ending of banking links which enabled South Africa to raise money on the London Market; machinery to prevent further British investment in South Africa; the ending of cover under the Overseas Investment and Export Guarantee Act; and the withdrawal of all or part of existing British investment in South Africa.

Indeed, these turned out to be mere rhetoric. When it came to practical politics, Britain under the Labour Party and Conservatives alike did not embark on any arrangements that would have strained its relations with South Africa – and this included those in the nuclear field.

British dilemmas of the seventies-eighties

Due to the coup in Portugal and the installation of pro-communist governments in Mozambique and Angola, the apartheid government decided

21 Foreign and Commonwealth Office (FCO), FCO45-1809, 1973 British Labour Party Manifesto, "World peace, International Order and Human Rights".

22 The Ottawa Agreements is a product of The British Empire Economic Conference (also known as the Imperial Economic Conference or Ottawa Conference) held on 21 July and 20 August, 1932 among the British colonies and the autonomous dominions. The meeting worked to establish a zone of limited tariffs within the British Empire, but with high tariffs with the rest of the world. This was called "Imperial preference" or "Empire Free-Trade" on the principle of "home producers first, empire producers second, and foreign producers last". See B Eichengreen and DA Irwin, "Trade blocs, currency blocs and the reorientation of world trade in the 1930s", *Journal of International Economics*, 38(1-2), February 1995, pp. 1-24.

in 1974 to develop nuclear weapons as a deterrent. Prior to this period, it had viewed nuclear capability as a matter of prestige (because of strong Afrikaner nationalism).²³ This outlook soon changed when the contagious Cold War and raging hostilities between the two power blocs led by the United States of America (US) and the Union of Soviet Socialist Republics (USSR), found its way to the shores of Southern Africa, triggering a strategic need for the buffering by the South African government of its geo-political entity. The apartheid government concluded that significant security as well as bargaining power in international politics could only be achieved by accelerating its nuclear weapons programme with assistance from Western allies.²⁴

As noted, Britain and South Africa are bound by history, with Britain being South Africa's former colonial master and the existence of Commonwealth links as well as continued economic arrangements. At the time, Britain had large-scale investments as well as military and trading links in Southern Africa. The British were also attracted by South Africa's uranium deposits, a vital resource which Britain could have used as a bargaining chip to ensure sustainability in a nuclear driven international system. While the British government was keen to improve economic ties with South Africa, diplomatically, it needed to keep the country at arm's length in order to signal disdain for apartheid and to avoid "guilt by association".²⁵

However, Britain quickly discovered that adopting a neutral attitude towards both the confrontations between the regime and the liberation movement and the apartheid government's rumoured development of nuclear capacity, was impossible. This presented a strategic quagmire.²⁶ While Britain could not shirk its responsibility to oppose a socio-political system that was a threat to peace in South Africa, at the same time, within the context of the Cold War, the British government's allies expected it to side with those who were defending capitalism and who were key suppliers of uranium for its indigenous nuclear

23 M van Wyk, "Sunset over atomic apartheid: United states-South African nuclear relations, 1981-93", *Cold War History* 2009, pp. 1-29. Indeed, South Africa depended on possible collaborations from any or all of the Western states for the development of its nuclear capability. Such technological capability was a prerequisite for the development of nuclear weapons.

24 J Siracusa, "Averting Armageddon: In search of nuclear governance", *Globalisation and Development Center*, 22, October 2008. However, the apartheid government basically decided to "go-it-alone" in developing nuclear capability. While assistance from other countries was regarded as a bonus, such assistance was never formalized. Indeed, dual-use items were usually obtained from other countries and converted for use in the weapons program without their knowledge.

25 J Siracusa, "Averting Armageddon...", *Globalisation and Development Center*, 22, October 2008, p. 18.

26 PN Edwards and G Hecht, "History and the technopolitics of identity: The case of apartheid South Africa", *Journal of Southern African Studies*. 36(3), September 2010, pp. 619-639.

industry. As a fiercely anti-communist government and a steady supplier of nuclear raw materials, the apartheid regime fitted this profile. South Africa was the supplier of uranium products required for the fuelling of the Western nuclear industry, including that of Britain.²⁷ The principal state actors of the prevailing international system needed South Africa's uranium residue as a commodity both for peaceful and military purposes.²⁸ Therefore Britain's reaction to South Africa's nuclear proliferation can be encapsulated in a single word, "complacent".

In the period of heightened Cold War politics in the Southern African sub-region, particularly from 1974, South Africa was excluded from attending the UN General Assembly meetings, signaling a period when South Africa found itself to be a pariah state.²⁹ The new Labour government of Harold Wilson that came into power on 4 March 1974 had evidently inherited a political and diplomatic quagmire in the equivocal position of the South African nuclear intentions, raising concerns for British policy experts as they were unclear on how to proceed in their relations with South Africa, particularly with regards to the NPT regime and enrichment safeguards.

The Prime Minister, Balthazar Johannes Vorster had announced in parliament in Cape Town on 20 July 1970 that South African scientists had accomplished an exceptional achievement in succeeding to develop a new process for uranium enrichment. He also mentioned that he had approved the building of a pilot plant for this process, which was under construction by the South African Atomic Energy Board (AEB).³⁰ Vorster described the success as "unequaled in the history of our country".³¹ This was so because

27 The Combined Development Agency (CDA) (formerly the Combined Development Trust) was established by the US and Britain in 1944 to procure uranium for British and American nuclear weapons programs. See also W Taya, *Progress or proliferation?* (Washington DC, Center for strategic and international studies, 2008), pp. 139-153; LE Asuelime and S Francis, "Drivers of nuclear proliferation...", *Journal for Contemporary History*, 39(1), June 2014, pp. 55-68.

28 LE Asuelime, "Uranium politics of gatekeeping...", *Historia*, 58(1), May 2013, pp. 33-50; "Commonwealth, bargains and influence...", *Journal of Southern African Studies*, 42(4), 2016, pp. 675-686.

29 In 1974, the General Assembly called upon the security council to review the relationship between the UN and South Africa in the light of the constant violation by South Africa of the principles of the Charter and the Universal Declaration of Human Rights. The president of the general assembly, Abdelaziz Bouteflika of Algeria, ruled that the delegation of South Africa should be refused participation in the work of the general assembly.

30 Uranium was used to manufacture nuclear weapons by the South African government. South African nuclear energy history dates back to 1959 when the country's first large-scale nuclear research and development project was initiated under the auspices of the AEB. The AEB however was replaced later by a newly formed 'Uranium Enrichment Corporation of South Africa Limited' (UCOR) to take over the enrichment of uranium, to develop the process further and to complete the construction of the pilot plant and put it into operation.

31 D Albright, "South Africa's Nuclear Weapons Program", *Massachusetts Institute of Technology*, 4 March 2001; A Cassuto, "Can uranium enrichment enrich South Africa?", *The World Today*, 26(10), October 1970, pp. 419-427.

the pilot plant would be testing the process on an industrial scale. At the time, this announcement was received with some skepticism from other states, for very understandable reasons: because South Africa had not been forthcoming about the nature of its process and the progress it was making.³²

It was therefore natural that South Africa, as a country with large resources of uranium and at the same time a young industrial country which for its further development had adopted a policy of marketing its raw materials in the most advanced form, should have looked at ways and means of enriching at least some of its uranium reserves. For such an undertaking it also had the advantage of low cost power and industrial infrastructure developed to the point where it was capable of embarking on the development and construction of sophisticated military projects.³³

In April 1975, the Prime Minister announced that a part of the pilot plant at Valindaba had been successfully commissioned. The expectation was that the construction of the test plant would be completed early the following year (1976) after which it would be commissioned so that the whole plant could be brought into production in the course of that year. In a press release by the South African Minister of Mines, PGJ Koornhof, on 12 November 1975, he stated in part that:³⁴

...during the past two years, UCOR first on its own and later in co-operation with Britain, undertook feasibility studies from which it emerged that a commercial plant, based on the South African process, would be competitive with all the enrichment processes, either already applied, or in an advanced stage of development in the free world...the expanding nuclear power programmes will thus bring about an ever increasing demand for uranium and more specifically for uranium in the enriched form.

He asserted further that by the commercial application of its enrichment process, which promised to be competitive with existing processes, and by marketing at least a part of its uranium in its most refined form as enriched uranium, South Africa will be able to extend this contribution significantly and such a step will be of exceptional value to the scientific, technological and industrial development of the country. Furthermore, it will enable the Republic, in due course, to produce enriched uranium required for its own nuclear programme, rather than becoming dependent, in an unstable world, on foreign sources for its requirements.

32 AJA Roux and WL Grant, "The South African Uranium Enrichment Project", paper, European Nuclear Conference, Paris, France, April 1975.

33 AJA Roux and WL Grant, "The South African Uranium Enrichment Project", 1975.

34 PGJ Koornhof, "Commercial Uranium enrichment plant in South Africa", Press release, South African Minister of Mines, 12 November 1975.

Britain interpreted the comment to be directed at London because of their hard-line position on the apartheid question. Britain feared that South Africa might have been receiving other assistance from West Germany. Suspicions were high particularly when there were widespread reports from major news publications that classified documents from the South African Embassy in Bonn had disappeared. Britain was not clear whether uranium enrichment had been one of the topics discussed by the high level German mission that had visited South Africa. It was clear that the Germans' enrichment plant (STEAG) had been readily open for access to a "nuclear want-to-be state" like Brazil. The STEAG was based on nozzle technology which the Germans claimed could only produce civil-grade "low-enriched" uranium.³⁵

But, on investigation by Clements C Mike of the British Energy Department to test the accuracy of the claim by the Germans about the capacity for enrichment plants based on "nozzle" technology to produce military grade (93%) enriched uranium, the British Nuclear Fuels Limited (BNFL) commented that it was theoretically possible to enrich uranium up to 93% by the "nozzle" process.³⁶ The fear of a German takeover of a traditional sphere of influence, made Britain recommit to providing the necessary technology to enhance South African nuclear capability.

The report on likely German collaboration with South Africa in the nuclear field got the earliest attention from other states in Africa. Notable among these was Nigeria's reaction which was confirmed when the Nigerian Commissioner for External Affairs, Colonel Garba, was on Lagos radio saying that "Nigeria would review her relations with West Germany if it was established that that country signed an agreement with apartheid South Africa on the development of nuclear materials in the territory". Colonel Garba emphasized that the "FMG [Federal Military Government of Nigeria] would not compromise the interests of Africa and the third world countries on any issue". But the Germans professed innocence on the matter. PJ Roberts of the British West African Department was quick to warn its government (because a British conglomerate, General Electric Company (GEC)³⁷ had developed an interest in making a bid for some limited facility equipment to South Africa's nuclear plant) that the German episode was of more than passing interest. He stated that:³⁸

35 FCO, FCO45-1809, "South African Uranium enrichment", Letter, British embassy, Pretoria/Joint Nuclear Section (Energy Department, Whitehall, London), 17 November 1975.

36 FCO, FCO45-1809, Letter, Clement/Wilmshurst, 2 May 1975.

37 The General Electric Company or GEC was a major British-based industrial conglomerate, involved in consumer and defence electronics, communications and engineering.

38 FCO, FCO45-1809, "Nigeria: Policy on nuclear cooperation with South African", Letter, Roberts/Lewis and Heath, 1 October 1975.

I thought it best to check that we were not likely to find ourselves in a similar position [to the Germans]. I find that we may. GEC wish to tender for the supply of a radioisotope plant to South Africa. British Foreign and Commonwealth Ministers were considering this and awaiting a convincing argument from the Energy Department that the sale is inoffensive before it can be permitted. Garside of the Energy Department explained that the Germans have gone further along the road of nuclear cooperation with South Africa than we could contemplate; the joint feasibility study of uranium enrichment plant touches on a sensitive area close to the production of fissile material. Equally, the proposal to supply nuclear power plant to South Africa is sensitive; such plants can, in certain circumstances also play a role in the production of fissile material.

He also warned that “we want to avoid being pilloried like the Germans (though Colonel Garba’s threat is carefully conditional on ‘guilt’ first being proved)”. The Secretary of State for Energy unequivocally expressed concern that the issue would indeed raise political issues, which Ministers ought to consider. He immediately made reference to the party’s 1974 manifesto in which the party pledged itself to “disengagement from Britain’s unhealthy involvement with apartheid”. Clearly there were also concerns about South Africa’s adherence to the NPT, a step that would have made relations with South Africa in the atomic field less cumbersome for Britain.

Since enrichment plant safeguards seemed to be a potential problem, Britain had another tactic in mind in its approach to the South Africans. Britain would pursue an agenda under which South African experts met equivalent exports rules from those countries which were parties to the NPT and were about to accept safeguards at their own enrichment plants.³⁹ This highlights the camouflaging style with which Britain was forced to deal and relate with a pariah South Africa during this time.

There were worries on the side of the British government particularly the fear of South Africa’s nuclear ambitions and its hesitant behaviour towards acceding to the NPT regime. But the Cold War’s practical politics would not allow for more restricted nuclear relations. The problem it created for British foreign policy in relation to other countries within multilateral platforms as well as other African countries, was constant, not only because of the apartheid policy in place in South Africa but also because of the complication arising

39 FCO, FCO45-1809, “South Africa, the NPT, and enrichment safeguards”, Minute of a meeting (British Department of Energy office), F Brown (British department of Energy) / D Fakley (British Ministry of Defence hereafter cited as MOD), A Hughes (British Nuclear Fuels Limited) and L Stieff (ACDA United States), 4 December 1975.

from South Africa's suspicious intentions for the pursuit of nuclear weapons development for itself on the one hand, and on the other hand, the possibility of making erroneous decisions with its enriched uranium that would threaten the non-proliferation regime altogether.

Nuclear collaborations: Britain and South Africa

Serious nuclear collaboration persisted for some time at the interdepartmental levels between BNFL and South Africa, most of which was not clear knowledge for the British Ministers.⁴⁰ While relative petty transactions were going on, the UK Government (HMG) was increasingly vulnerable to criticism of nuclear collaboration with South Africa on two points. First and more importantly, was the Consultancy Agreement of 1st January 1973 between the United Kingdom Atomic Energy Agency (UKAEA) and the South African Atomic Energy Board (SAAEB), an agreement that could only be terminated by giving at least three months' notice. At this point, the UKAEA in fact derived very little commercial benefit from the agreement, but it was at least anomalous and could have proved a serious political embarrassment if its existence had become publicly known. The other point was very vital and could also have given rise to embarrassment for the British Government. The UKAEA and BNFL had discretion to accept, without reference to the Foreign and Commonwealth Office (FCO) or to the Department of Energy (DoE), short technical visits by South Africans, provided that the visitors were not sufficiently well known as to be likely to attract publicity.⁴¹ This gave room for the easy transfer of nuclear expertise.

On 28th September 1984, the 266th plenary meeting of the IAEA was held. In a summary document of the meeting entitled *South Africa's Nuclear Capabilities*, the IAEA stated that it was "alarmed that South Africa's unsafeguarded nuclear facilities enable it to acquire the capability of producing usable material for nuclear weapons".⁴² In August 1988, South African Foreign Minister, Roelof F. Botha, made a public statement through reporters at a press conference in Vienna just before the year's IAEA general meeting: "We have the ability to make [a nuclear bomb]...should we want

40 FCO, FCO45 – 1924, "Export of uranium oxide to South Africa application 2/1250/76, Make peace to Mcmillan", 14 September 1976.

41 FCO, FCO45 – 1924, "Nuclear contacts with South Africa", Cox / Butler, 16 September 1976.

42 IAEA, "South Africa's nuclear capabilities", IAEA website, October 1984 (available at: www.iaea.org, as accessed on 21 September 2014).

to”. This statement made headlines around the world and the international community watched in awe. But experts familiar with South Africa’s nuclear programme scoffed at the publicity, greeting the statement with no more than a shrug of indifference.⁴³

The comment however underscored a neglected but nascent question: if South Africa did have a nuclear bomb, how should the international community respond on the one hand, while on the other hand, was the allegation by the Africans against Britain in the question of nuclear capability development in South Africa justified after all? Indeed, South Africa did develop a nuclear weapons capability.

Conclusion

The manner in which internationally recognized nuclear weapon states particularly Britain (being one of the nuclear superpowers) aided nuclear proliferation in a developing country (like South Africa) was discussed. The preponderance of multi-faceted cultural, strategic and economic linkages between Britain and South Africa provided a quagmire or pretext for nuclear technology collaboration even when it contradicts the dictates of the NPT. Post colonial South Africa and British nuclear relations are an example of a state’s extensive technological collaboration as a factor in nuclear proliferation.

Generally the ongoing vertical proliferation by superpowers against a backdrop of fits-and-starts efforts to halt horizontal proliferation will continue as a trend into the future. The authors label it as “fits-and-starts” because nuclear superpowers, such as the United States, Russia, Britain, France and China occasionally supported allies, or turned a blind eye, as it suited them. A distinction between the current and former proliferation of nuclear weapons lies in the fact that the non-proliferation norm did not exist in the early part of the nuclear age. It took time to develop, and has since called for more attention in discourses on international security.

43 M Flournoy, “South Africa still in IAEA”, *Bulletin of the Atomic Scientist*, November 1988, pp. 3-5.