

**SOUTH AFRICA'S NUCLEAR DIPLOMACY, 1990-2010: SECURING A NICHE
ROLE THROUGH NORM CONSTRUCTION AND STATE IDENTITY**

by

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DECLARATION

I declare that the thesis, which I hereby submit for the degree D Phil (International Relations) at the University of Pretoria, is my own work and has not previously been submitted by me for a degree at this or any other tertiary institution.

A handwritten signature in blue ink, reading "Jo-Ansie Karina van Wyk".

.....
Jo-Ansie Karina van Wyk
30 January 2013

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Strabo, a Greek geographer and philosopher, maintained that geography is destiny (quoted in Dawson 2005: 362). This holds true for me. I grew up approximately 60 km west of Vaalputs, South Africa's National Radioactive Waste Disposal Facility. I became aware of its existence much later in life and this awareness gradually resulted in an academic interest in environmental, hydro- and space politics and more specifically an interest in the influence of nuclear science on international relations and diplomacy.

My academic interest in nuclear politics and nuclear diplomacy was cultivated in 1995 when I was awarded the British Foreign and Commonwealth Office's (FCO) *New South African Security Policy Fellowship* which allowed me to spend time at the Department of War Studies, King's College London. There I attended the lectures of Dr Martin Navias on nuclear strategy which left me in awe of the power of the "ghost inside the atom".¹

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¹ This phrase is taken from South African anthropologist and singer-songwriter, Johnny Clegg's lyric "I call your name" which appeared on Johnny Clegg and Savuka's 1988 album *Shadow Man*.

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List of Abbreviations and Acronyms

⁹⁹ Mo	Molybdenum-99
AAM	Anti-Apartheid Movement
ABMT	Anti-Ballistic Missile Treaty
AEB	Atomic Energy Board of South Africa
AEC	Atomic Energy Corporation of South Africa
AFCONE	African Commission on Nuclear Energy
AFRA	African Regional Cooperation Agreement for Research, Development, and Training Related to Nuclear Science and Technology
AG	Australia Group
ANC	African National Congress
ANWFZ	African Nuclear Weapon Free Zone
ARMSCOR	Armaments Development and Production Corporation of South Africa
AU	African Union
AUPSC	African Union Peace and Security Council
AWB	Afrikaner Weerstandsbeweging
BIOT	British Indian Ocean Territory
BTWC	Biological and Toxin Weapons Convention
CANE	Coalition Against Nuclear Energy
CD	Conference on Disarmament
CEO	Chief Executive Officer
CIS	Commonwealth of Independent States
COP	Conference of State Parties
CPF	Country Programme Framework
CPPNM	Convention on the Physical Protection of Nuclear Material
CTBT	Comprehensive Nuclear-Test-Ban Treaty
CTBTO	Comprehensive Nuclear-Test-Ban Treaty Organisation
CWC	Chemical Weapons Convention
DFA	Department of Foreign Affairs (South Africa)
DIRCO	Department of International Relations and Cooperation (South Africa)
DME	Department of Minerals and Energy (South Africa)
DOE	Department of Energy (South Africa)

DRC	Democratic Republic of the Congo
DST	Department of Science and Technology (South Africa)
€	Euro
EMG	Environmental Monitoring Group
EU	European Union
FCO	Foreign and Commonwealth Office
FMT	Fissile Material Cut-Off Treaty
FNRBA	Forum of Nuclear Regulatory Bodies in Africa
FNWS	Former Nuclear Weapons State
G-77	Group of 77
GC	General Conference
GCIS	Government Communication and Information System (South Africa)
GIF	Generation IV International Forum
GNPI	Global Nuclear Power Infrastructure
GNU	Government of National Unity (South Africa)
HCOC	The Hague Code of Conduct against Ballistic Missile Proliferation
HE	His Excellency
HEU	Highly-Enriched Uranium
IAEA	International Atomic Energy Agency
IBSA	India-Brazil-South Africa Dialogue Forum
IEC	International Enrichment Centre
IGO	Inter-Governmental Organisation
INFC	International Nuclear Fuel Centre
IR	International Relations
IRBM	Intermediate-Range Ballistic Missile
IRP	Integrated Resources Plan
ITDB	International Atomic Energy Agency Illicit Traffic Database
LEU	Low-Enriched Uranium
LTBT	Limited Test Ban Treaty
Mo-99	Molybdenum-99
MP	Member of Parliament
MPI	Middle Powers Initiative
MTCR	Missile Technology Control Regime
MW	Megawatt

NAC	New Agenda Coalition
NAM	Non-Aligned Movement
NECSA	Nuclear Energy Corporation of South Africa
NERS	Network of Regulators of Countries with Small Nuclear Programmes
NETC	Nuclear Energy Technical Committee (South Africa)
NGO	Non-Governmental Organisation
NNEECC	National Nuclear Energy Executive Coordination Committee (South Africa)
NNR	National Nuclear Regulator (South Africa)
NNWS	Non-Nuclear Weapons State
NP	National Party (South Africa)
NPA	National Prosecuting Authority (South Africa)
NPC	South African Council for the Non-Proliferation of Weapons of Mass Destruction
NPT	Treaty on the Non-Proliferation of Nuclear Weapons
NSG	Nuclear Suppliers Group
NSS	Nuclear Security Summit
NTI	Nuclear Threat Initiative
NTP	Nuclear Technology Products Radioisotopes (Property) Limited
NWS	Nuclear Weapons State
NWFZ	Nuclear Weapons Free Zone
NWFZT	Nuclear Weapons Free Zone Treaty
NUFCOR	Nuclear Fuels Corporation of South Africa
OAU	Organisation of African Unity
OECD	Organisation for Economic Cooperation and Development
OTB	Overberg Toetsbaan
P5	Five Permanent Members of the United Nations Security Council
PAC	Pan Africanist Congress of Azania
PBMR	Pebble Bed Modular Nuclear Reactor
PIV	Physical Inventory Verification
PREPCOM	Preparatory Commission of the International Atomic Energy Agency
PREPCOM	Preparatory Committee of the Treaty on the Non-Proliferation of Nuclear Weapons
PPNN	Programme for the Promotion of Nuclear Non-Proliferation

PSI	Proliferation Security Initiative
PWR	Pressurised Water Reactor
R/ZAR	South African Rand
REC	Review and Extension Conference
REVCON	Review Conference
RSA	Republic of South Africa
SADC	Southern African Development Community
SAFARI-1	South African Fundamental Atomic Research Installation-1
SANDEF	South African National Defence Force
SAPS	South African Police Service
SIPRI	Stockholm International Peace Research Institute
SORT	Strategic Offensive Reductions Treaty
START	Strategic Arms Reduction Treaty
TACC	Technical Assistance and Cooperation Committee of the IAEA
UAV	Unmanned Air Vehicle System
U-235	Uranium 235
UK	United Kingdom
UN	United Nations
UNGA	United Nations General Assembly
UNMOVIC	United Nations Monitoring, Verification and Inspection Commission
UNSC	United Nations Security Council
UNSCEAR	United Nations Scientific Committee on the Effects of Atomic Radiation
US	United States of America
US\$	United States Dollar
USSR	Union of Soviet Socialist Republics
WA	Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies
WANO	World Association of Nuclear Operators
WMD	Weapon of Mass Destruction
ZC	Zangger Committee

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SUMMARY

SOUTH AFRICA'S NUCLEAR DIPLOMACY, 1990-2010: SECURING A NICHE ROLE THROUGH NORM CONSTRUCTION AND STATE IDENTITY

by

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Supervisor: Professor Anton du Plessis

The main thesis of this study is that since 1990 South Africa has conducted its nuclear diplomacy by constructing certain norms and its identity in a particular way to serve its national interests. A constructivist analysis of South Africa's nuclear diplomacy concerning the nuclear non-proliferation export control regimes; the International Atomic Energy Agency (IAEA); the Pelindaba Treaty; and the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) suggests that South Africa's application of three typical middle power diplomatic strategies, namely confrontation, cooperation and parallelism have enabled the country to secure a niche role for itself that has provided the country with some material and non-material rewards.

South Africa's membership of some of the major nuclear export control regimes reflects its socialisation of the norms of non-proliferation, disarmament, and the peaceful uses of nuclear energy. South Africa has incorporated aspects of this regime in its nuclear export trade policies and national nuclear-related institutions. Despite this, the South African government's efforts were undermined by a series of contentious nuclear proliferation-related incidents, most notably the involvement of South Africans in the AQ Khan network.

South Africa was a founder member of the IAEA in 1957. Despite this early role in norm construction, South Africa's relations with the IAEA deteriorated as international opposition to its apartheid policies escalated. Defying international isolation, the country embarked on a nuclear weapons programme that produced six atomic devices. South Africa returned to its designated seat for Africa on the IAEA Board of Governors in 1995. A vocal opponent of the discriminatory nature of the

IAEA Statute and supporter of all countries' right to the peaceful uses of nuclear energy, South Africa's influence in the Agency expanded. Despite this, the country's candidate for the position of IAEA Director General was not elected.

Africa's position on nuclear non-proliferation originated in the 1960s. Once South Africa's domestic policies became known and suspicions of its nuclear weapons programme grew, the Organisation for African Unity (OAU) turned its focus to condemnation of South Africa. As a result of the political transition in South Africa; its ratification of the NPT; and the IAEA's verification process, South Africa joined Africa to establish the African nuclear weapons free zone in terms of the Pelindaba Treaty. As a result the country was elected to chair and host the AFCONE.

Despite its historical opposition to the NPT, the country ratified the Treaty in 1991 and has constructed its niche role in the NPT regime through its problem-solving and bridge building roles at various NPT conferences.

Therefore, this study concludes that South Africa's post-1990 nuclear diplomacy has maintained a normative foundation; employed various diplomatic strategies; and was conducted in compliance with the set objectives of the country's foreign policy. In this, the analysis of the nuclear diplomacy of a state such as South Africa, which discontinued its nuclear weapons programme, provided insights into nuclear diplomacy in general and the nuclear diplomacy of states similar to the South African situation.