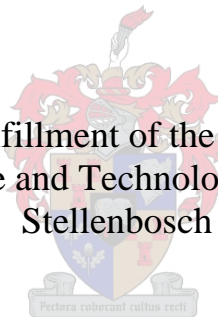Putting indigenous knowledge on the science policy agenda in South Africa, 1994-2002.

Student Name: Azeza Fredericks
Student No: 13759795

Thesis presented in partial fulfillment of the requirements for the degree of Master of Philosophy (Science and Technology Studies) at the University of Stellenbosch

Supervisor: Prof J Mouton
Co-Supervisor: Prof A Rip

Proposed date of award of degree: April 2005

"Declaration

I, the undersigned, hereby declare that the work contained in this thesis is my own original work and that I have not previously in its entirety or in part submitted it at any university for a degree.

Signature: ....…..........…..……..   **Date:** ....……………. "

Abstract

Putting indigenous knowledge on the science policy agenda in South Africa, 1994 - 2002

The study focuses on tracking the developments accompanying the rise of indigenous knowledge (IK) and its positioning on the science policy and national research agenda in South Africa (SA). The historical occasion, the variety of policy developments in a diverse 'new' SA and how IK evolved, presented the impetus and context of the study.

The objectives of the study were to consider more closely the roles and actions of the participants in the overall process, how they interacted and to identify broad patterns that occurred. Other areas included positioning IK as strategic science and how it was refracted through the national research system.

To achieve these objectives, a significant part of the methodology involved a historical reconstruction of developments in IK. The data obtained from this reconstruction provided the basis for further analysis and closer scrutiny of the issues. Reconstructing the history assisted with providing some answers regarding the sources of concern and motivation which led to formulating policy on IK, the processes that advanced IK to its position in 2002, looking at how the various players in the research system were mobilized and how the prelegislative stage of activity determined the outcome of the IK legislative process. In addition to these questions, there was an opportunity to consider Wally's Serote's role as 'moral entrepreneur and to try to understand both his personal trajectory and the role he played in the system.

The historical reconstruction provided a periodization comprising three chronological phases, namely

- Genesis (1994 – 1996)
- Awareness Creation (1997 – 1998)
- Programmes and Implementation (1999 – 2002)

New policy directions in SA provided a context for positioning IK within strategic science. The leadership and passion displayed by Serote also required an understanding of his personal trajectory and the role he played in the system. IK as strategic science is positioned within framework of the moral entrepreneur's cycle in a changing system. The historical reconstruction raised the issue of how easy or difficult it is to embed processes and how these processes co-evolve in the system. It also showed how IK was refracted through the national research system.

The broad 'success' of the IK initiative is discussed with respect to its legislative and policy journey in SA and its current position in the research system. The 'lesser successful' side is also discussed in terms of the intended objectives and the eventual outcomes. Protecting IK, a central issue throughout the process, led to struggles and tensions that required rethinking both the policy and epistemic aspects of both western science and IK.

Die plasing van inheemse kennis op die agenda van wetenskapsbeleid in Suid-Afrika, 1994 - 2002

Hierdie studie fokus daarop om dié ontwikkelinge te volg wat deel was van die opkoms van inheemse kennis (IK) en die posisionering daarvan op die agenda vir wetenskapsbeleid en nasionale navorsing in Suid-Afrika (SA). Die historiese gebeurlikhede, die verskeidenheid in beleidsontwikkelinge in 'n diverse "nuwe" SA en die manier waarop IK ontwikkel het, het die stukrag en die konteks vir hierdie studie verskaf.

Die doelwitte van die studie was as volg: om die rolle en die aksies van die deelnemers aan die proses as geheel in meer detail te oorweeg; om hulle interaksie waar te neem en om die breë aksiepatrone te identifiseer. Ander ondersoekareas was om IK as strategiese wetenskap te posisioneer en om vas te stel hoe dit deur middel van die nasionale navorsingstelsel gerefrakteer is.

Om hierdie doelwitte te kan bereik, het 'n belangrike deel van die metodologie die historiese rekonstruksie van ontwikkelinge in IK behels. Die data wat deur middel van hierdie rekonstruksie verkry is, het die basis voorsien vir die verdere analise en nadere beskouing van die relevante kwessies. Deur die geskiedenis te rekonstrueer kon sommige van die vrae oor die volgende beantwoord word: die oorsprong van sake wat kommer gewek het en die motivering wat gelei het tot die formulering van beleid oor IK; die prosesse wat IK tot die posisie daarvan in 2002 bevorder het deur te kyk hoe die onderskeie rolspelers in die navorsingstelsel gemobiliseer is; en hoe die pre-wetgewende fase van aktiwiteite die uitkoms van die IK-wetgewende proses bepaal het. Bo en behalwe die beantwoording van hierdie vrae, kon Serote se rol as morele entrepreneur ook ondersoek word om sodoende beide sy persoonlike trajektorie en die rol wat hy in die stelsel gespeel het te probeer verstaan.

Die historiese rekonstruksie het 'n periodisering, bestaande uit drie chronologiese fases, verskaf, naamlik
- Genesis (1994 – 1996)
- Skepping van 'n Bewussyn (1997 – 1998)
- Programme en Implementering (1999 – 2002)

Nuwe beleidsrigtings in Suid-Afrika het 'n konteks verskaf vir die posisionering van IK binne die strategiese wetenskap. Die leierskap en passie wat Serote geopenbaar het, het ook begrip vir sy persoonlike trajektorie en die rol wat hy in die stelsel gespeel het, gevra. IK as 'n strategiese wetenskap is geposisioneer binne-in die raamwerk van die morele entrepreneur se siklus in 'n veranderende stelsel. Die historiese rekonstruksie het die kwessie geopper van hoe maklik of hoe moeilik dit is om prosesse in te bed, en hoe hierdie prosesse saam in die stelsel ontwikkel. Dit het ook gewys hoe IK deur middel van die nasionale navorsingstelsel gerefrakteer is.

Die breë "sukses" van die IK-inisiatief word bespreek met betrekking tot die pad wat dit geloop het in die wetgewende en die beleidsvormende proses in Suid-Afrika en die huidige posisie daarvan in die navorsingstelsel. Die "minder suksesvolle" kant word ook bespreek met betrekking tot die vooropgestelde doelwitte en die uiteindelike uitkomste. Die beskerming van IK, 'n sentrale kwessie regdeur die proses, het gelei tot worstelinge en spanninge wat vereis het dat die beleids- én die epistemiese aspekte van beide die westerse wetenskap en IK herbedink moes word.

CONTENTS

Chapter 1

Introduction: Putting Indigenous Knowledge on the Science Policy Agenda in South Africa, 1994-2002

1.1. Developing the idea for the thesis and motivation for the study

The idea for this thesis was sparked by my interest in the relationship between knowledge and power and how it can create a barrier between those who are able to participate in the apparent development and organization of knowledge and the economy in general, and those ('others' on the outside) who may well be producing and using knowledge, but are unable to participate in this process and generally appear to be poor, marginalized and misunderstood.

Knowledge has been around since time immemorial. Over time, different components of this knowledge composite have become organized and institutionalised, and through this ongoing development there has evolved a body of knowledge called Western Knowledge or Western Science. Other parts of this universal and composite knowledge base were afforded lesser status and were positioned as having local relevance only (as opposed to broader application), up to backwardness, primitive, superstition, etc. In fact, they were not seen as 'real' knowledge. In the 1980s anthropologists and development scholars introduced the term 'indigenous knowledge' to give recognition to this "form" of knowledge. The historically asymmetric relationship could not be overturned by just introducing a new term. By now, however, the relationship between these two so-defined (apparently separate) components of the knowledge composite which always co-existed, has shifted. More attention is being paid to the epistemic, developmental and opportunistic elements associated with the latter body of knowledge and the learning (and other) opportunities for 'custodians/holders' of these knowledges.

Over the last three decades there has been decidedly more interest shown internationally in the knowledge composite that is held by indigenous peoples on all

continents. Perhaps predominantly because of the inequitable resource allocation on the globe, with the so-called Western countries accessing the lion's share and the majority of indigenous people (others) living in abject poverty, it has become necessary to better understand indigenous people and their knowledge frameworks to 'assist in their development'. Indigenous Knowledge (IK) as a knowledge framework has surfaced as entry point for various aspects of development studies, predominantly by those in the western knowledge arena. Bringing the different parts of the knowledge composite together has brought about interesting new spaces for the general development of people and their interest in the 'construct' called knowledge.

South Africa (SA), a country ravaged by the National Party-Apartheid government, and perhaps mainly because of it, had what appeared to be the benefit of these two very distinct knowledge groupings and also very many inherent inequality-related issues and problems. When the promises of IK was introduced to Parliament as a priority issue in 1996, it presented as an exciting opportunity for the country, but also one for learning more about who we are and what it is that makes us 'go'. The knowledge challenge presented by the dichotomy and hierarchies of power, inequitable resource allocation, etc for a diverse SA, with approximately 70% of its population being immersed in indigenous knowledges, was clear. This historical occasion and the opportunity presented by considering some of the (politically correct) policies of a young democracy and the manner in which this may play out, was very appealing.

1.2. Preliminary reading and refinement

The preliminary reading of the literature highlighted the complexity of the issues and the numerous international debates, contested definitions and ongoing developments in the understanding of what it is that defines and constitutes the constructs 'Western science' and 'Indigenous Knowledge'. It also presented a framework and context presented by international developments in the indigenous knowledge arena. In the process of gathering material (data) that would aid in the historical reconstruction, I noted the enthusiastic participation by many, but the leadership and passion displayed by Wally Serote was particularly striking, and this became a further topic for my study.

There were many participants in the overall process of getting IK onto the science policy agenda; there were a suite of new policies and ongoing policy developments and there was the outcome of this process that would require some form of analysis. Entrance points for the analysis were:

1. presenting some background to the processes that set the stage for the playing out of the numerous activities,
2. understanding the possible roles and actions of participants or 'actors' in the overall process and how they interacted,
3. what patterns occurred (broadly speaking), similar to patterns described in the literature

The above points served as a guideline for my study. Though the problem was not clear and the data/story had not yet been compiled, it highlighted the need to focus on the historical reconstruction of IK in South Africa as a necessary first, and major task, as the possible issues and patterns would be contained there.

1.3. Key research questions

Reconstructing the history, required articulating answers to the following questions:

- What were the sources of concern, the motivations, concurrent developments which led to the effort to formulate government's policy towards IK?
- What were the processes by which this desire for policy advanced the issues of government policy towards IK to its state in 2002?
- How was it that a number of actors in the national research system came to participate and become mobilized in the field of IK?
- How did IK as entity emerge out of these interrelated actions to take up the space it occupied in 2002?
- How did the prelegislative stage of activity determine the outcome of the history of the IK legislative process?

In addition to these questions, there was an opportunity to consider Serote's role as "moral entrepreneur" and to try to understand both his personal trajectory and the role he played in the system.

1.4. Indication of research design and methodology

The study comprises two main but integrated parts. The one part was constituted by an attempt to access all the available data on IK as it appeared in parliamentary, policy and other relevant documents and to reconstruct a history out of these diverse and sometimes 'fugitive' resources. Important in this respect also was my being employed by the CSIR and establishing a working relationship with Serote. In this position, I was privy to many formal and informal discussions and this unique opportunity was helpful when positioning information in terms of analysis.

Reconstructing the IK story was guided and the outline supported by Rettig's Cancer Crusade which provided broader context and nodes for comparison. This historical reconstruction could then be used as data for the subsequent analyses. The literature which was consulted was applied to look for similarities, differences and patterns and also used to answer the key research questions.

1.5. Outline of the thesis

The chapters in the thesis have been organised as follows:

Chapter 2

Chapter 2 positions developments in SA as part of a 'bigger story' and attempts to introduce windows through which to view other parts of the story. It provides an overview of the literature covered and discusses and defines some key concepts. Key questions are provided (at the beginning) that serve as the guide to the literature review and also provide the framework for the discussion throughout the chapter.

This chapter starts by providing a context for IK as an item on the policy agenda in SA and looks briefly at the local context in terms of the underpinnings of the New

Constitution. To contextualize IK's development in SA, there is consideration of the broader international developments, as the thinking inherent in these developments invariably permeated into and impacted on developments locally.

The literature raises issues of uneven knowledges, dichotomies and power, dynamics of knowledge production, demarcation debates and new spaces for interactions between knowledges. It also provides examples of analyses which provided supporting frameworks for the structure of subsequent chapters.

Chapter 3

This chapter comprises the historical reconstruction of IK activity and processes and presents in the beginning an attempt at 'an at-a-glance periodization' comprising the following phases:

- Genesis (1994-1996),
- Awareness and Creation (1997-1998) and
- Programmes and Implementation (1999-2002).

The chapter considers how IK emerged as issue in parliament and how Serote attempted to (initially) transform aspects of the S&T system in various stages. This is followed by a description of the roll-out of Audit of Indigenous Technology in SA, the objectives of the IKS programme and the structures established during this period. Attention is paid to how it was that the need for legislation came about, the unfolding of the legislative process and the complexities that arose. More-or-less chronologically arranged , actors and their agenda-setting activity are documented per calendar year.

Chapter 4

Chapter 4 considers more closely the doings of a moral entrepreneur in a changing system. An attempt is made to weave together the two important and relevant

perspectives of 'mobilization through agenda setting' and 'Outsider' theories. The events in the historical reconstruction are looked at more closely by considering how it was that a number of actors in the national research system participated and became mobilized to work in the field of IK.

The general antecedents to the IK policy agenda are outlined within the context of the new policy direction in SA. An attempt is made to show how IK was positioned within the category of "strategic science" and the activities that brought IK to its position in 2000. Separate attention is paid to considering Serote as moral entrepreneur and to try to understand both his personal trajectory and the role he played in the system. Various comparisons to and reflections are made on the role of Mary Lasker of the Cancer Initiative in the USA.

The history is positioned within the framework of the moral entrepreneur's 'action' cycle and parallels are drawn and applied to the South African IK process. A new wave of activity is suggested in terms of the support and contextualization of IK within the notion of the African Renaissance and the movement of IK across the research system is considered.

Chapter 4 is concluded with a summary table that shows the activity and relevant stages of the IK evolution process and its participating actors.

Chapter 5

Chapter five suggests that history raises two issues issues. The first question considered is how easy or difficult it is to embed processes and how various interactions and processes co-evolve in the system. The question is also raised about whether the initiative was a success; what constitutes success in this case is discussed briefly and comments made on the outcome/s.

<p style="text-align:center">…..</p>

Chapter 2

Context and examples of analysis from the literature

2.1. Introduction - Part of a Bigger Story

Attempting to tell the story of how IK was put on the Science Policy Agenda in SA in itself introduces several windows to seeing parts of a larger story. These windows are supported by vast and diverse literature denoting a wide area of debate. In the discussion of the literature, a number of different perspectives are constructed through these windows, which are intended to support the story. The intention is to keep a focus on key aspects of the literature supporting the background, context and the subsequent unfolding of the story in chapter 3.

The story/thesis is essentially about how it came about that IK came to be an item on the Science Policy agenda from 1994-2002. Below I outline some key questions that required reflection and explanation and which will serve as the backbone of the literature review. The structure of this chapter is guided by these questions and the discussions and references to the literature will be made within this framework:

- Why did IK come up as an item for the policy agenda and where was it located in terms of a South African context?
- What was happening in terms of IK globally?
- Given the above developments, how was IK defined and are there any specific issues or discussions related to these definitions that require discussion and further attention?
- How then do these discussions lead into the processes that eventually located IK on the South African Science Policy agenda?
- Were there other processes and frameworks that supported the discussion which are documented in the literature. How are they described and do they provide an analytical perspective from which to proceed?

2.2. A context for IK as item on the policy agenda in South Africa

This was the time of new politics in SA. The country previously ruled by an 'apartheid' government became a democratic country on 27 April 1994. There were a number of fundamental transformation issues that required redress by the African National Congress (ANC) - led government post the inception of this democracy, including establishing the right to people's freedom, dignity, language, culture and the need to forge a new South African identity. South African 'societal rhetoric' at the time was that the time to 'effect change for the better' for the majority of South Africans had arrived. South African society had previously been characterized by disparities, by unequal access to the country's resources and uneven distribution of wealth and access to services and support. There was a need to find panaceas for the 'ills' of the country.

The preamble in the New Constitution of South Africa reflect the above:

We, the people of South Africa,

Recognize the injustices of our past;

Honour those who suffered for justice and freedom in our land;

Respect those who have worked to build and develop our country; and

Believe that South Africa belongs to all who live in it, united in our diversity.

We therefore, through our newly elected representatives, adopt this Constitution, as the supreme law of the Republic, so as to –

Heal the divisions of the past and establish a society based on democratic values, social justice and fundamental human rights;

Lay the foundations for a democratic and open society in which government is based on the will of the people and every citizen is equally protected by the law;

Build a united and democratic South Africa able to take its rightful place as a sovereign state in the family of nations.

The Constitution of the Republic of South Africa, Act 108 0f 1996

as adopted on 8 May 1996 and amended on 11 October 1996 by the Constitutional Assembly

This was a period dedicated to addressing imbalances of the past through the new Constitution and subsequent policy and legislation. New partnerships and working relationships with government structures were being established. The South African government, challenged by underdevelopment and inequalities in wealth distribution in large sectors of the country, was taking steps to transform and had the mandate to do so, governed (now) by a democratic government comprising predominantly of previously disadvantaged citizens. In terms of seeking solutions and transforming the country, it was necessary to address inequities and contribute to seeking ways to enhance the country's economic competitiveness.

The initial concept of indigenous technologies was born during this period and brought with it particular promises. There was a perspective held by many, including government departments (DST, 2003) that 'under apartheid, IK as well as practitioners within this system were marginalized, suppressed and subjected to ridicule and that this had profoundly negative effects on the development of South Africa's economy and society resulting in the distortion of the social, cultural and economic development of the vast majority of South African people'. An excitement developed regarding the range of possibilities that could arise from redressing these distortions.

There was at the time, just after the constitution was adopted, interest in a potential source of knowledge as yet untapped that could benefit marginalized Black South Africans and contribute to economic growth for the country as a whole. There was a need in the context of redress to look at alternative sources of knowledge to support the knowledge residing in the South African science system of the time and through this process, find ways of transforming the science system (Serote, 2001).

Odora Hoppers, known for her conceptualization of a post-victimology perspective on development, (in Ravjee, 2002) supports the above, 'South Africa's drive for the development, promotion and protection of indigenous knowledge systems … comes at a time when major 'winds of change' are blowing in the country. On the one hand, there are major transformation and democratization processes being implemented under the

new dispensation. Several macro-level policies provide frameworks for understanding the equity, empowerment, and development thrusts in government policies'.

Essentially, in terms of a broader agenda discussion debate (Van Lente and Rip, 1997), it was perhaps its time. IK was part of the public agenda for four decades, but received no favourable attention. Due to the transition to a new government representative of the people of the country, IK (and perhaps some of the issues inherent in the definition) was being moved to the formal agenda of government.

2.3. International developments

One of the strong drivers for the transition to democratic rule in SA was the fight for basic human rights for all citizens, many of who were perceived as people who were indigenous to the country. In SA, the struggle was about 'freeing' the marginalized people of the country. Globally, there was a simultaneous movement to support the right to freedom for Indigenous Peoples, most often also marginalized within their countries. There could thus be a strong sense of identity and link made between what was happening in SA and what was happening in IK debates globally.

According to Becker (2002), IK has been the subject of increasing attention by anthropologists, biodiversity prospectors and development planners and implementers during the past two decades. Local people have also themselves begun to appropriate and reconfigure these discourses 'from below' by drawing on discourses of traditional practices in fields as diverse as land use, local governance and medicine. According to Ravjee's study (2002), the notion of IK appeared frequently in the field of development studies since the late 1970s when many development organizations were broadening existing development frameworks to include participation and perspectives of beneficiaries of development aid projects. Questioning assumptions of the dominant modernization paradigm, many organizations expressed the expanded development frameworks in terms of strategies emphasizing IK as a cultural dimension of

development. This trend became evident in the new emphasis on cultural policies in conferences and workshops sponsored by several international organizations.

The definitions and related concepts are continually evolving as is shown by the varying definitions some of which will be referred to later. According to Smith (1999) known for her seminal work on indigenous methodologies, *'indigenous peoples'* is a relatively recent term that was constructed in the 1970's mainly out of the struggles of the American Indian Movement (AIM) and the Canadian Indian Brotherhood. She suggests that it is a term that 'internationalizes the experiences, concerns and struggles of some of the world's colonized peoples and that approaches generated from very different value systems and worldviews are denied, even within the emancipatory paradigm of post-positivism'.

In recent years, there have been many developments in international thinking and action on indigenous issues. According to the United Nations (UN), 300 million indigenous peoples in more than 70 countries have 'retained social, cultural, economic and political characteristics that are distinct from those of the dominant societies in which they live… (and) are arguably among the most disadvantaged and vulnerable groups of people in the world today'

Below, I outline chronologically some of the key developments.

2.3.1. The World's First Convention on Indigenous Peoples, ILO 107 and ILO 169
Posey (2002) suggests as a first reference of many, that the first world convention specifically on indigenous peoples took place in 1957 and was adopted by the International Labour Organization (ILO Convention 107)[1]. In 1980, Convention 169 replaced the ILO 107[2]. This notion replaced the concept of integration with the 'notion of self government, cultural integrity and auto-denomination' (i.e. the right of indigenous

---

[1] Convention Concerning the Protection and Integration of Indigenous and Other Tribal and Semi-Tribal Populations in Independent Countries under the assumption that indigenous peoples would 'inevitably be integrated as modern citizens into the nation states that usurped sovereignty over their communities'
[2] Concerning Indigenous Tribal Peoples in Independent Countries

peoples to define themselves). These early references show that, as is the case with many concepts and definitions, they evolved over time.

ILO 169 at the time, defined indigenous peoples as:

'Peoples in countries who are regarded by themselves or others as indigenous on account of their descent from the populations which inhabited the country, or a geographical region to which the country belongs, at the time of conquest or colonization or the establishment of present state boundaries and who, irrespective of their legal status retain, or wish to retain, some or all of their own social, economic, spiritual, cultural and political characteristics and institutions' (Posey, 2002)

2.3.2. Working Group on Indigenous Population

In 1971, the Sub-Commission on the Prevention of Discrimination and the Protection of Minorities (of the UN) appointed Mr. Martinez Cobo as Special Rapporteur[3]. Martinez Cobo addressed a wide range of human rights issues affecting Indigenous Peoples (IP), including health, housing and education. The study called on governments to formulate guidelines for their activities concerning indigenous peoples and represented an important development in recognizing the human rights problems confronting indigenous peoples.

In 1982, before the Martinez Cobo study was completed, the United Nations Economic and Social Council established the Working Group on Indigenous Population (WGIP). This working group had been a catalyst for many initiatives related to Indigenous Peoples. Perhaps as one of the most important, the Working Group elaborated a draft United Nations declaration on human rights of Indigenous Peoples, in collaboration with governmental, indigenous and non-governmental participants.

2.3.3. Cultural and Intellectual Property Rights
The first International Conference on the Cultural and Intellectual Property rights of Indigenous Peoples took place in June 1993 in Aotearoa, New Zealand and brought forth

---

[3] Tasked with conducting a comprehensive study on discrimination against indigenous populations and to recommend national and international measures for eliminating such discrimination

the Mataatua Declaration on Cultural and Intellectual Property Rights of Indigenous Peoples[4] with a recommendation that it be incorporated in its entirety in the UN Study on Cultural and Intellectual Property of Indigenous Peoples. This was supported by the II World Conference on Human Rights held in Vienna also in June 1993 which recognized the responsibility of all UN member states to respect the human rights and fundamental freedoms of indigenous people and recommended that a permanent forum at the UN for indigenous people be set up.

2.3.4. International Year for the World's Indigenous Peoples and International Decade of the World's Indigenous Peoples (1995-2004)

The UN General Assembly Resolution 48/163 of 21 December proclaimed 1993 as the International Year for the World's Indigenous Peoples and the UN General Assembly launched the International Decade of the World's Indigenous Peoples (1995-2004) on 9 December 1994. It was proclaimed to increase the UN's commitment to promoting and protecting the rights of indigenous peoples worldwide. The theme for the decade was 'Indigenous People: Partnership in Action' with the main objective being the strengthening of international cooperation for the solutions of problems faced by indigenous people in such areas as human rights, the environment, education and health. Under the above theme, it was intended to be a time to mobilize action to redress negative aspects introduced into indigenous communities by years of colonization and marginalization.

The International Decade had brought with it advances such as the establishment of the Permanent Forum on Indigenous Issues. The UN Declaration of the Rights of Indigenous Populations is currently still in draft and is intended to cover a wide range of human rights and fundamental freedoms issues related to Indigenous Peoples .The end of the

---

[4] Amongst others to "Adopt or strengthen appropriate policies and/or legal instruments that will protect indigenous intellectual and cultural property and the right to preserve customary and administrative systems and practices." - United Nations Conference on Environmental and Economic Development; UNCED Agenda 21 (26.4b) on http://aotearoa.wellington.net.nz/imp/mata.htm

International Decade of the World's indigenous peoples in 2004 has been set as the target for adopting the Declaration.

2.3.5. Additional IK activity

The international movement on IK is constantly evolving and receiving attention from a wider range of stakeholders. From a scan of the relevant websites, extracts of information on the activity of additional international organizations that have embraced IK within the sphere of their activities brought forth the following:

UNESCO

The Netherlands Organization for International Cooperation in Higher Education / Indigenous Knowledge (NUFFIC/IK-Unit) in co-operation with UNESCO's Management of Social Transformations Programme (MOST) has established a Database of best practices on indigenous knowledge in 1999 which initially contained 27 best practices. Through the second phase (2001-2002), 22 cases were newly added to the database. This database is part of the MOST database of best practice, which concentrates on poverty alleviation. It contains examples of successful projects illustrating the use of local and indigenous knowledge in the development of cost-effective and sustainable survival strategies, covering Africa, Asia-Pacific, Europe, North America and Latin America & Caribbean. It also includes a geographical and thematic index and an index of institutions acting as indigenous knowledge resource centres.

The World Trade Organisation (WTO)

 The WTO has recognized IK as part of the debate around the resolution of Intellectual Property Rights, more especially as it impacts on development. The Rio Summit sought to address the problems that arise in the exploitation of the bio-diversity of the world and declared that IK belonged to Indigenous Communities. The most recent activity included The International Cancun Declaration Of Indigenous Peoples at the 5th WTO Ministerial Conference in Mexico, 12 September 2003, where Indigenous Peoples request from governments to consider the adverse impacts of WTO agreements.

The World Intellectual Property Rights Organisation (WIPO)

The WIPO is currently exploring ways of accommodating IKS within the existing Intellectual Property Rights or considering whether there is a need to develop an alternative system specific to IKS. The General

---

Assembly of the World Intellectual Property Organization (WIPO), meeting from September 22 to 1 October 2003 considered future directions for the organization's work in the area of traditional knowledge, folklore, and genetic resources. Over the last two years, the WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (IGC) has laid down a solid basis for WIPO's work in this area, and its meeting in July 2003 explored ideas for future work and considered the prospects for accelerated moves towards concrete outcomes.

The IGC has debated a range of pressing current issues in the field of intellectual property (IP), and has overseen the development of practical tools and mechanisms to support traditional knowledge (TK) holders, custodians of traditional culture, and indigenous and local communities in identifying and promoting their interests in relation to the IP system. There has been overall agreement that immediate steps need to be taken to safeguard the interests of those communities who have developed and preserved TK and traditional cultures.

The World Bank

The World Bank has an initiative on IK with the objectives below, amongst others, to:
- Enable development partners to learn more about the local practices of client countries so as to adapt global knowledge to local conditions
- Advocating the application of IK in the development process

The Indigenous Knowledge (IK) Program's website opens a gateway to different sources on IK. It aims to facilitate a multilateral dialogue between local communities, NGOs, governments, donors, civil society and the private sector. The ultimate objective of the website is to help mainstream indigenous/traditional knowledge into the activities of development partners and to optimize the benefits of development assistance, especially to the poor.

These goals are being achieved through different strategies. These include a database on indigenous/traditional knowledge and practices with over 300 case studies and a series of "IK Notes" which present in some detail, locally driven solutions to complex issues. The Program also supports over 15 resource centers across Africa that focus on identification and dissemination of indigenous/traditional knowledge and practices. Working with governments and local partners, the Program has also begun to help mainstream the application of IK in World Bank projects and in national development programs.

The Centre for World Indigenous Studies

The Centre is involved in domestic and international policy, research, education, documentation and publication. The Center for World Indigenous Studies (CWIS) is an independent, non-profit [U.S. 501(c)(3)] research and education organization dedicated to wider understanding and appreciation of the ideas and knowledge of indigenous peoples and the social, economic and political realities of indigenous

nations. The Center fosters better understanding between peoples through the publication and distribution of literature written and voiced by leading contributors from Fourth World Nations. An important goal of CWIS is to establish cooperation between nations and to democratize international relations between nations and between nations and states.

What is consistent throughout and included somewhat in the summary of developments on IK issues internationally, is the global need to promote and protect the rights of indigenous people worldwide and to strengthen co-operation to find solutions to the problems faced by Indigenous Peoples. Although there may be several differences, parallels can be drawn between the 'struggles' against marginalization, poverty, inequality and other development issues of the South African people (which are still continuing from an IK perspective) and IK communities globally. These struggles could be perceived as struggles against unevenness/inequality and may be considered a useful entry point to the debate about unevenness pertaining to knowledges.

2.4. Some issues: Uneven knowledges, dichotomies and power, dynamics of knowledge production, demarcation debates and new spaces for interactions between knowledges

The opening sentence of the World Bank's 1998/99 World Development Report, Knowledge for Development, highlights a perspective on aspects of global unevenness:

" Knowledge is like light. Weightless and intangible, it can easily travel the world, enlightening the lives of people everywhere. Yet billions of people still live in the darkness of poverty – unnecessarily. Knowledge about how to treat such a simple ailment as diarrhea has existed for centuries – but millions of children continue to die from it because their parents do not know how to save them" (World Bank 1999, 3).

According to Weingart[5], 'globalization provides the backdrop against which knowledge gaps and the uneven distribution of knowledge in the world become apparent. It suggests that there is a standard against which all countries can be measured (…) Inequality in the

---

[5] Paper on Knowledge and Inequality

distribution of knowledge is equivalent to inequality of development'. What is significant (and unsurprising perhaps) in terms of its positioning, is that the World Bank refers to knowledge and development. There are two assumptions (Weingart), namely: that the knowledge referred to is scientific and technical knowledge, and that this form of knowledge is believed to be the crucial factor responsible for development.

Scientific is understood to mean Western or universal knowledge and is most frequently used as the yardstick for the assessment of quality of knowledge. The capacity to benefit from science and technology (S&T) knowledge has two basic elements: the ability to acquire and to apply knowledge that already exists, and the ability to produce new knowledge. Ravjee (2002) asserts that what in essence is created due to this knowledge gap, is a dichotomous and hierarchical relationship, with the simultaneous construction of science as western and of indigenous knowledge as unscientific (and/local). Weingart also proposes that the focus on IK is, in effect, a new approach in development policy and represents a major shift in development paradigms as it places knowledge in the center of development strategies, and recognizes for the first time, the importance of local knowledge and participation in decision making[6].

2.4.1. Contested definitions

In terms of defining IK, the term 'indigenous knowledge' means different things to different parties, as the contentious debate is ongoing. However, two key strategies may be distinguished: with the one seeking to integrate IK into Western knowledge and the other claiming an autonomous status for IK as an alternate route for development. An issue inherent in the first (integrating) view is that there is the underlying assumption (Agrawal, 1995, 434) that Western Science remains the frame of 'reference' against which all IK's are judged. This hierarchical distinction between IK and Western Science 'seeks to separate and fix in time and space…systems that can never be separated or

---

[6] Though debatable, Weingart also goes as far as to say that the debate over 'indigenous knowledge' was clearly initiated and is still driven by a guilt complex among Western countries in response to their role as colonial powers.

fixed', and so the proposed strategies of storing and exploiting IK will only once again 'benefit the richer, more powerful constituencies…thus undermining the major stated objectives …to benefit the poor, the oppressed and the disadvantaged.'

Though there are the two main strategies, there are also discussions about 'other space': rhetorical space where Western knowledge and IK can be brought together. Rip (2001) makes the point that sociology of knowledge can contribute by analyzing the nature and potential of 'spaces' for new knowledge production. He refers to Turnbull (2000, 227) who calls for a 'third space' in addition to the knowledge spaces of each of the different parties. In such a 'third space', the tensions can be entertained productively, in particular when the various stories can be told, weaving together what was separate. (Turnbull 2001)

David Turnbull refers to the recognition of the role of 'third spaces' for the interaction between the different knowledges and knowledge traditions, and actually building such spaces and having different knowledge traditions perform in them. Instead, it may be possible to devise ways in which alternative knowledge systems can get to interrogate each other and work together in a creative space: a 'third space' or 'transmodern space'. One way to address the issue is through the notion of 'cosmopolitan' (rather than universal or objective) knowledge and the way circulation and mediators can transform local knowledge into cosmopolitan knowledge (Rip 1997).

This is an important point as it also speaks to recognition of multiplicity, implying that neither Western science nor indigenous knowledge is homogeneous. Renewed attention to complexities of the world also creates opportunities for new synergies between Western science and indigenous knowledge. Epistemic space is available for both to interact and evolve (Rip, 2001).

In some countries, specifically South Africa (SA) and New Zealand (NZ) there are new opportunities within the science policy arena and science funding agencies to create (other) space for indigenous knowledge: focus areas and other dedicated funding

programmes for research on indigenous knowledge and/or working from IK approaches. According to Rip (2001) political pressure in SA and political correctness (in NZ) forced attention on what used to be exclusively Western-science style organizations. Epistemic space must be created. Both countries have been explicit in creating a separate science-funding category for indigenous knowledge.

These decisions have resulted in the opening of a new interface for IK with science policy and a multiplicity of institutional and epistemic spaces, which now occur. The new science policy spaces enable such epistemological spaces, even if these are/will be structured in terms of the present system. Where there are combinations of, and struggles between, indigenous and so-called Western approaches in knowledge production, epistemological space is created (Rip, 2001). The institutional space will be influenced by developments in IK and interaction with Western Science, but will then introduce further dynamics, e.g. making IK research more credible. An important thread according to Rip will be to recognize its multiplicity. Creating space for IK will also create opportunities to reflect on and further develop Western Science.

2.4.2. Definitions as windows into debates on IK

Some definitions of indigenous knowledge and western science reflect particular criteria often used as markers for the opposite meanings ascribed to both. The definitions below also place the definitions in IK in direct contrast to scientific knowledge and provide evidence of the ascribed dichotomy:

'The term indigenous knowledge (IK) is used synonymously with 'traditional' and local knowledge to differentiate the knowledge developed by a community from the international knowledge system sometimes also called Western' system, generated through universities, government research centers and private industry. IK refers to the knowledge of indigenous peoples as well as any defined community'. (Warren, 1992)

'Indigenous knowledge is the knowledge that people in a given community have developed over time, and continue to develop. It is based on experience, often tested over centuries of use, adapted to local culture and environment, dynamic and changing.' UNESCO's Definition of Indigenous Knowledge

'Indigenous or local knowledge is knowledge that is unique to a given culture or society. It is seen to contrast with the knowledge generated within the international system of universities, research institutes and private firms. Indigenous knowledge is used at the local level by communities in developing countries as the basis for decision-making pertaining to food security, human and animal health, education, natural resource management, and other vital activities.' (Indigenous Knowledge and Development Monitor, http://www.nuffic.nl/ciran/ikdm/focus.html)

'Indigenous knowledge systems (IKS) refer to the complex set of knowledge and technologies existing and developed around specific conditions of populations and communities indigenous to a particular geographic area. IKS can also develop within communities descended from populations that inhabited the country at the time of conquest or colonization. These populations – irrespective of their legal status- retain some of, or their entire own social, economic, cultural and political institutions. In this case the focus area, indigenous knowledge (IK) refers to knowledge developed by these populations themselves, and knowledge developed through interaction with other populations in SA." (National Research Foundation, http://www.nrf.ac.za/focusareas/iks/)

The above definitions highlight the dichotomous relationship in the characterization of 'indigenous' as traditional, empirical, local, simple lay, practical, etc and western science as hierarchically opposite as university-generated knowledge (with self constructed and implicit notions of modern, theoretical, expert, international, etc.).

The World Bank (in support of the above notions) in its analysis summarises the specific nature of IK:

- Locally bound, indigenous to a specific area.
- Culture- and context-specific.
- Non-formal knowledge.
- Orally transmitted, and generally not documented.
- Dynamic and adaptive.
- Holistic in nature.
- Closely related to survival and subsistence for many people worldwide.

http://www.worldbank.org/afr/ik/what.htm

There is also something to say about the use of the singular 'knowledge' or 'science' (instead of knowledges and sciences), which may suggest a unity to dynamic and diverse knowledges. Some critical perspectives on knowledge (e.g. Agrawal, 1995; Odora Hoppers, 1999; Smith, 1999, as cited in Ravjee, 2002) have questioned the assumption that a fixed body of indigenous knowledge exists and suggest that knowledges can be neither be fixed nor static, but rather always 'in the making' (Turnbull, as cited in Ravjee, 2002) and therefore dynamic.

The earlier references to Indigenous Technologies in the South African context considers technology as an aspect of the broader definition of indigenous knowledge and attempts to position this 'technology aspect' in broader IKS:

> Technology is about skill or applied expertise whereas IKS is about social capital and knowledge. Productions consisting of characteristic elements of traditional artistic heritage developed and, maintained by a community in the country or by individuals reflecting the traditional artistic expectations of such a community'
> *Prolegomena to a Policy Framework on IKS (1998:7)*

Odora Hoppers and Makhale-Mahlangu (1998) in terms of this broader context of IKS defines IKS as a combination of knowledge systems:

'… the word *indigenous* refers to the root, something natural or innate (to). It is an integral part of culture. *Indigenous Knowledge Systems* refer to the combination of knowledge systems encompassing technology, social, economic and philosophical learning, or educational, legal and governance systems. It is knowledge relating to the technological, social, institutional, scientific and developmental, including those used in liberation struggles'.

According to Odora Hoppers, the idea of indigenous knowledge … is not just about woven baskets, handicrafts for tourists or traditional dances per se. Rather it is about

'excavating the technologies behind those practices and artifacts: the looms, textiles, jewellery and brass-work manufacture; exploiting indigenous knowledge in agriculture, fishing, forest resource exploitation, atmospheric and climatological knowledge and management techniques (Dah-Lokonon 1997), indigenous learning and knowledge transmission systems (Doussou 1997), architecture, medicine and pharmacology, and recasting the potentialities they represent in a context of a democratic, equitable participation for community, national and global development in real time'.

A cautionary note from Agrawal (1993), regarding the presumed distinction between indigenous and Western/scientific knowledge, is that he sees that this distinction can in itself present problems for those (in SA) who believe in the significance of IK for development. He refers to the rhetoric of development which has passed through several stages, and states that IK is seen as central in discussions on sustainable resource and balanced development. The focus on IK presents a shift away from considering mainstream technically oriented solutions to highlighting possible contributions of knowledges of the marginalized poor of the world. Revisiting IKS has its roots in the redress of the marginalization of most of the South African population in all aspects.

Continuing with Agrawal's view (1995:2), the classification of knowledge involves political choices often ignored in demarcation debates:

'It makes much more sense to talk about multiple domains and types of knowledge, with differing logics and epistemologies. It is something of a contradiction-though an unavoidable one-that the same knowledge can be classified one way or another, depending on the interests it serves, the purposes for which it is harnessed, or the manner in which it is generated.'

The above definitions suggest that the meanings of indigenous knowledge' and 'western knowledge' are not settled matters with stable meanings. Developing and interrogating definitions of IK in themselves may contribute to broader (often developmental) processes. When the concept 'indigenous technologies' was initially introduced in SA, it did not necessarily carry with it the connotations or expectations that (eventually) evolved during the period under review. As the process unfolded and IK issues received increasing prominence and attention, which included interrogating definitions and problematizing IK, the discussion around issues of IK were further enhanced.

Considering what strategies and processes contributed to South Africa locating the positioning of IK on its science policy agenda is now discussed further.

2.5. Examples of analyses

In terms of looking more closely at how events unfolded in SA, I consider here some aspects of the literature which provide supporting frameworks that may serve as analytical tools for my analysis. Because Serote played such a pivotal role, it is necessary to have some discussion on the entry point by and role of the moral entrepreneur and some consideration of the (defining) characteristics of a moral entrepreneur.

2.5.1. Characteristics of Moral Entrepreneurs as rule makers

Given the framework within which activities could be viewed, I introduce the notion of a "moral entrepreneur" as a heuristic notion in describing and understanding the role of Serote in the official history of IK in South Africa. It is therefore useful to have a closer look at why it is that moral entrepreneurs 'come about' and whether there are any characteristics that are unique for people who are defined as moral entrepreneurs.

Having discussed some background aspects of the political situation in SA, which provide a context to this study, there existed a real situation in the country where new laws needed to be made to redress (legally imposed) Apartheid- injustices of the past. Many rules were being made, but there were also many opportunities for enterprise within this newly opening rule-making 'terrain'. Becker (1963) states that rules are not made automatically. If something wrong needs to be corrected, it needs to be pointed out and people must feel that something ought to be done about it. It is necessary for someone to call the matter to the public's attention and to supply the required impetus to get things done. Energies need to be channeled in the required direction, to get a rule created – People who exhibit such enterprise are referred to as moral entrepreneurs..

A first characteristic of a moral entrepreneur is that s/he would want to put rules in place to make something right which in his/her opinion is wrong. With the typical strong humanitarian overtones of the crusading reformer (one type of moral entrepreneur), s/he would want to ensure that people are not exploited. Moral entrepreneurs 'want to help those beneath them to achieve a better status' (Becker, 1963) . Moral entrepreneurs generally work towards winning the main point/s and then leave the implementation and the detail to others. These support persons are often professionals who can draw up the appropriate rules in the appropriate form.

According to Becker (1963), when the moral entrepreneur is successful in the enterprise of getting a new rule established, s/he is 'out of a job'. The crusade which took up so much of her/ his time, energy and passion is no longer there.

The occupation becomes a pre-occupation and the entrepreneur becomes a 'professional discoverer of wrongs to be righted, of situations requiring new rules.   What was initially a moral issue becomes a full-time job for the moral entrepreneur. Because of the humanitarian motive, moral crusaders (despite their relatively single-minded devotion to their particular cause) often lend their support to other humanitarian crusades and will almost inevitably move on the next 'cause'.

In addition to the notion of the moral entrepreneur lending support to a crusade, this study also considers how it came about that IK was placed on the science policy agenda in SA as ' promising area of research' and how it came to occupy its current position. Given the nature and the content of indigenous knowledge, I also consider the developments of Indigenous Knowledge within the context of the study by Van Lente and Rip (1998). This study provides a context within which to position IK in the category of strategic science and then looks at the possible agenda setting activities of the actors involved.

2.5.2. *Strategic science and agenda setting*

The process of placing an item on the policy agenda in the South African scenario can be guided by previous literature on agenda setting and strategic science. Through a case study on membrane technology as a scientific-technological field and as newly-emerging 'world' of membranes, Van Lente and Rip (1998) attempt to show how such policy labels and rhetorical claims are filled up and new social realities are created. A shared agenda is built up at the same time as the future technology. They argue further that there are a number of cases where scientific-technological fields have emerged and that these are related to the general phenomenon of science and technology becoming strategic.

Considering the case study, Van Lente and Rip refer to the dynamics of strategic science and technology, resource mobilization strategies and how these interlock and the gradual emergence of social realities (structured by earlier rhetorics) are traced. John Irvine and Ben Martin (Van Lente and Rip, 1998) define the special category, 'strategic research' used in science policy to accommodate new interest:

'basic research carried out with the expectation that it will produce a broad base of knowledge likely to form the background to the solution of recognized current or future practical problems'.

By the 1980s it was accepted in policy circles as a new category of science located between the traditional categories of 'fundamental' and 'applied' science. Expectations of potential - promises- are what count rather than actually achieved understanding or immediate application. In this way the rise of strategic science as a policy and funding category has created a 'rhetorical space' in which promises can be floated; generally to whomever will listen and specifically directed towards sponsors of R&D who have an interest in promising areas of science.

The emerging social reality of membrane technology is constituted by three interrelated processes: (transforming rhetorics to social reality):

1. What happens is that actors take up positions and make linkages. One effect is that nodes are created, which introduce irreversibilities into the process.
2. Mutual positioning of actors create dependencies which do not rely on any direct linkages especially through the articulation of a more-or-less shared agenda for the membrane world
3. How strategic information is inferred from the positions expressed, or taken up in ways, by actors, and how reputation building allows further co-ordination.

In parallel with the rhetorical strategies in relation to a promising area of research, actors move into position, create linkages and define a new activity for themselves and for others. The key question to focus on empirically is how heterogeneous actors start to interact and become mutually dependent, in the same movement as the rhetorical entity 'e.g. membrane technology' or in this case 'IK', becomes a social reality. The aim is to show how rhetorical claims are filled up and new social realities and structures are created.

2.5.3. *Moral Entrepreneurship and agenda setting*

Parallels in the literature also exist in Rettig's Cancer Crusade, in which the National Cancer Act of 1971 was seen as a political event of intrinsic significance. This story may be of particular interest in this discussion as it considers how a small but powerful elite composed of private citizens mobilized sufficient resources to secure the passage of legislation opposed by National Institutes of Health and most of the biomedical scientific community. It thus provides some entry points for discussion and analysis. To frame the unfolding history in the South African context, the discussion will consider the antecedents of the legislation and the general agenda-setting activities that brought cancer to a position of prominence as well as a perspective on developments in the legislative history.

One could liken the placing of IKS on the science policy agenda in SA to the discussion by Rettig (1977), which places the National Cancer Act in a framework of agenda setting

and policy formulation. He maintains that there is a logic that places nearly as much emphasis on the origins of a piece of legislation as on the legislative history itself and likens the latter to a dramatic production and the agenda setting to all that happens prior to the opening night.

Rettig on agenda setting distinguishes between the public agenda and the formal agenda of government. The public agenda includes issues that have achieved a high level of public interest and visibility, that require government action in the view of a sizeable proportion of the public and are the appropriate concerns of the government (similar to IKS) . The formal agenda of government refers to issues or demands that are being given serious consideration by government. Cancer and IKS have been on the public agenda for a long time, yet there was a special need for the initiative (IKS) when this did arise.

According to Jones (Rettig, 1977), the agenda of government is not set by new problems emerging in a state of nature. The issues that are acted upon by government are usually as a result of continuing application and evaluation of policies within the system. Agenda-building or agenda-setting has been defined in Rettig as the 'process by which the demands of various groups in the population are translated into items vying for the serious attention of public officials'.

There are three key questions that could serve as a broad framework for discussion and which will be applied in the historical chapter:
1. What were the sources of concern or motivation that led to the effort of government's reformulation/introduction of the policy?
2. What processes led to the advancing of government policy to a stage of new legislation?
3. How did the prelegislation stage of activity determine the outcome of legislative/policy history?

The strong case by Rettig (with Lasker as moral entrepreneur) assists in providing a framework and perspective on the activity of Serote in SA. Rettig (1977) presents Mary

Lasker as Moral Entrepreneur and states that neither the Senate panel of Consultants nor its report was the product of chance and that they owed more to Lasker than to any other individual. She was present with every step of its work, and active at each subsequent legislative juncture. The skilful enlistment of a number of her influential associates and friends and her mobilization of a remarkable political coalition was central to the development of the legislation. The progress and achievement serve as reflections of her substantial investment of time, energy and political craftsmanship by these 'benevolent plotters'

The attributes relating to Lasker's access to substantial personal resources, i.e. money, time, commitment, organizational resource (Albert and Mary Lasker Foundation), her position in the American Cancer Society, the capacity to confer status onto others to further her ends, constitute a significant point as there are opportunities to draw parallels later. The skilled manner in which she used these resources in a focused manner is another aspect which can be used as point for reflection. Her own resources were additionally augmented through access to political leadership, the press and broadcast media. Using Rettig's framework of Lasker's role in the Cancer initiative provides an entry point within which to frame IK activities in SA.

2.6. Conclusion

To summarise, I have considered some key and particular debates related to this historical reconstruction. Because the research is so vast and diverse, the work is fairly simplified in an effort to reduce the inherent complexity. As an opening, I presented a context for the birth of IK as policy item in SA and positioned this alongside what was happening internationally. As a further exercise, I considered the contested definitions as openings into the world of IK and a discussion of the frameworks that would be used later to position, organize and analyse the empirical content.

Chapter 3

A brief history of developments in IK in South Africa: 1994-2002

3.1 IKS in a newly constituted society

This chapter is essentially a historical reconstruction and focuses on tracking process, policy and legislative developments in Indigenous Knowledge (IK) as they unfolded in national Parliament in South Africa (SA) since the inception of a democratic government in 1994. For purposes of this study and to support the chapter outlining the unfolding story of the 'moral entrepreneurial' process, the time frame is fixed from 1994-2002. The findings are based on the examination of diverse sources available, namely Parliamentary documents, legislative hearings, National Assembly inputs and reports, official Science Council and Departmental reports, as well as meeting minutes, interviews and other documents that are referred to by Warren et al (in Ravjee 2002) as 'fugitive' and 'non-conventional literatures'.

It is widely understood that IKS could not have received any serious positive recognition and consideration within the context of a minority government in Apartheid[1] SA prior to 1994. The Department of Science and Technology (DST) takes up this view noting that 'under apartheid, Indigenous Knowledge Systems (IKS) in SA, as well as practitioners within such systems, were marginalized, suppressed and subjected to ridicule (DST 2003). The document further argues that this marginalization has had 'profoundly negative effects on the development of South Africa's economy and society, resulting in the distortion of the social, cultural and economic development of the vast majority of its people'. It suggests that two conditions have influenced IK recognition. The first is peculiar to South Africa's political history as referred to briefly above and the second is due to accelerating developments in globalisation and the consequent effects on all IKS.

---

[1] The system of segregation or discrimination on grounds of race in SA from 1948-1994.

With the advent of a new political order the opportunity arose for a structured resurgence in areas of IK. The new African National Congress (ANC)-led democracy promised rights for all members of South African society and was intent on addressing imbalances of the past through reconciliation and creating a just and equal society through the new Constitution, Act 108 of 1996. Since IK forms part of the lives of the majority of South Africans, redress to alleviate the 'distortion' referred to earlier would require consideration and review of several views and aspects of IK.

Though not articulated as such in the beginning, the tone inherent in the IK debate is set within a spirit of reconciliation and redress of past injustices. Within this context, former president Nelson Mandela in his first opening speech in Parliament, referred to a 'healing' nation which 'can neither heal nor build, if such healing and building are perceived as one-way processes, with the victims of past injustices forgiving and the beneficiaries merely content in gratitude. Together we must set out to correct the defects of the past (Mandela 1996)'. He further reminded South Africans of the many differences and prejudices and that during the reconciling process 'the collision of cultures does not necessarily lead to subjugation and hegemony. It may also lead to subtle cross-pollination of ideas, words, customs, art forms, culinary and religious practices (…) Embodied in this interaction is the role of technology: access to technology; its transfer; and artistic expression through technology. These too are dynamic'. In referring to these dynamic processes, he forecasted the challenges to come – the re-introduction of African culture in a previously legally divided society, the inevitable 'collisions' as society redresses past imbalances and the possibility of new spaces that could come from 'cross pollination'. President Mandela reminded South Africans that the possibilities for technological innovation and looking forward to the future are now realities that do exist.

What is unique then about SA, is that the emergence of the IKS concept and subsequent evolution of IKS as a 'public priority' issue unfolded against a backdrop of the founding provisions of the Constitution. New policies were being introduced based on the values of human dignity, the achievement of equality and the advancement of human rights and freedoms in SA. The context presents itself as the 'turning of tides', where there is a shift

in governance and power from a previously advantaged (White) to a previously disadvantaged (Black) group broadly representative of the majority of South African people. Prioritising IK was thus important as it was seen to be contributing to addressing imbalances and injustices whilst simultaneously considering the movements and challenges posed by globalisation.

Different to other parts of the world where developments in IKS may have been ongoing, yet situated (mainly) within marginalized groups, the opportunity to bring IKS and related developmental issues to centre stage in SA became a priority supported by the majority of South Africa's population[2]. There were thus opportunities in the new government for resourcing the process and taking the debate forward. The focus (and rather tall order!) was on equitable development, access for all to resources, wealth and development and an attempt at bringing people who were systematically marginalized to the mainstream of the economy. It was also at around this time that IKS was receiving increasing global prominence. These initiatives also emerged at a time when similar international developments were occurring, namely, the UNESCO World Decade for Cultural Development, (which ended in 1997), and the World Decade for Indigenous People, which began in 1995. Opportunities abounded to explore the possibilities.

These opportunities were exciting and relevant yet not without challenges, as change in the country was taking place at a rapid pace. Infrastructure requirements, resource constraints, restrictive legislation, new priorities and reclaiming space to discover a new identity added to the challenges and real complexity inherent in concurrent , but perhaps unforeseen developments of IK.

---

[2] Approximately 70% of South Africans are African.

3.2 Mapping IKS

Along with other processes of the time and the general tone of development initiatives in South Africa, the overall effect of developments in IK during this period may contribute to a political event of intrinsic significance. This, because it allowed for increased understanding of the issues of redress related to IK and the corresponding legislative challenges that accompanied this process. It was also a means to consider the learnings out of the process and apply it to relevant legislation passed during this period. The process also impacted on the broader R&D system in SA as it had implications for revised programme structure/s and resource allocation. In political terms the IK story is of interest because it shows how a small group (with some powerful people) could mobilize resources to assist in the conceptualization and facilitation of a policy process.

Before 1996, Indigenous Knowledge (IK) did not feature anywhere on the science policy agenda in South Africa (SA). Currently, IK as concept is present on the policy, research and implementation programmes nationally (Department of Science and Technology and Science Councils). It is also being positioned regionally (South African Chapter of the African Renaissance (SACAR)) and continentally (New Economic Plan for Africa's Development (NEPAD)). The emergence of IK can be related to the general phenomenon of Science and Technology (S&T) becoming strategic in the sense that it was positioned as a strategic resource for potential economic growth, the object of a strategic policy making process – one that moved through the system with some key players in the South African National System of Innovation (NSI). It would also provide, according to Irvine and Martin's definition of 'strategic science' (as cited in Van Lente and Rip, 1998), a 'knowledge base that would form the background to the solution of recognized current or future problems' in SA.

The development of the story for the period under review has been divided into three main parts using Rettig's framework (1977): The first is a focus on antecedents to the discussion of IK as a 'knowledge' that required legitimacy[3] in post-Apartheid South

---

[3] Here meaning relevance and pride

Africa and the initiative that kick-started the process; the second refers to a period of intense engagement, organization and the unfolding of the legislative history of the Bill/s themselves. Since there is no IK legislation in place yet, the third looks at the implementation of the policy decisions within the science system of the time. The story, though predominantly a historical reconstruction, is an attempt to place the IK story in a framework of agenda setting and policy formulation. The detail of the story is also the beginnings of placing the available detail in a larger context of policy progress.

The three parts of the story are outlined in the summary below and provides an 'at a glance' periodization:

- **GENESIS … 1994 to late 1996**

This was a period dedicated to addressing imbalances of the past through the new constitution and policy, establishing new partnerships and working relationships with Science Councils, Higher Education Institutions and other stakeholders in the National System of Innovation (NSI). Ongoing discussions and debate amongst African intellectuals and support by the Council for Scientific and Industrial Research (CSIR) gave rise to the articulation of the Pilot Programme entitled the *Audit of Indigenous Technologies* in the Northern Province. This pilot was to form the basis of the IKS Programme.

- **AWARENESS CREATION AND ENGAGEMENT … 1997 to 1998**

This period was marked by IK orientation and organisation throughout Parliament and government (where applicable) with the PC ACST and its entrepreneurial chairperson as the leader in the movement. The pilot audit expanded to a national audit of indigenous technologies and there was intense engagement with national players. An effort was made to engage the press and a study tour of the provinces was planned. Fundraising and other resource requirements became paramount priorities and broader awareness and involvement of Members of Parliament (MP's) were encouraged. Concerted effort was made to engage 'traditional leaders'. *Indigenous Technology* as concept became *Indigenous Knowledge Systems* and a national workshop and regional conference on IKS took place. Policy and legislation were drafted. IKS was now positioned within the African Renaissance programme.

> - **PROGRAMMES AND IMPLEMENTATION … 1999 to 2002**
>
> A slow start during an election year spurred on intensive Portfolio Committee follow-up and oversight of developments in IKS within the NSI in 2000. The need to implement and engage with implementation challenges and resource constraints were acknowledged. Some Science Councils and government departments included IKS in their programmes and plans. There was further concentration and engagement with policy setting and draft legislation. IKS was positioned within the South African Chapter of the African Renaissance as a significant contribution to the operational aspects of the African Renaissance. DST established a Directorate of IKS and positions the programme within the Executive Portfolio of Technology for Development.

What is apparent is that there was a composite vision supporting the notions underpinning 'development in IK' in SA. The plan was fluid and connections were made and then branched out as the learning process unfolded. As more participants came on board, international perspectives were shared and the programme expanded, the larger too the complexities and challenges became. Though complexities cannot be underestimated, the IKS as item on the science policy agenda appeared to have been "institutionalized" by 2002.

The literature on agenda-setting (Rettig, 1977) distinguishes between the public and formal agenda of government. The public agenda includes issues that have achieved a high level of public interest and visibility that require government action in the view of a sizable proportion of the public. The formal agenda in comparison includes those issues or demands that are under active and serious consideration by government. In line with this definition, it could be viewed that, in SA which is a country predominantly inhabited by African Black people, IK had been a subject that had a high level of public interest[4] and was part of the public agenda just as cancer was part of the public agenda in the USA since the early part of the twentieth century.

---

[4] DST (2003): "Under apartheid, IKS in SA as well as practitioners were marginalized, suppressed and subjected to ridicule. This had profoundly negative effects on the development of South Africa's economy and society, resulting in the distortion of the social, cultural and economic development of the vast majority of its people'. *Key Drivers of a South African IK Policy*

3.3 Reconstructing IK developments in SA

Since IK may have been on the public agenda, the question then arises why the need for the initiative and the (re)formulation of the new policy? Articulating answers to the above question (in the Rettig 'cancer' framework) gives rise to articulating answers to three further questions:

- What were the sources of concern, the motivations, which led to the effort to formulate government's policy towards IK?
- What were the processes by which this desire for policy advanced the issue of government policy towards IK to its state in 2002?
- How did the prelegislative stage of activity determine the outcome of the legislative history of the IK legislative process?

The articulation of these answers attempts to provide some structure and framework for the chapter.

- **What were the sources of concern, the motivations, which led to the effort to formulate government's policy towards IK?**

It appears from available documents during this time, that IKS (per se) as a 'concept/political domain/issue' in Parliament or government documents, had not received specific attention before 1996. The concept of redress incorporating the broad understanding, development and harnessing of IKS at this stage focused on more 'urgent' Rreconstruction and Development programme (RDP) based delivery matters, e.g. clean running water and energy provision, education and welfare.

I will be considering the evolvement of IK as concept in Parliament by referring to relevant extracts in policy and other documents. One of the central players present and

active through all aspects of the development of IK during this period was Dr Mongane Wally Serote[5], Chairperson of Parliament's Portfolio Committee on Arts, Culture, Language, Science and Technology (PC ACST) and regarded widely in SA as the Father of IKS.

3.3.1   Genesis… 1994 - late 1996

This was a period dedicated to addressing imbalances of the past through the new constitution and policy, establishing new partnerships and working relationships with Science Councils, Higher Education Institutions and other stakeholders in the National System of Innovation (NSI). Ongoing discussions and debate amongst African intellectuals and support by the Council for Scientific and Industrial Research (CSIR) gave rise to the articulation of the Pilot Programme entitled the *Audit of Indigenous Technologies* in the Limpopo Province. This pilot was to form the basis of the IKS Programme.

This was the time of the new Constitution of SA. A time where South Africans were reclaiming their new identities and rights within the country's borders as well as learning to better understand their position within a global context. In international developments referred to in more detail in chapter 2, this period was also a time when development organizations (e.g. UNESCO, World Bank) started to use the 'value' of IK to improve the lives of the poor[6] and to redress issues of equity and freedom.

This period is summarized by considering inferences to or mention made of IK (or Indigenous Technologies as it was called then), in the Constitution and other relevant policy documents. It subsequently considers the involvement and interactions of key players as IK as issue emerged and leading up to the Audit of Indigenous Technologies, an event that was to form the basis of the "IKS movement" in SA.

---

[5] NRF's People's Science Voice, Vol 1 (3), p3
[6] http://www.worldbank.org/afr/ik/ikrept.pdf

A. IKS emerging as an issue in Parliament

IK, though not explicit, appears to be embedded throughout the constitution and in the language and context of new South African policies and legislation. Though a large number of policy documents were developed during this time, I have taken a snapshot of some relevant examples from the Constitution and appropriate White Papers to outline the general trend and nature of the 'rhetoric' of the time and consider some international developments. The examples also show how this 'notion of IK' in policy documents makes references to the cultural and development aspects of IK.

(a)   Constitution

Indirect references to IK through incorporating the diverse heritage of South African culture is consistent throughout the Constitution of SA (1996) as quoted in the textbox below. A pronouncement is made of the 11 official languages, most of which along with its people had not been afforded proper and appropriate status in the previous dispensation. Another reference to IK, though indirect is the chapter dedicated to Traditional Leaders and the establishment of the Commission for Promotion and Protection of the Rights of Cultural, Religious and Linguistic Communities[7]; Re-establishing and legitimizing a new South African identity, implies that several aspects of IK are underpinned by the general tone of the Bill of Rights in Chapter 2.

---

[7] Constitution of RSA (1996), p 99 1c - State institutions supporting constitutional democracy in the Republic

(b) White Paper on Arts, Culture and Heritage

Reference is made to a new vision that adheres to global declarations in the White Paper on Arts, Culture and Heritage (1996, 19), viz, Article 27 of the Universal Declaration of Human Rights where 'everyone shall have the right to freely participate in the cultural life of the community (and) to enjoy arts'. Also in this White Paper, Deputy Minister Bridgitte Mabandla states that 'We believe that Indigenous SA art forms can and will reach a standard of excellence, and if anything, can set new and even higher standards of excellence because they grow out of the diversity which characterizes our vibrant cultural inheritance'. She comments further that, 'Like technology, culture is all-pervasive (and

that) indeed, the failure of many technology transfer initiatives arises precisely because insufficient care has been taken to understand the cultural dimensions of what seemed merely to be technical'.

A more direct inference to indigenous people is made under the Chapter on International Cultural co-operation. It is stated that particular attention will be given to liaison with other Southern African countries 'to share knowledge, training and facilities for a regional network on information on indigenous African customs and beliefs. These initiatives will link with the UNESCO World Decade for Cultural Development that ends in 1997 and the World Decade for Indigenous People, which began in 1995. It appears that this reference supports the location of IKS within the African Renaissance arena as will be discussed in more detail later.

(c) White Paper on Science and Technology

In the White Paper on Science and Technology (1996), the RDP White Paper, November 1994 is cited as presenting a SA which has 'begun for the first time in its history, to undertake the task of the equitable development of the life opportunities of all its citizens (…) (and) a unique opportunity at this time to transform the means and the methods through which its social goals are to be achieved. This is sketched against the dominant trends and developments of our time and the major challenge facing SA which is 'to integrate successfully into global systems and communities while addressing the local needs of South Africans'.

No specific mention is made of IKS or its link to innovation in the Department of Arts, Culture, Science and Technology's (DACST) White Paper on Science and Technology. DACST, though, has as its mission to 'realise the full potential of ACST, in social and economic development, in nurturing creativity and innovation, and promoting the diverse heritage of our nation.'

(d) IK and other priority issues

Although ongoing redress-focussed on discussions around equity, cultural and other issues must have occurred, it appeared that the development of IKS debates (per se) had not received specific attention. The development of IKS, though not named or articulated as such at this time, would be positioned to contribute to the development of the economy, the quality of life and the human resources of South Africa[8]. The White Papers set the stage for the discussions that were to lead to a first 'pilot in Indigenous technology'. Concurrently, debates were beginning to pick up internationally.

(e) International developments in SA with focus on the UN

Parallel to these processes, the United Nations (UN)[9] refers to their learning and engagement on the issue of the protection of the right of indigenous peoples. The Working Group on Indigenous Populations (WGIP) was established in 1982 as the forum through which indigenous issues were to be addressed. Only relatively recently (for SA) have indigenous peoples participated at major conferences, such as the UN Conference on Environment and Development (Earth Summit), held in Rio de Janeiro in 1992 and the 1996 Social Summit.

The UN proclaimed[10] 1993 as the International Year for the World's Indigenous Peoples and in 1994 the UN General Assembly launched the International Decade of the World's Indigenous Peoples (1995-2004) to increase the UN's commitment to promoting and protecting the rights of indigenous peoples worldwide. The theme for the decade 'Indigenous People: Partnership in Action' has as its main objective the strengthening of international cooperation for the solutions faced by indigenous people in such areas as human rights, the environment, education and health. The International Decade has

---

[8] Also given priority at this time within government sectors were 'Working towards environmental sustainability', the 'Promotion of an Information Society' and the importance of a 'need to recognize the importance of the knowledge-generating function of research, particularly in the Higher Education sector'.
[9] Leaflet on Indigenous Issues (UN)
[10] UN General Assembly Resolution 48/163 of 21 December 1993

brought with it other advances such as the establishment of the Permanent Forum on Indigenous Issues.

At the time of UN's Earth Summit, the African National Congress (ANC) was involved with ongoing negotiations with the government of the time regarding the transition to a democracy. One could argue that whilst these UN developments were happening, SA was dealing with more serious in-house matters[11]. These developments though served as important reference points and presented an opportunity for SA to engage more broadly in the issues facing IK globally and on the continent.

B. Serote considers transformation issues in Science and positions IK within PC ACST initiatives during 1996

- **What were the processes by which this desire for policy advanced the issue of government policy towards IK to its state in 2002?**

By 1996 most policy documents had been finalized. The White Paper on Arts, Culture and Heritage and the White Paper on Science and Technology were published in September of that year. These policy documents were useful entry points for Dr Mongane Wally Serote, Chairperson of the Portfolio Committee on Arts, Culture, Science and Technology (PC ACST) to engage with the Heads of Science Councils on issues pertinent to South Africa's transformation. In the PC ACST's Committee plan (1996) reference is made to the establishment of a research office (to focus inter alia on Science and Technology matters) and to contribute to the positive transformation of Science and Technology in SA. Prior to and up to this time, no specific mention had been made of IK in the proceedings of the PC ACST.

---

[11] Mandela, de Klerk and representatives from 18 other parties agree on an interim constitution that paves the way for historic all-race elections. All citizens over 18 are allowed to vote, and a long list of social and political rights are guaranteed. Mandela and de Klerk are awarded the Nobel Peace Prize. http://www.raceandhistory.com/historicalviews/southafricatimeline.htm

Policy documents though finalized, may not necessarily have brought forth all the answers for the many questions that were arising and still required debate and solutions. In pursuing and developing new relationships in the November 1996 meeting with the Science Councils (SC)[12] as part of his oversight and accountability work, Serote was engaging with Science Council presidents regarding the broad issues of redress and transformation within their institutions. He was keen to discuss particular key issues to ensure that partners understood their role in change and how to nurture a consciousness and culture of science and technology (S&T) in SA, especially within disadvantaged communities and the acceptance and integration of the demographic transformation of SC.

The focus of the discussions centred around future actions (seeking answers to some of the questions of national priority) and plans by Science Councils[13] on issues of support and transformation in National Human Resource Development (NHRD) in Science, Engineering and Technology (SET) and how SC were going to integrate Public Education (and understanding) and Awareness about Science, Engineering and Technology (PEASET) into their activities in preparation for 1998 which was proposed by the PC as the Year of S&T[14].

In Serote's IKS Review (2001), he also refers to a meeting he participated in during November 1996 with African intellectuals at the University in Venda. Discussions included the forthcoming Public Awareness of Science and Technology programmes and the process which was to be unrolled so that an S&T consciousness could be nurtured within marginalised and disadvantaged communities. Aware of the negative impact that Apartheid education had had on the development in S&T capabilities amongst Black

---

[12] Serote in a letter to Garrett, dated 25 March 1997, comments on the achievements of the Science Councils, viz Council for Scientific and Industrial Research (CSIR), Human Sciences Research Council (HSRC) and Foundation for Research and Development (FRD) and their thorough thought on transformation

[13] Serote was looking into Science Council contributions in 1) meeting basic needs, 2) developing human resources, 3) developing the economy, 4) democratizing the state

[14] The concept of the Year of Science and Technology formed part of the discussion of the PC's five-year mandate for the transformation and its contribution to the democratization of the nation as mentioned in SciFlash, a newsletter informing MP's of happenings in S&T, Sept 1997

South Africans, they considered the definition in plain language of S&T as "organized knowledge, which is systematically used to evolve new knowledge which will be utilized to create a quality of human and other life and make the world livable'. Taking this definition into account in an 'interesting' way, Serote asked 'whether it was possible that the vast majority of South Africans who are indigenous to the country lived for generations and centuries without engaging the process implied by the definition (Serote 2001, 1) and escaped this (science) process?' This was a (nother) question Serote took seriously and could be viewed as the entry point for questions regarding epistemology, knowledge spaces, hierarchies and power dynamics.

A similar discussion had echoed in the Portfolio Committee (PC). The Committee grappling with this process of change management (as new Members of Parliament) was defining key concepts to enhance their understanding regarding matters in their portfolio. Using the same definition that was used in Venda and clearly steered by Serote's interest in understanding what was happening in the country and where people were, the PC ACST posed another question: Is it possible then, taking the above definition into consideration, that Africans in South Africa, who are indigenous to the country lived for generations and centuries without engaging the processes implied by the definition? (Serote, September 2001)

A keen interest developed to discover 'what was there' as these technologies provided the promise of contributing to improving the quality of lives of marginalized people. It was agreed at this meeting that the Portfolio Committee would spearhead a process to provide answers to this question. This idea sowed the seed for the identification of the 'Indigenous Technologies project'.

Soliciting CSIR Support
In the first of a number of written responses to Serote by Dr Geoff Garrett, president of the Council for Scientific and Industrial Research (CSIR) in December 1996, Garrett comments on Serote's positive approach to 'finding and developing a new relationship with the CSIR and its sister science councils with Parliament'. During this time of

transformation, science council presidents, all white males were responding (and may have felt a bit of pressure) to processes of 'politically-correct' change. It was also the rhetoric of the time to be 'doing the right thing' and assisting ' by playing your role' in the transformation process.

In keeping with the support role, the CSIR had at this stage established a parliamentary office and in addition to assisting with 'Information and Research Support' in Parliament, was also providing assistance with processes for the Year of Science and Technology (1998), PEASET issues, teacher visits to CSIR and co-ordinating activities with other Science Councils[15]

Pilot on Indigenous Technologies

Serote had managed to engage Garrett in all manner of things related to Science and Technology and was in a position to use the resources of the Science Councils as a stepping stone to effect the kind of 'political and transformation 'movement' he intended. The reference made to indigenous knowledge appeared in Garrett's letter to Serote (December 1996) where he refers to interactions at the University of Venda, including people from the University of the North and that there had been a successful launch of the 'indigenous technology programme' involving 49 students. This programme had formed part of the CSIR's support role in assisting with University linkages/alliances. The primary objective of the programme at this stage was to identify technologies and establish economic and social impact of these technologies and to advance them into enterprises and industries for the benefit of the communities from whence they came[16].

It appears from available material that the concept 'indigenous' within this context was 'newly born' and the debates and evolving policy framework that were to follow were in their infancy and not yet clearly articulated. From what is there, it could be viewed as the manifestation of the symbolism of the 'bringing together' of the concepts of transformation for South African people and their heritage ('indigenous') and the

---

[15] Personal Communication, 20 December 1996
[16] Audit of Indigenous Technologies in SA, 23rd October 1997

country's developed knowledge infrastructure and its heritage ('technology' – as part of the S&T system). It could also be perceived as the entry point of IK into the Science System and vice versa.

Deliwe (1998) subsequently referred to 'indigenous technologies' as 'skill or applied expertise' and IKS as being about social 'capital and knowledge'. The NRF (March 2000) defined Indigenous Technologies as 'the use of knowledge and or tools in the manipulation or control of the environment in the form of products, processes, artifacts, cultural systems and laws that enable society to survive'. The definition incorporates Deliwe's articulation as being 'about skill or applied expertise (…) applied knowledge in the management of the biosphere. It is innovative and entails the fashioning and the utilization of tools and it results in economic activity.'

This research project was initiated jointly by the PC on ACST and the CSIR[17]. Ongoing discussions gave rise to 'a relationship developing between CSIR and the University of the North through Professor Phuti Ngoepi. Ngoepi was asked to find a champion to assist in a pilot study in the Northern Province from December 1996 to January 1997. A meeting was subsequently held at the University of Venda at which the audit was discussed (Paterson, 1998). The objective of this pilot study was to identify indigenous technologies in the different communities in SA and compile a record of these. Though the CSIR had at this stage taken a (organizational) lead in facilitating the research project, the PC was still remaining at the helm and had taken the decision to 'promote this project nationally'[18]. At this stage already concerns were expressed regarding protecting the rights of communities' intellectual property and the PC's legal advisor was instructed to consider the necessary legal steps in this regard.

It appears that developing a strategic relationship with the CSIR was key to getting the programme off the ground as the PC did not have the funds or the mandate to implement

---

[17] Press Statement issued by Serote , 7th April 1997; in this statement, it is emphasized that the CSIR was asked to institute the research into indigenous technologies by PC ACST
[18] Press Statement issues by Serote , 7th April 1997

programmes themselves. The support of the CSIR was thus crucial as a funding and implementation partner at this early stage.

Since Serote understood that cultural protocols existed and were applied in rural villages, he ensured that these were observed. Students were identified and trained in three aspects, viz, village protocol, identification of an Indigenous Technology and methods of recording information on the Technology. Observers from the University of Venda also attended the 2-day training programme. The pilot survey conducted by teams of students from different disciplines from the University of the North took place during December 1996 and January 1997[19]. It was noted that the approach from the beginning was informed by an intense pragmatism and a commitment to finding economic and social benefits in the technological resources of communities rather than adopting an analytical sociological or anthropological approach' (Paterson, 1998).

The rationale of the Indigenous Technology (IT) pilot is summarized from Paterson (1998) as follows:

- It has a 'critical role to play in the redress of the alienation of the vast majority of South Africans from effective engagement in S&T'.
- The need to address self-understanding of individuals, communities and institutions with respect to S&T. One of the lasting legacies of apartheid is the alienation of most South Africans from S&T as enabling resources for development
- Proceeding from the assumption that all people are technologists and thus have the means to solve their technological problems. 'Communities are authentic sites of long-term sustainable innovation'
- IT Audit is a key process for 'making connections and engaging in a meaningful discourse of mutual respect that promises an enhanced rate of innovation for the nation as a whole

---

[19]Statement issued by Wally Serote of the PC, Indigenous Technology – Press Release, 24 March 1997

- Valuing IKS strengthens and gives content to our National System of Innovation (NSI) and in no way reduces the importance of globally linked elements

As the process developed, it became necessary to contextualize these developments and learnings (and their relevance) within current policy developments – these are outlined below (Paterson, 1998):

- Protection of Intellectual Property, as vested in the IKS of communities who participate in audits
- Linkage of the indigenous technology audit to YEAST, as conceptualised by PC ACST
- More effective link between IKS and SA's National System of Innovation (NSI)[20], eg potential for increased relevance of research at Historically Disadvantaged Institutions (HDI's) and international collaboration with respect to these systems

At this stage of the process, it appears that IK formed a part of broader issues of redress, collaboration and PEASET process to support research:

> There is no doubt that the auditing, assessment and more effective use of indigenous technology by communities in partnership with the research and technology infrastructure of the country has a critical role to play in the redress of the alienation of the vast majority of South Africans from effective engagement in science and technology.
>
> *Paterson, A (1997) Executive Summary: Indigenous Technology*

---

[20] 'Key role of the NSI is to devise more direct ways to improve the quality of life of ordinary citizens (….) to use SET to empower those who have been marginalized and to entrench this goal in its structure and functions', Ch 10, White Paper on S&T, Preparing for the 21st Century

3.3.2 Awareness Creation and Engagement ...1997- 1998

> This intense period of engagement with IKS issues was marked by the increase in availability of financial and human resources, expansion of the IT audit, the promise of blockbuster technologies, setting up of structures, drafting policy and legislation (NACI Act) and engagement with press

1997

The processes or key activities that occurred during 1997 are grouped into five sections, namely, the roll-out of the audit of Indigenous Technologies, the expanded thinking during the audit (which included a mission, vision and objectives), the structures that were established, the first steps in formulating legislation and other initiatives by Serote which integrate and 'pull things together'. Together they present some perspective on intensity of activity taking place during 1997.

A. Roll-out of the Audit of Indigenous Technologies in SA

In the press release of March 1997, an announcement was made of the success of the Audit of IT pilot and the PC's decision to promote this project nationally[21]. The concern regarding the rights of the communities to 'own their technologies' necessitated that parliament protected these rights through legislation. The committee was convinced that the 'technologies developed by the people on the ground could be researched and developed for the benefit of the whole country'. The PC welcomed Cabinet's decision to make 1998 the Year of Science and Technology, but wanted to ensure that traditional technologies form an integral part of the PC's programme.

> 'Fascinating evidence about the use of Indigenous Technologies in the Northern Province was given this morning in Parliament to the Portfolio Committee on Arts, Culture, Science and Technology by the CSIR.

---

[21] Statement issued by Wally Serote of the PC, Indigenous Technology – Press Release, 24 March 1997

As a result of the pilot survey (…) the PC took a number of decisions to promote the project nationally. Concern was expressed about the rights of the communities to their own technologies… It was resolved that the use of traditional technologies should be an integral part of the (Year of Science and Technology) year programme…. The Committee is convinced that with a careful and co-operative approach, under the oversight and protection of Parliament, the technologies developed by people on the ground can be researched and developed for the benefit of the whole country'.

Press Statement by Serote, 7 April 1997

The survey and presentation of results of the indigenous technology audit were presented at the University of the North in February 1997. The pilot project exceeded the expectations of organizers and provided a good platform for more extensive programme design and further developments[22]. It was decided not only to proceed with the research but also to give the programme national scope. At the workshop an indication was given of the variety of Indigenous Technologies that were found in the Northern Province and in some areas in the Mpumalanga Province.

By February 1997, the dominant thinking was that, in addition to redressing issues of inequality, indigenous technologies identified in the Pilot could be a source of economic growth. The context presented by a University of the North (UNIN) academic[23] who participated in the process was that 'the Indigenous Technologies enable indigenous to be translated into modern concepts and modern concepts translated into indigenous ones. Once both 'understand' each other, a dialogue towards development and optimization of technologies to establish internationally competitive production processes for products and services for the global market, can be initiated'. The long-term objective was seen as

---

[22] Paterson (1998), Executive Summary: The objective of the audit was 'To identify technologies and establish economic and social impact of these technologies, also advance them into enterprises and industries for the benefit of the communities from whence they came'

[23] Fax from Prof Elisabeth Goyvearts, UNIN, 21 October 1997

'activating/enhancing the rural potential so that rural communities became contributors to the SA economy in the 21ˢᵗ Century[24].

The result of the pilot project confirmed, at a workshop held at the University of the North, that each Indigenous technology carried a context with it emanating from culture, tradition, customs, knowledge, expertise, history and language. Serote was at this time motivated by 'find(ing) blockbuster technologies' [as this would contribute to economic development] and considering how to bring all SC's on board and other members of the newly constituted NSI.

Indigenous Technology was receiving high-level political support[25]. Executive members of the CSIR, Dr Adi Paterson and Mr Neo Moikangoa drafted a paper on indigenous technologies as requested by Serote in preparation for a briefing (by Serote) to then Deputy President Thabo Mbeki. In this paper, it was positioned within the concept of a Year of Science and Technology and emerged as one of six key points. Indigenous technology was being positioned on the policy agenda.

The CSIR agreed to fund the extension of the pilot to other provinces as well as to provide resources to establish a national database and preliminary technology assessment in 1997[26].Its leadership role amongst Science Councils appears apparent at this stage. Garrett had not only provided the necessary resources to get the proverbial ball rolling, but had also brought part (a significant part) of the South African research and technology infrastructure on board. An additional resource (to specifically assist with driving the national roll-out of the audit) was made available by CSIR in the form of an Indigenous Technology Programme Manager. Mogege Mosimege was appointed around mid-1997 specifically to assist with facilitating the Audit of Indigenous Technologies Programme [which later became the IKS Programme][27].

---

[24] Key challenges according to Goyvearts were that the quality of products was often low and that packaging and marketing were not well understood. Markets were far away and needs and wants of cities and international markets were poorly understood.
[25] Serote was providing briefings to the Deputy President, Thabo Mbeki
[26] Paterson, A (1997), Executive Summary: Indigenous Technologies
[27] NRF Newsletter People's Science Vote, Volume 1, No 2, Oct - Dec 2002

By mid 1997, structures consisting of the Portfolio Committee, the historically black universities, science councils, government departments, individuals from the private sector, other relevant structures, and the chairperson of the house of traditional leaders were put in place, with the emphasis that universities integrate IKS practitioners into two structures: the National IKS steering committee, which was guardian and custodian of the process, and the inter-provincial operating structure which conducted research in the seven provinces excluding Northern - and Western Cape.

Each university that took part in the audit of Indigenous Technologies was expected to compile a database of all technologies found during the audit. The IKS Programme at the CSIR funded the training of members of staff from universities as part of capacity building[28] .The CSIR also provided the technical expertise of one of its strategic units. MIKOMTEK(Micro-electronics and communications technology) compiled the database into a national database, which the National Steering Committee was meant to analyse. The objective was that the information be made available to Divisions at the CSIR and the Universities jointly or separately for analysis for possible business enterprises. Wherever Intellectual property issues were encountered, the communities and technologists would be consulted.

There was increased participation by the research system as several science councils were participating at this stage, namely, Medical Research Council (MRC), Agricultural Research Council (ARC), Foundation for Research and Development (FRD), Human Sciences Research Council (HSRC), Council for Scientific and Industrial Research (CSIR) who identified the need for a workshop[29]. After a brief report from each of the science councils, it was apparent that there was some involvement in IKS activities, ranging from studying aspects of traditional plants by researchers through the FRD, to working with traditional doctors by the MRC, and the audit of IT by the CSIR in collaboration with Historically Black Universities.

---

[28] Retrospective: Briefing to PC ACST (2000)
[29] Mosimege, M., March 1998, Proposal for a National Workshop on IKS

B. The objectives of the IKS Programme

The objectives of the extended IK Programme were indicative of dominant trends in thinking in the country and links into some aspects of the 'international development' paradigm at the time. Odora Hoppers (2003) when referring to the 'major winds of change blowing in the country' points to the major transformation and democratization processes and macro-economic policies e.g., the Reconstruction and Development Programme (RDP), the Policy for Growth, Employment and Redistribution (GEAR), the National System of Innovation and the African Renaissance.

In a PC ACST working document (1997), the thinking around the Audit of Indigenous Technology had expanded to include a mission, vision and objectives as outlined below:

Mission

To unearth IK and transform it into economic and intellectual wealth for our country and to contribute to the African Renaissance

Vision

Through innovation and knowledge, South Africans must transform this country to effectively collaborate and compete with other countries in all spheres of human endeavour

Objectives

- To audit and record indigenous knowledge
- To evolve the relevant human resource out of the process
- To contribute to the competitiveness of the country
- To contribute to ideas for the 21st Century

PC ACST Working Document, 1997

There are perhaps two noteworthy points to be made here:

1) The transition from *Pilot on Indigenous Technologies* to the expanded concept of *IKS Programme* and the reference to Indigenous Knowledge (IK).

2) The link to the *African Renaissance*[30].

C. *Structures established during this period*

Though there may have been other formal and/or informal gatherings, the first record available refers to a meeting of Indigenous Technologies on 16th October 1997. The key items for discussion included formulation of a policy for indigenous technologies, how this policy would influence legislation regarding the protection of Indigenous Technologies, preliminary plans for the workshop on indigenous technologies and making an effort to ensure that communities benefit (both in material terms and intellectually from Indigenous technologies). The meeting was chaired by Serote and included members of Parliament, representatives from the Department of Trade and Industry, the State Law Advisor, Members from HSRC and CSIR. By November, there was an Interim Policy definition Structure of Indigenous Technologies that was focusing on the Indigenous Technology Conference, participation by communities, policy and legislation consideration, etc.

From the presentation to PC ACST(2000) by Mosimege, a retrospective idea can be gleaned of a number of committees that were established after the audit. These committees served several functions and made every effort to ensure that indigenous practitioners were incorporated into these structures. The committees' functions and composition are outlined in the table below:

Committee	Function	Composition
IKS Working Committee	Making decisions relating to the IKS around policy, strategy, operational and acted as the Executive Committee of the National Steering Committee	Two members of the Executive of the CSIR, the chair of the PC ACST and the IKS Programme Manager at the CSIR.
Provincial level planning committee/Interprovincial	Discuss all issues relating to the running of IKS pilot in	Members of all 9 universities involved in the audit,

---

[30] Deputy President Mbeki's employment of the concept African Renaissance in official ANC discourse had started around 1997.

Operating Structure (IPOS)	each University	representatives from Free State, Mpumalanga, IKS Programme Manager at CSIR, Chair of PC ACST
Steering Committee	Highest decision-making powers in IKS. Policy, funding, and strategic matters on IKS	Three members from the CSIR and HSRC, 2 members from MRC, 2 members from ARC, representative from the House of Traditional Leaders, Chair of PC ACST
Technical Committee	Debate issues around IKS and make recommendations to the Steering Committee Status: Ceased to exist after the National workshop in IKS and the UNW in Sept 1998. Perceived vacuum in terms of activities of the committee and discussions between IKS manager and Dr Serote	Members of the PC ACST, members of the SC's CSIR, ARC and HSRC, State legal advisors, representatives of related PC's Representatives from DACST, DEAT and representatives from the House of Traditional Leaders. People were also invited to share expertise on IKS matters as appropriate
National Workshop Organization Committee	Make arrangements for the First National workshop in IKS at UNW.	IKS Research team leader, 3 members of the UNW, 3 students who participated in the audit, CSIR representative in the NW Province, IKS manager, CSIR policy unit representative, MRC representative, HSRC representative, Secretary of the Steering Committee
Draft Discussion document Policy Subcommittee	To advance the discussion on Policy in IKS and finalise the process for incorporation into each Departmental structure. Reports to Steering Committee	Representatives from CSIR, HSRC, NRF, Representatives from Department of Health, DACST, Department of Foreign Affairs, Department of Agriculture, Department of Environmental Affairs and Tourism, Department of Trade and Industry, Chair of PC ACST

It appears that the issues of funding and human resources received the necessary priority through co-option of further support from the Science Councils. Structural and process requirements and logistics for provincial participation were also solicited, as this was becoming a fairly large task. Serote ensured throughout all his communication that the PC remained involved and that structures were effective throughout the process. He called several meetings during this period to ensure that the required co-ordination was taking place, e.g., the co-ordination between the Interprovincial Operating Structure (IPOS) and the working committee in the interim. He also remained central to the planning and maintained strong links on the IK issue with the ACST Ministry[31].

In a move towards mainstreaming IKS (as opposed to soliciting support only through science councils) and also to provide more focused resources for the programme, Serote also indicated in his communications with Garrett that the intention is 'to intervene at the level of the budget process, so that Indigenous Knowledge is not seen as an 'appendage', but as an integral part of the Science Council budget[32].

D. Legislation: Indigenous Technology and Intellectual Property (IP)

As early as April 1997, the Chief State Law adviser, at the request of the PC Chair, was looking into the issue of copyright on Indigenous Technology and made a number of recommendations to assist in the process. A number of other interactions which included research papers[33] to support the development of IP rights for Indigenous technologies were established. Through the Department of Trade and Industry, the DG of WIPO was invited to the Conference on the Protection of Indigenous Technologies in SA, as part of the development of appropriate policy and legislative framework for the protection of the traditional knowledge of the indigenous people of SA.

---

[31] Personal communication, 18 August 1997

[32] Personal communication, 29 August 1997
[33] CSIR, Eleine Roets, March 1997

An attempt was made to amend the existing Intellectual Property Laws Amendment Act of 1997 to provide for 'recognition and protection of Indigenous Technologies, (…) to provide for a National Regulatory Authority to regulate the reproduction and exploitation of Indigenous Technologies and to provide for representations at the NACI', etc[34]. The focus of the legislation appeared to be on the protection of Intellectual Property Rights of the IK of individuals and/ communities. There was also an ongoing commitment to work through a policy process, which would inform legislation on Intellectual Property issues around Indigenous Technology and a number of discussions with DTI regarding law formulation for the protection of Indigenous Technology [35]. The process was informed by the need to protect the vested intellectual property rights of communities, the strengthening of the relevance of research at tertiary institutions, linkage to provincial structures and government small business support initiatives and the development of a sustainable approach to the management of information and data assembled with the assistance of the community partners[36].

Initially the Bill provided for 'sui generis type of protection' of Indigenous Technology. The State Legal Advisor suggested that it was not correct to introduce the legal issues around Indigenous Technologies as an amendment to the Intellectual Property Laws Amendment Act of 1997. He suggested that it be a separate law and should be given a new name and some examples were put forth of what this name could be.

The definition was evolving and people were grappling with what they understood by Indigenous Technologies. What seemed a rather 'simple' and fundamental shift became more complex and challenging. The complexities of 'mainstreaming' Indigenous

---

[34] Intellectual Property laws Amendment Bill [B-97] - outlines what is referred to as Indigenous Technologies: a) Tangible Cultural properties, e.g. drawings, carvings, etc; b) Intangible cultural properties expressed by words, musical sounds; c) Intangible folk- cultural properties e.g. Manners and customs; d) Tangible folk -cultural properties e.g. clothing, implements; e) Monuments e.g. historic sites; f) Group of Historic Buildings; g) Cultural Property Conservation Techniques; h) Buried Cultural Properties; i) Documentation of Cultural Properties
[35] Letter dated 27 August 1997
[36] Paterson, A., Executive Summary: Indigenous Technologies

Technologies became more evident as the challenges in articulation[37] (due to diverse understandings) and learnings from international developments stepped in. This is also reflective of the challenge of moving Indigenous Technology into a new and different space.

In the Draft Bill, Indigenous Technologies referred to the following:

a) Cultural properties of the South African people which have been created, nurtured and transmitted from generation to generation and which are regarded as pertaining to a particular community or its territory, or to an unidentified author of South Africa

b) Cultural properties which are indispensable for an understanding of the history, tradition and culture of South Africa and at the same time form the basis for the development and advancement of future culture.

Protection of Indigenous Technologies: Comments on the Draft Bill

With IK high on the agenda, the PC on ACST made amendments to include Indigenous Technologies in the National Advisory Council on Innovation (NACI) Bill. The National Advisory Council on Innovation Act[38] - NACI Act, No 55 of 1997 was passed on 16th September 1997. One of the objects of NACI, amongst others, is to

"advise the Minister (….) on the role and contribution of Science, Mathematics, Innovation and Technology, **including Indigenous Technologies**, in promoting and achieving national objectives…"

Once the data from the audits became available, the challenge to protect this knowledge received more attention[39] as the Intellectual Property Law was regarded as not adequately

---

[37] Briefing to PC by Directorate of Patents on 27 August 97- No specific lists available, nor common understanding of what Indigenous Technologies mean.
[38] Serote, 29 August 1997
[39] Memo from Serote to DTI 's Acting Registrar of Patents, Trade Marks, Copyright and Designs, 28 August 1997

capable of protecting indigenous or traditional forms of artistic and cultural expressions or materials nor to control the use of them by non-indigenous people[40].

The Department of Trade and Industry (DTI) had their own challenges in understanding what was meant by Indigenous Technologies. The Director for Technology Promotion states that it 'support(s) the development of new technologies through the Support Programme for Industrial Innovation (SPII) and the Technology and Human Resources for Industry Programme (THRIP). This support would also cover indigenous technologies (i.e. technologies which originated in SA)… The CSIR also develops (indigenous) technologies, the detail of which can be found in the CSIR Impact Report'[41].

A subsequent transition to the concept of Indigenous Knowledge in the documentation is seen in the Draft Resolution tabled by the PC ACST in Parliament. Expressing its support for Indigenous Knowledge (IK), the PC made the following Draft Resolution[42]:

'That the House expresses its support for

- The Audit of Indigenous Knowledge, as it will contribute to
- African Renaissance,
- The Reconstruction and Development Programme (RDP),
- Ensuring the integration of the grassroots as a social group in the mainstream of community,
- Building of self esteem and self respect and
- The moral fibre of our country as its history, culture, sociology, anthropology, traditions and customs are rewritten,

---

[40] View expressed by DTI's Acting Registrar of Patents, Trade Marks, Copyright and Designs, 28 August 1997

[41] Letter dated 23 September 1997

[42] Noteworthy is the positioning of IKS alongside S&T as a knowledge system as part of the country's heritage.

endorses the launching in Parliament, of 1998 as the year of S&T on 4 February 1998, which should "**conscientise the nation to the importance of S&T and Indigenous Knowledge as national heritage**".

Order Paper of Parliament of SA, 25 November 1997

E. Pulling processes together

Serote was keen to 'test' how developments in IK were moving along in the tertiary education system at that stage. By September 1997 he required follow up on the students who were involved in the Indigenous Technology process. He specifically asked about the possibility of allocating university credits for their acquired skills and tried to involve the university principals. He also started to move 'out of the science council arena' in terms of support and funding, yet was still requesting various forms of support from Garrett[43].

At this stage, though tertiary education institutions were involved, they were predominantly Historically Disadvantaged Universities (HDU's). In his briefing to the PC, Mosimege indicated that attempts had been made at the National Workshop to bring together both HDU's and Historically Advantaged Universities (HAU's) to encourage co-operation in work in IKS. Until then the focus had been on HDU's due to their participation in the audit an also their proximity and access to rural communities.

To create awareness amongst Members of Parliament, Serote initiated and facilitated the distribution of SCIFLASH[44] in Parliament to ensure broader awareness of developments in Indigenous Technologies amongst his peers. A section was allocated to Exciting developments in Indigenous Technologies. He positioned the 'Audit of Indigenous Technologies as one of the 6 key points put forward by PC ACST to receive priority in

---

[43] Serote; letter to Garrett, 8 September 1997
[44] Drafted by CSIR's Parliamentary office in consultation with Serote, Highlights current S&T happenings to inform MP's, September 1997

the Year of S&T. In this section, the audit of Indigenous Technologies was included in the discussion of the PC's 5-year mandate for SA's transformation and contribution to democratization.

In terms of involvement with the SC's, the PC ACST invited the HSRC to make a presentation. The presenter, Catherine Odora Hoppers, deputy director of the Center for Education Policy Development at the time, briefed the Committee and engaged the PC in a challenging academic debate by problematizing IK and raising issues around 'subjugated knowledges' to new heights[45]. She was subsequently requested by the PC to write a discussion document on IK, which she entitled 'Indigenous Knowledge and the Integration of Knowledge Systems: Toward a conceptual and methodological framework'. This document was later endorsed by the science councils of SA and used in preparation for the Study Tour on IKS to India in 2000[46].

1998:

Though Indigenous Technologies did not feature in the PC ACST's annual programme prior, it was highlighted in the 'Reconstruction and Development Programme of Action' for the Year 1998 entitled 'Consolidating Arts, Culture, Language, Science and Technology'. In phase 1 in particular the objective was to access information on DACST's proposed programme with a specific focus on amongst others, Indigenous Technologies. Indigenous Technology was also positioned as a 'content item' under the PC's Science and Technology programme.

In a briefing paper prepared for Serote by the CSIR, the following key policy issues were raised which were to be followed up subsequently:

---

[45]'Science and Technology in Africa: Research without Programmes, Scientists without a community', 16th October 1997
[46] www.dst.gov.za/indigenous_knowledge

1. Protection of intellectual property vested in IKS of communities who participate in such audits (or engage with researchers from universities and local or foreign firms)
2. Linkage of audit to the YEAST in 1998
3. More effective policy linkage between IKS and SA's NSI

At the Year of S&T launch at Parliament on 4 February 1998, Serote making another link between IK and the African Renaissance, poses the question (in his now customary way):

What would happen to this country if we targeted Science and mathematics trainers at primary schools to empower them with the potential of S&T (….) what would happen, if we unearth Indigenous Technology with the objective to know what is there; to find from what is there what can be transformed into enterprises and industries and to find what of that which is there can contribute to African rebirth so that when we enter the 21st century, Africa can take its place to collaborate and to compete with other continents in its own right?

At the first meeting for the year, and it appears without too much ado, the programme makes the transition to its new title of 'IKS Programme'. An IKS co-ordinator had been appointed to assist with policy and research projects and several other logistical matters. To expedite the passing of the bill on IK, it was agreed that a workshop[47] would take place in Mid-May and that this process would inform policy and the Bill. The purpose of the workshops was to provide information, conscientise and advance representivity ('i.e. include actual technologists'). The technical committee would function in an advisory capacity to the PC and the office of the Deputy President would be seen as the executive arm and patron of the project. [48]

Serote positioned the concept of indigenous technologies within the notion that South African industry had not developed an innovative technology development culture and had accepted restrictive practices in licensing from overseas suppliers. Large procurement programmes were often 'wed to overseas manufacturers without any

---

[47] To include stakeholders and research team leaders, MRC, ARC, FRD, Departments of Health, Agriculture and Trade and Industry
[48] Minutes of meeting of IKS programme, 24 February 1998

significant strategies for insourcing and developing this'[49]. The position was that valuing IKS could strengthen and give content to the National System of Innovation without reducing the importance of the formal globally linked elements.

A technical team was constituted[50], represented by SC's, government departments and the state legal advisor. Four science councils were involved at this stage, namely, Foundation for Research and Development (FRD), Human Sciences Research Council (HSRC), Medical Research Council (MRC), Agricultural Research Council (ARC) as well as the Historically Black Universities (HBU's) and Parliament. The IKS workshop was intended as serving a consultative function, so that policy could be finalized by the time the conference took place. It was agreed that traditional healers would be brought in when experts are needed.

The roll-out of the audit of Indigenous Technologies was well on its way[51]. Subsequently each of the universities involved in the audit required to conduct a 2-day workshop on the provincial audit results. This took place throughout 1998. These workshops were attended by an average of 80 participants and reported on the findings of the audit.

The leadership was decided upon by each university and brought a variety of approaches and richness that would not have been possible from one faculty[52]. Universities involved in the audit with leadership in the respective departments were as follows:

University	Faculty	Department
Venda	Science	Chemistry
North	Science	Biochemistry
North West	Science	Chemistry
Vista	Management Sciences	Economics
South Africa	Education	

[49] Serote, Personal communication, 8 January 1998

[50] First meeting of the Technical Team of the IKS Programme on 18 March 1998

[51] Universities involved were Fort Hare, Transkei(Unitra), QuaQua, University of the North (UNIN), Venda (UNIVEN), UNW, Zululand, Vista Mamelodi and UNISA

[52] Mosimege, M., Briefing to PC ACST, February 2000

North, QwaQwa campus	Arts	Geography
Zululand	Science	Agriculture
Transkei	Arts	
Fort Hare	Arts	Cultural Centre

The presentations included:

- The different villages and communities visited for the audit and the technologists interviewed
- The IT found in the communities, including the uses or how technologies were used
- The possibilities that may arise from the uses of the Indigenous Technologies
- The technologies that have the potential to be developed into business enterprises

Inclusion of traditional leaders

Much of the activity to date had occurred amongst a small group of key players including parliamentarians (and some parliamentary support structures), science councils and universities. In February 1998, Serote planned a study tour to Mpumalanga[53]. Though the objectives were not clarified, the visit could be viewed as a stepping-stone to a more inclusive process and an opportunity to move the activity and discussion into communities. From a social perspective, it was also proper protocol (respect and consultation) to inform the chiefs of the audit process to enhance the level of co-operation from practitioners.

With activities taking place at a rapid pace, the PC and 4 CSIR representatives took a study tour of four provinces, viz Mpumamlanga[54], Northern Province[55], North West Province,[56] Kwa-Zulu Natal[57] to have discussions with the chiefs on the participation of communities and their potential gains in the project. The Chiefs were informed regarding

---

[53] Report on Study Tour to the Provinces, February 1998
[54] Kwa Ndebele, King Maishe II
[55] Venda, Chief Dvavhana
[56] Mafikeng and Taung, Chief S Suping and Chief M Mankuroane
[57] Ingwavuma and Empangeni, Chief Mathenjawa and Chief Mkhwanazi

the objectives of the audits[58] and the process of the project in all the provinces. Three issues were raised with the Chiefs, namely,

1. Authorities should embark on a conscientising campaign in their communities in order to protect and preserve Indigenous Technologies and national heritage,

2. Advice on the issue of intellectual property and how to ensure community participation and representation in structures responsible for the audit.

3. The intention of the IKS programme leaders to ensure' broad and relevant consultation' was present throughout the process.

At this meeting, the chiefs agreed to assist in identifying the 'technologists' in their regions and to ask them to co-operate with the students. The Chiefs would also comment on the draft Bill on Indigenous Knowledge.

African Renaissance

In May 1998, Mbuyisile Deliwe, a senior policy researcher at the CSIR drafted a document entitled 'Prolegomena to a Policy on IKS in SA[59]' which defined and interrogated key issues and concepts and was intended to provide input and create an impetus for the drafting of an IKS policy document. In this comprehensive document, he situated IKS within contemporary Society and considers many of the debates on IK. The document, after some amendments was later endorsed by the IKS Technical Team.

In a preceding Interim report of March 1998 prepared by CSIR's Policy Group (Deliwe, 1998), reference was made to the forging of a new identity for SA – a persona that would express the diverse mosaic of people, to be forged within the broad framework of the African Renaissance (AR). He argued that this was an important programme for the country in its period of transformation and that it was in line with public policy, the AR and the National System of Innovation.

---

[58] One of the objectives of the audit was how this process could contribute to the African Renaissance
[59] Concise Oxford Dictionary: 'A critical or discursive introduction to a book'; 'to say beforehand'

The concept of African Renaissance is described as 'a combination of the essence of renaissance connoted to Innovation and prosperity – a fortuous (sic) alliance of mind and matter for the benefit of humanity. It has strong cultural roots, with intellectuals delving into their heritage to confront contemporary problems'. The 'African' stood for identity and opportunity. The AR aims to encourage African Unity for mutual advantage, looking at both material and spiritual resources for advancement. It aims to re-awaken cultural pride and to derive inspiration from it for material development. It stands for material prosperity, for intellectual expansion, for world cosmopolitanism, for the welfare of citizens, and for international peace. It means, in essence, local development with international partnerships (Deliwe 1998).

Deliwe(1998) referred amongst others to IKS as a promising area for finding solutions to modern problems and 'how the situation in SA mirrors what is happening in the world':

Modern technology has proven to be inadequate in solving some of the perennial problems of human existence – particularly in areas of bio-diversity. There is now a scramble to seek alternative ways of perceiving and solving these problems. Indigenous Knowledge Systems have proven to be a promising area for this kind of prospecting. This has opened a political Pandora's box, with perplexing legal problems.

'With the emergence of the New SA issues of a renaissance of previously marginalized cultures have now arisen. These cultures are now to contribute to the mosaic of the cultural identity that define the country, and, also, help SA contribute to the sum cultures of the world in the 21st Century. This happens at a time when IKS have come under the spotlight in the international arena'.

The current position in SA mirrors the world situation. It has existed as an undercurrent, with no legal protection, and, as such, faced extinction. Whenever officially promoted it was distorted to serve the policies of the government of the day. Issues of promoting and protecting it are fraught with fears of calls for restitution or compensation.

The present government aims to reverse the position of IKS in SA. It is envisaged that IKS would cease to be an undercurrent. It is to become part of the superstructure, as part of the cultural mosaic of the nation. To safeguard its identity and to prevent distortion this is to follow a democratic process, by ensuring the fullest

involvement of indigenous communities.

The intended results are the promotion and the protection of IKS in an equitable and sustainable way that will develop the communities that possess this knowledge. The primary mechanism to achieve the ends will be the promulgation of an Act to promote and to protect IKS, as well as safeguard the interests of indigenous communities.

Deliwe, M (1998), Prolegomena to a Policy on IKS

In the IKS Funding Proposal (1998), the concept of 'African Renaissance' referred to the thoughts, technologies and activities that the deputy-President denoted as 'the unique creation of African hands and minds'. The IKS Programme intended to 'shine a light on work that has in the past been dismissed and denied'.

After members of the IK Technical Team deliberated on issues raised in this document, it was suggested at the June meeting[60] that the following items be included on the agenda:

- IKS must be put on the S&T agenda locally and globally
- Ways need to be sought for technologists to become partners in innovation
- The Archives Bill and the NRF Act should be examined in relation to the activities of the IKS programme
- The us/them dichotomy, part of SA's historical legacy should be addressed

In the first 'concrete' presentation of a piece of legislation on IKS (in-the-making), Advocate Mapule Masemola introduced the Bill on the Protection and Promotion of South African Indigenous Knowledges at the June meeting (referred to above). She indicated that before the draft legislation could be finalized, Cabinet approval was required and the bill would then be referred to the State Legal Advisor. The decision was taken that Serote would table the bill as a Private Members Bill.

---

[60] 10 June 1998

The National Research Foundation (NRF) Act was passed on 18th May 1998, with the planned inclusion of IK in the mandate as per the input of the PC ACST:

Its objective is to 'support and promote research through funding, HRD and provision of the necessary infrastructure in order to facilitate the creation of knowledge, innovation, and development in all fields of S&T, including IK, and thereby contributing to the improvement of the quality of life of all the people of the Republic.'

NRF Act, No 23 of 1998.

Here the positioning of IK as a field of S&T should be noted. The effort to 'elevate' the status of IK was ongoing and further opportunities were presented and sought for infrastructure support.

Increased collaboration was sought with DACST to avoid duplication[61]. Serote would approach the relevant ministers so that departmental directives could be issued.
This was a time of regular interaction, assessment and organizing: Attention was given to questions regarding[62]:

- Research at historically disadvantaged universities
- Funding for the IKS workshop and beyond
- How to organize 'communities of technologists'
- Government department representation in IK
- Inputs to the 'Prolegomena to a Policy on IKS' document which was to be renamed 'Document of the Portfolio Committee and the Steering Committee prepared by IKS Programme Technical Team
- Serote's attendance at the WIPO Roundtable on Indigenous Intellectual Property in Geneva on 24 July 1998

---

[61] Report of a workshop held at CSIR, 19 June 1998

[62] Minutes of Technical Team: IKS (June - 1998)

- Other Bills, namely the National Research Foundation Act, the Innovations Bill and the Archives Bill to be examined in relation to the activities of the IKS programme
- Us/them dichotomy viewed as part of SA's historical legacy was to be addressed
- IK was to be put on S&T agenda locally and globally
- Consider how indigenous technologists can become partners in innovation

Draft Bill on IK

On 10 September 1998, the 'Protection and Promotion of South African Indigenous Knowledges Bill'[63] was forwarded to the Portfolio Committee (in accordance with the Private Members' Legislative Proposals and Petitions) in terms of rule 168 (2). The purpose of this legislation was to codify the tacit and embedded knowledge in Indigenous Knowledge Systems; the next step was to store this 'knowledge' in a national database and the final goal was to harness economic and social benefits of these technologies for development and for trade by promoting the establishment of rural Small, Micro and Medium enterprises (SMME's).

Extract:

The draft bill defines IKS as 'productions consisting of characteristic elements of the traditional artistic heritage developed and maintained by a community in the country or by individuals reflecting the traditional artistic expectations of such a community.' Section 1 (xv) Participants at the workshop felt that the workshop was an important first step to building communication and support networks.

The draft bill seeks to protect indigenous knowledge against 'illicit use and exploitation' and other 'prejudicial acts'

Section 3 (1)

Indigenous knowledge has been protected through the extension and application of the Intellectual Property Amendment Act, 1997. Section 1 (xiii) defines the term 'Intellectual Property Right' as referring to Trademarks, Copyright and Merchandise Marks.

The draft bill makes provision for the establishment of the following bodies:
- Regulatory Authority

---

[63] Memorandum to PC ACST, 10 September 1998

First National Workshop

The First National Workshop was a significant event in that it brought together a broad spectrum of key players together. As one of the planned outputs by the PC ACST, it was an event that required a significant amount of organization and occurred as a result of a number of fairly intense interactions and processes. The content of the discussions below could be viewed as a summary of IK-development inputs, which were now being expanded and interrogated further.

A National IKS Planning Workshop was convened in August 1998 which had as its goal to 'define the IKS institutional framework'. This discussion was further subdivided into areas like:

- Management (consensus on national strategy),

- Policy document (decomposition of IKS into focus areas for establishing separate programmes, Policy on Intellectual Property Rights and database access, roles and functions of various structures, aspects of IKS that can be linked to the present),

- Draft bill (public hearings, definition of IKS, grassroots participation, constituting a draft team, questionnaire on regional co-operation),

- Convening the national IKS workshop and conscientising people at various levels in society (with buy-in from all 3 spheres of government and private sector).

Themes and sub themes of the workshop were as follows:

- How to link IKS to the African Renaissance – definition of IKS and Audit of IKS

- Decomposition of IKS into focus areas, traditional knowledges – towards equity, indigenous technology embedded in IKS, Research on IKS- Co-ordination of research on IKS by individuals, science councils and all universities

- Achieve consensus on programme vision

- Integration into curricula

- Regional conference – taking the process forward

- Identification of IKS stakeholders

After significant effort and planning, the First National workshop held at the University of the North West from 21 to 23 September 1998 brought together a number of stakeholders including MP's, SC's Universities (staff and students) and national government departments. About 400 stakeholders participated, among whom were IKS practitioners, parliamentarians, students and staff from Historically Black Universities, Science Councils, the private sector, government departments, and international organisations. Serote ensured that MP's were informed of the Workshop through the distribution of SciFlash[64]. The theme 'Towards Integrating Knowledge Systems into the NSI' was viewed as a bridge for arts and culture to move closer to S&T.[65]

Minister Mtshali of DACST congratulated the organizers for the event and stressed its importance as the 'systematic revitalisation of indigenous knowledge systems and indigenous technology is a major aspect of our experience of the AR'. The national workshop covered the following areas:

- Discussion on the Policy on IKS

- Discussion of legislative mechanisms in IKS

- Active involvement of the different stakeholders in the promotion and protection of Intellectual Property in IKS

- Closer and appropriate working relations between indigenous technologists and the different researchers in IKS

- Development of different technologies into SMME's for the purposes of creating jobs for the majority of South Africans

- Improvement of skills to be used in Indigenous Technologies

---

[64] July 1998; Compiled by Serote and Fortuin (CSIR) - highlights current S&T happenings to inform MP's
[65] PC ACST Programme of Action for 2000

- Active involvement of other different national departments in the advancement of work in IKS

- Plans for a regional collaboration in southern Africa and plans to hold a regional conference

Participants at the workshop felt that the workshop was an important first step to building communication and support networks. The conclusions of the workshop were that:

1. An IKS structure must be put in place in South Africa. The structure must address the issues of its innovation, social and economic upliftment potentials, and protection.

2. A Southern African conference must be convened to raise and conclude on issues of protection of IKS, collaboration and legislation.

3. IKS must be put on the National Agenda, promoted as National heritage by the nation, protected and innovated to contribute in the 21st Century.

4. The IKS steering committee must organise provincial workshops to mobilise IKS practitioners to complete the national pilot data on IKS and to organise for its contribution.

5. IKS Centres of Excellence must be identified and mobilised.

The IK workshop was followed by a historic conference on the theme of the African Renaissance on 28 and 29 September. It was historic because it was the first conference of its kind held in SA, and also because this conference was 'driven and led by Africans themselves. Its main objectives were to define who we are and where we are going in the global community, and to formulate practical strategies and solutions for future action that would benefit the African masses' (Makgoba, 1999).

The conference was about the unity and humanity of Africans and about strategy and repositioning as an African people, particularly in South Africa where 'contestation around the broad national agenda and reconciliation versus transformation continues to plague our fledgling democracy'. (Makgoba, 1999)

Programmes and Implementation …1999- 2002

<u>1999</u>

After the IKS workshop, it was a matter of weeks before Parliament adjourned for the year (1998). With not many parliamentary documents available for the early part of 1999, it could be assumed that the slow start in IK discussions was due to 1999 being an election year. There were three PC meetings[66] dedicated to IK. Serote was re-elected as chairperson of the Portfolio Committee on ACST on 23rd August 1999 and Committee Programme proposals were discussed a week later. (Parliamentary Monitoring Group[67]) By November 1999, the Strategic plan was framed under the title 'S&T as an Instrument for the Creation of Wealth'. The link of IKS to the African Renaissance was further established and an effort to communicate S&T to the broader public was highlighted.

In the Strategic Plan document of the PC on ACST reference is made to the promise of 'a form of knowledge embedded in IKS, which for SA can be a great source of innovation'. IK is expected to become a 'legitimate, respected partner and the base from which innovation proceeds. (…) The relationship between the two systems can be harnessed to build a new form of knowledge for SA by including categories of knowledge embedded in IKS with western knowledge.' The discussion regarding the relationship between two systems first refers to the dichotomy and the possibility of incorporating IK into western knowledge. However, the understanding appears to be that a new (form) of knowledge will evolve, which is not necessarily either IK or Western Science. The concept of 'knowledge spaces' arises here and will be referred to in more detail again later.

Reference was made in the above document to the evolving concept of African Renaissance, 'a social movement of African people through the development of an African renaissance agenda for civil society on the continent'. The paper recommended

---

[66] Out of a total of 7; www.pmg.org.za
[67] The Parliamentary Monitoring Group, an information service, was established in 1995 as a partnership between Black Sash, Human Rights Committee and Idasa with the aim of providing a type of Hansard for the proceedings of the more than forty South African Parliamentary Committees; www.pmg.org.za

the utilization of IKS as a significant contribution to the operational aspects of the African Renaissance. The structures in IKS were expected to engage in four areas to bring about qualitative change and transformation and to lay the basis for contributing to the African Renaissance (AR). IKS was viewed in this plan as a bridge for arts and culture to move closer to science and technology.

The continental commission[68] of SACAR identified five components of IKS, namely

- IKS and Enterprises and Industries
- IKS and Biodiversity
- IKS and Social issues
- IKS and Liberatory processes
- IKS and Institutions

Broader partnerships, Regional and NEPAD

Momentum had been gathering around the establishment of the South African Chapter of the African Renaissance (SACAR) since the opening of the first African Renaissance conference by Deputy-President Thabo Mbeki on 28 September 1998 in Johannesburg. Serote, the convenor of the Continental Commission had mobilized people from within Parliament and had held a pre-SACAR launch workshop.

IKS was presented as the catalyst to the success of the implementation of the AR goals on the continent and the central theme to providing direction to the two main thrusts was identified at the Colloquium in February 2001[69]. The African Renaissance document was also distributed by the PC ACST for comment.

---

[68] The mandate of the Continental Commission of SACAR s to promote the principles and values of the African Renaissance throughout the African continent, with specific emphasis on building the chapter in South Africa

[69] African Renaissance: Building a Social Movement of African People; Lessons learnt on the establishment of Provincial Forums of the SACAR.

The SACAR offered the following definition of the African Renaissance: " … a shift in the consciousness of the individual to re-establish our diverse traditional African values, [in particular *ubuntu]* so as to embrace the individual's responsibility to the community, and the fact that he/she in community with others, together are in charge of their destiny'. (SACAR Profile: Nature, Characteristics and Objectives of SACAR, 1). This formed part of the Millennium Africa Plan (MAP) which further placed the AR within the sphere of developmental action 'anchored in the determination of Africans to extricate themselves and the continent from the malaise of underdevelopment and exclusion in a globalising world' (Millennium Partnership for the Africa Recovery Plan (MAP), Draft 3a, Pretoria, March 2001, 1). Though no single definition exists, the central idea is that it is about the rebirth or renewal of the socio-politico-economic aspects of the continent (African Renaissance: 1998).

Serote (IKS Review, 2001), in summarizing his thinking on the IKS process, referred to a partnership that should be developed 'both within national boundaries, at continental and international levels'. He argued that it was this partnership that would ensure the necessary shifts that should occur to unearth the potential relevance of IKS. He encouraged the notion of a 'paradigm shift for both the practitioners and western-trained intellectuals'. He also challenged the practitioners to 'accept that IKS is dynamic, and therefore for it be accepted as a 'thing called IKS', which may not have as its basis, the reference and logic similar to what they were familiar with from their training. IK practitioners were therefore challenged to see the evolution of IKS and knowledge as a dynamic process. This partnership and shift in paradigm, he argued, could offer potential for Africa and for humanity in general. He concluded his review by stating that Development processes should 'come up with mechanisms for the protection of the intellectual output of practitioners, so that they gain intellectual. This human resource development is a national investment.'

2000

In the briefing by CSIR's IKS Manager on 9 February 2000[70], it was evident that activity in the IK committees was on the decrease. The working Committee was still in existence, but not active. The steering committee was active, though restricted due to availability of funds. Inter-Provincial Operating Structure had not functioned since April 1999 and its funding by the CSIR had discontinued. The Committee agreed that it was necessary to bring together different structures and solicit support from stakeholders that may have been left out. The importance of empowering the IK practitioners to view themselves as integral to the process, was emphasized.

The briefing summarized the status of IK at this stage:

- The Bill was still in 'rudimentary' form and the CSIR had in its possession the accumulation of pilot data.
- The National Research Foundation had been mandated to implement provisions of the NRF Act.
- The Science Council Indigenous Knowledge Champions had to meet once every two months with the aim of conscientising researchers in science councils about IKS.
- An effort should be made to integrate historically White universities into the process.
- The Draft legislation of Intellectual Property had been developed. It was still undergoing further discussion by different stakeholders and was intended to be introduced in parliament during the next ensuing session.

In a presentation to PC ACST in March 2000, the NRF positioned itself as the 'proper' research organization to manage this programme. What follows is a summary of this briefing to outline key aspects of the discussion.

DACST made a parliamentary grant of R10 million to the NRF to support research in the field of IK. This allocation was meant to confer the necessary capability to the NRF to

---

[70] Minutes on www.pmg.org.za

practically implement the provisions of the Act as they relate to IK. It also presented an opportunity for IK research to be properly resourced and capacity to be built within a nationally structured and co-ordinated way. It signalled a new national direction in research development. The NRF Act stipulates that the NRF should 'stimulate, promote, support and protect research in the field of indigenous Technology (section 4(b)). And, in anticipation of the nature of the potential products of IK research/technology, the NRF is empowered to 'initiate liaison with structures involved in the protection of Intellectual Property Rights'. (Section 4(p))

NRF was given the responsibility of supporting research in IK, in fulfillment of its statutory obligation. This function was now and still is part of NRF's core business. By virtue of its given mandate and the allocation of funding by DACST to develop research in IK, the definition and eventual establishment of a research programme (to build capacity in IK research), would become a key component of that process.

The Research Support Agency of the NRF introduced a new suite of focus areas for research support, one of which was IKS. The IKS Support team then interacted with research communities comprising representatives of a variety of institutions, including museums, community-based organizations and non-governmental organizations. The interaction took the form of visits, discussions, seminars and conferences and was further supported by email and telephone conversations.

Research issues at the time were highlighted as follows:
- The production, transmission and utilization of IK and technology
- The role of IK in nation building
- IK at the interface with other systems of knowledge

The aim and strategic objectives of the NRF's IK Programme(2000) are outlined in the textbox below:

"The present status of IK [indigenous knowledge] is that these forms of knowledge have hitherto been

suppressed. Therefore, IKS should be brought into the mainstream of knowledge in order to establish its place within the larger body of knowledge. The socio-economic potential of IK should be considered, as well as the socio-economic values, such as the impact of IK on lifestyles and the ways in which societies are run. Research into IK should ideally be carried out with the participation of the communities in which it originates and is held." (http://www.nrf.ac.za/focusarea/iks/)

Aim

The overall aim will be to develop the requisite structure and capacity in IK research by seeking to meet the following broad areas of activity:

- The support of the appropriate research projects

- The development of a conceptual foundation and framework for Indigenous IK Research

- The establishment and improvement of infrastructure for IK Research

- The development of the requisite human resources in IK Research

Strategic Objectives:

1. Improved conceptual understanding of the underlying principles and dynamics in IKS and IK Research

2. An increased number and quality of both researchers and post-graduate students working in IK Research

3. Established and/or enhanced multi-disciplinary centres of excellence in IK Research

4. Enhanced knowledge of traditional practitioners and their knowledge systems

5. Development of technologies, products, processes, and artifacts with potential for economic benefit to participating traditional practitioners

6. Increased collaborative research efforts and networks in IK Research nationally across higher education institutions, science councils and industry

7. Enhanced SADC co-operation and research networks in IKS Research

8. Enhanced image, status, and appreciation of the social and economic importance of IK in the public

NRF Proposed Framework for the NRF's IKS Research Programme, March 2000

Further initiatives in science councils were emerging during this period. The Human Sciences Research Council (HSRC) in its Annual Report (2000/1) refers to the important cross-cutting theme of IKS and gender in each of the HSRC's New Priority Areas. The report also refers to the launch of the IKS programme (some two years previous) to

'facilitate the development of community-conscious scientists across the social and natural sciences'.

The MRC also instituted an IKS Initiative, a new addition to the Technology and Business Development Group. The aim of the initiative was to develop, promote and protect IKS and its innovative systems of health through education, systems research, research and development and the development of policies that will be of benefit to all. It aimed to redress health research traditions, which it stated had been neglected national health priorities and issues.

Summary of the Draft Bill[71]

Since 1998, the PC on ACST had received many comments stating that the Draft Bill was unsuitable for introduction into Parliament in its form at the time. The PC and the Science Councils were engaging in a process of preparing recommendations on how society should deal with the protection of indigenous technology. The PC was keen to solicit broader input and arranged additional public hearings on the Bill: 'we cannot do this on our own. We need to engage other science institutions, government, NGO's and the community – to say what they think and how they feel about this complex question'.

The Committee wanted to involve all interested and concerned people and organizations in discussions on Indigenous Technology so that, together, South Africans could decide on what the law must say and do about the situation.'[72] Further research and review was necessary to address some of the concerns raised by commentators. Public hearings were being arranged by the PC to gain the broader perspective required. Serote met with ten traditional healers[73] to discuss specific issues and to demystify their roles. This included discussing the air of secrecy, diagnosis and curative methods, the problem surrounding

---

[71] Bill emanated from IKS Programme in 1998, is a private member's legislative proposal on the protection and promotion of IKS
[72] Model Provisions for Laws on the Protection of Indigenous Knowledge
[73] First week of May 2000

the issues of witchcraft and discussions with the Portfolio Committee[74]. It was stressed that every effort needed to be made to ensure that as many traditional healers attended the public hearings as possible.

The draft bill defined IKS as 'productions consisting of characteristic elements of the traditional artistic heritage developed and maintained by a community in the country or by individuals reflecting the traditional artistic expectations of such a community (Section 1 (iv)). It seeks to protect indigenous knowledge 'against illicit use and exploitation' and other 'prejudicial acts' (Section 3(i)) and makes provision for the establishment of the following bodies:

- Regulatory authority
- Collective community Administration agencies
- Directorate of IKS
- Makes provision for the Creation of Centres of Excellence whose main function is to act as Collective Community Administration Agencies

After an intense period of public hearings from May to July, a report was compiled on the Public Hearings on the Draft Bill on the protection and promotion of IKS. From this comprehensive report, it was evident that a number of complex issues were debated and brought to the PC's attention. Perhaps in a first forum of this kind, the views were diverse and they re-introduced the complexity of 'knowledge' debates. Basic principles emanating from the discourse at these hearings can be summarized as follows:

- The Bill requires revision and amendment to construct a broader definition of IKS
- Category of cultural heritage and liberatory processes require further consideration and debate
- Legislative framework for the protection of IKS has to be revisited
- Unless SA IP Laws are amended to provide for the protection of IKS, the manner in which IP has been extended to IKS violates international agreements such as

---

[74] PC ACST minutes, 16 May 2000 on www.pmg.org.za

TRIPS, and the Paris Convention for the Protection of Industrial Property, requires further consideration.

- Nature of the involvement of the traditional leaders requires further consideration
- An integrative, innovative and indigenous context based approach which, would respect the intellect and autonomy of indigenous intellectuals and practitioners and foster mechanisms through the proposed structure was seen as the most important objective of the exercise

Having a public debate on the Bill didn't lead to its expected outcome, that is, finalisation of the legislation on IK. What it did do, was create an opening that showed a glimpse of the quagmire associated with attempting to legislating IK.

In support of the legislative process, the Minister of the DACST Dr Ben Ngubane commissioned a study tour to be conducted in India from 3-10 June 2000[75]. The aim of the visit was to study the Indian government's approaches and historical experiences relating to the promotion, protection, legal frameworks, research base, community participation and commercialization of IKS. The intention was that lessons from this study would inform the current evolving legislative processes in South Africa.

The team included representatives from Parliament, DACST, NRF, HSRC, University of Natal and DTI's patents office. The approach agreed upon by the team involved a focused study of the following issues:

- The legislative framework in India, with specific reference to promotion and protection aspects of IK
- Strategies for developing the science base, with particular reference to frameworks for supporting Research and Development in the area of IKS and the incorporation of IKS into mainstream education and academic programmes
- Strategies for supporting commercialization activities stemming from IK and the development thereof

---

[75] http://www.dst.gov.za/programmes/indigenous_knowledge

- Community participation with a particular focus on benefit-sharing strategies and promotion within DACST strategy on public understanding of SET

The report summarised the following recommendations for SA as follows:

1. We need to legitimate and validate IKS in its own terms.
2. It is important to recognize that IKS is crucial in the development of rural communities and that the skills and cultures of indigenous people need to be harnessed for the good of all of us.
3. We need to create conditions in which the highest value of IKS assists in shaping South African Science and Technology policies.
4. We need to encourage benefit sharing for indigenous innovation
5. There is a need for thorough research to provide basic biological and chemical information that will allow for innovation and success in the development of new products from indigenous plants.
6. For the legislative process, attention should be given to the period of monopoly for each category of IKS inventions.
7. Academic and scientific research institutions need to transform their mindset and practices with regard to indigenous knowledge and other forms of knowledge in general.

Indigenous Knowledge Systems in India (Chapter 13)

http://www.dst.gov.za/indigenous_knowledge/India_visit_2K_rpt/chpt13.htm

The earnestness of applying minds to IK was apparent and many initiatives were undertaken to consider options and enhance understanding of the key issues and challenges. Apart from the Study tour to India, there was also a study visit to China[76] in 2000. Places visited in China included institutions responsible for the propagation of traditional knowledge in the areas of medicine, crafts, and intellectual property rights[77].

---

[76] Odora-Hoppers, HSRC Annual Report 2000/1on http://www.hsrc.ac.za/about/annualReport/2001/iks23 October.html

[77] HSRC Annual Report 2000/1on http://www.hsrc.ac.za/about/annualReport/2001/iks23 October.html

Early in March, Serote advised that a new Steering Committee was being formed to pick up where the National Steering Committee on IKS had left off, i.e. the Consultative Workshop in 1998[78]. It appeared at the time that the IKS legislation was still on the agenda for November 2001. The focus on the inter-relationship of African Renaissance processes and IKS was stressed. At this meeting it was resolved that the new structure would be called the Secretariat of IKS.

Participants were advised of the Vlakplaas[79] project, which was to form part of the nation building process. It was argued that there were potential economic benefits and that the idea of developing Vlakplaas into a Centre of Traditional Medicines could be located within the context of the African Renaissance and Reconciliation. The development of a programme and plan of action for the Vlakplaas event was to form the basis of the work of the Secretariat for 2001. Links with Universities and mobilization of Traditional Healers were to be re-established or strengthened. All efforts went into planning and managing a process that led up to the event at Vlakplaas.

The key functions of the Secretariat were as follows:
- Re-initiate the mobilization of IKS Practitioners to engage, participate and own the now high-speed development of IK processes.
- Raise issues that are fundamental to the relevant unearthing of IK and developing processes, programmes and projects emanating from IK processes so that Secretariat is the structure that will ensure the implementation of the project.
- Identify and create partnerships with other stakeholders, expert, organizations and institutions

Frustrated with what may have appeared to be 'slow' progress and perhaps a lack of commitment, Serote urged those present at a meeting between the IKS Secretariat and the PC on ACST to make a decision regarding whether 'to continue with IKS or stop

---

[78] IKS Steering Committee Minutes, 6 March 2001
[79] Vlakplaas is a notorious place in Gauteng where people who fought in the struggle against apartheid were brutalized and killed by South African Security Police of the time

completely'. The need for constant commitment, a review of the IKS process, building a human resource base, formalising an IKS Structure, co-operation with the traditional healers' forum and a strategic plan were addressed. A 'Vlakplaas project' task team was constituted which provided inputs regarding the number of uses of Vlakplaas.

On the 28th September, a memorandum of understanding was drafted for the first meeting between the IK Secretariat, selected traditional healers, Members of Parliament and experts at Vlakplaas. The objectives of the meeting were defined as follows:

- To work together with traditional healers for the finalization of agreement from relevant government departments to transform Vlakplaas into a traditional healers institute
- To integrate traditional healers into the IKS Secretariat
- To work out a programme to kickstart the transformation of Vlakplaas into a traditional healers' institute as a practical project in IK
- To negotiate with the PC to take the draft policy and bill forward
- To facilitate, through consultation with the Health Department, DACST and Public Works, the Cleansing Ritual of Vlakplaas by traditional healers
- To initiate the process of transforming Vlakplaas with the relevant government departments
- To negotiate with NRF to start a feasibility study in partnership with traditional healers

Serote referred to the event at Vlakplaas as an 'opening of a dialogue with the poor, disadvantaged and marginalized sections of our society, through their most trusted healing and health institution; it is a means to go back to the drawing board to consider the moral fibre (…) the spiritual, mental and physical health of the nation'.[80]
An extract from Serote's Report (2002) is outlined below:

---

[80] Serote, M, (2001) Vlakplaas Report

14-16 December 2001- Vlakplaas

The event at Vlakplaas was to set in motion, a process whereby traditional healing was to be recognized, reorganized, regularized and located in its own right and on the basis of its belief system within the 21st Century healing systems. It was a joint effort of the PC on ACST, National Department of Health, DACST, National Department of Public Works, National Forum of traditional healers, IKS Steering Committee and the Clinix Health Group.

On these days an unprecedented event took place in Pretoria, when approximately 700 traditional healers converged on the apartheid killing field of Vlakplaas. The aim was first and foremost, to hold discussions about the role and future of traditional healing in the new South Africa and to signal to the nation the healing and reconciliatory role of traditional healing.

The deliverables included:

- Laying a basis for the creation of one voice for one of the oldest institutions in our country
- Signalling to the nation the role of traditional healing in the 21st Century and in the global context
- Considering the viability of Vlakplaas being transformed into a National Centre for Traditional Healing and Reconciliation
- Expressing willingness to participate in the national effort for a moral regeneration of our society

Serote, W., Report of the Portfolio Committee on Arts, Culture, Science and Technology on Visit to Vlakplaas, 2002

Serote did not lose sight of the Science Councils during this busy year and was keen to assess whether there had been sufficient progress with the implementation of IKS at some of the institutions that had been involved. As part of the oversight work of the PC on ACST, Serote motivated for and undertook a visit to SC's in September 2001, namely CSIR, HSRC and ARC. The choice of science councils was linked to the potential role in the development of Vlakplaas. The objective of this series of visits was to receive progress reports on IK and Transformation in institutions. The brief given to the Science Councils was that they each present three items:

- A general report
- A special report on transformation in the organization
- The work of its IKS programme

Serote challenged senior management in all these organizations to apply innovation to transformation broadly and also within the Sciences[81]. It was the IKS Secretariat's concern that 'once Science Councils, including the funding arm, the NRF became responsible for management of IKS, IKS practitioners would be excluded from boardroom discussions, mainstream IKS activity, access to funding (criteria were in place qualifying and prescribing what constituted research) and therefore IK practitioners became research objects or information sources rather than active participants in the knowledge generation process. The challenge was whether more creative ways could be sought to harness or research new kinds of 'hybrid' knowledge'.[82]

As a conclusion to activities at Parliament during 2001, the focus was still on IK with two final presentations to the PC on ACST, both focusing on traditional healing aspect of IKS. The University of Venda was invited to brief the PC on ACST on Traditional Healing practices and a meeting was held (where indigenous healers were invited) to discuss the formulation of legislation that will culminate in the 'formation of a council for traditional healers in SA'. The traditional healers performed their ritual before the Committee - they invoked ancestors by burning herbs (impepho). The Committee was informed that this process was followed before traditional healers could perform any exercise.[83]

Serote was also concerned about whether the initial injection of resources into IKS (e.g. about R2m for CSIR) had had any transforming effect on the thinking and behaviour of individuals responsible for and working in these areas. He wanted to see how IKS was inter-woven into the organizational management and thinking of the institution. He was very concerned about the 'voice' of practitioners[84].

---

[81] Interview, October 2001
[82] Serote, Personal Communication, July 2002
[83] http://www.pmg.org.za/docs/2001/viewminute.php?id=1237, Minutes of 13 November and
http://www.pmg.org.za/docs/2001/viewminute.php?id= 1267, Minutes of 23 October
[84] Personal Communication, July 2002

There was also discussion regarding the establishment of a National Centre for Traditional Healers which would be established at Vlakplaas. The 'cleansing and reconciliation ceremony' according to traditional healers, would change Vlakplaas from a place of murder and torture, to a place of healing and reconciliation. There were four committees participating in this event, namely Arts and Culture, Land Affairs, Health and Environmental Affairs and Tourism. A space had been created to discuss and engage in IK issues in Parliament.

2002

Early in January 2002, the IKS task team met and reviewed the events and lessons from Vlakplaas. What was evident was the level of support from government departments and other sponsors. The Pretoria Council provided water at Vlakplaas, the toilets were provided and serviced regularly and the presence of police and paramedics provided the necessary safety and emergency services. The attendance at the Ceremony was indicative of a cross section of the partners in the development of IKS, viz, traditional healers, staff and students of universities, Parliamentarians, government officials and members of science councils. Key role players at this stage were the PC, the IKS Secretariat and the Task Team. The media portrayed the event in a very positive light, with a great deal of coverage across the media spectrum. Expectations in this regard were exceeded. A number of developmental activities were outlined by the task team to keep the proverbial ball rolling.

At the State of the Nation address in February, the state president announced that Serote had been appointed as the Executive Chairperson of the Board of Freedom Park.[85] He would be stepping down from Parliamentary duties to take up his new position. A small IKS working group in the Western Cape, based in Cape Town was encouraged by Serote to continue with developing and following up on discussions in IKS in the interim and to

---

[85] Freedom Park Conceptual Framework, March 2003: The primary objective of Freedom Park Trust is the creation of a monument to South Africa's heritage. Its secondary objective is the development of a resource for research and education aimed at developing a deeper understanding of South Africa and its people

consider the functions and operations of a provincial operating model[86]. A lack of funding hampered the progress of the team working as a group. Much of the discussion of the group was around the establishment of a proposed IKS Resource Centre.

In Vote 14(Arts, Culture, Science and Technology) of the 2002 Medium Term Expenditure Estimates (MTEE), there was no specific mention of IK under any budget item. Freedom Park had been allocated R70million and R180million for two consecutive years [87]. In the section 'key outputs and indicators' there was mention of 'advice on preservation and promotion of indigenous music and revival of indigenous games'. No mention was made of IK in the Science, Technology and meta-information Programme.

In terms of policy developments, it was indicated that 'at the level of the continent, more attention will go to Africa's knowledge systems and their link to the global science and technology system. Emphasis will be placed on developing legal frameworks and appropriate incentives, and on managing resources to benefit communities and the custodians of IKS'. (MTEE, p300).

Legislation during 2002[88]

In 2002, a national task team developed a draft legislative framework and draft policy for dealing with IKS. By the end of the period under review, 'both documents were at an advanced stage of development'[89]. It was anticipated that the policy document would be presented to Parliament in 2003. DST constituted an inter-Departmental Committee on IKS and four inter-departmental meetings were convened. The aim was 'to provide an opportunity to reflect the inputs from different Government Departments in the policy development on IKS, as well as an opportunity to share information on IKS. The Indigenous Innovation and Research Bill would not be proceeded with and was likely to be replaced with more comprehensive legislation based on the National Research and

---

[86] 1st meeting of IKS Working Group in Western Cape
[87] Treasury. MTEE (2002) Infrastructure and Development at Cultural institutions and the construction of Freedom Park (p290)
[88] DACST Presentation to PC ACST: Budget Briefing on Vote 14, 26th April 2002
[89] DST Annual Report 2002/3

Development Strategy currently being drafted. IK was being positioned as an instrument under the corporate goal of economic growth[90].

South Africa's National Research and Development Strategy document of 1 Aug 2002, prepared by the newly formed Department of Science and Technology (DST), suggests that 'one way to achieve national excellence is to focus our basic science on areas where we are most likely to succeed because of important natural or knowledge advantages. In SA, such areas include astronomy, human paleontology and **indigenous technology**'.

In an August briefing to the Select Committee on Education and Recreation[91] in Parliament, Mosimege, now Director of IKS Directorate in DST, informed the Committee about the newly established IKS Directorate established at the Department of Science and Technology. The mission of the Directorate was defined as 'to protect, promote and develop IKS within the NSI to contribute to economic and social transformation.' (Mosimege, 2002). The sub-directorates include the following four key areas:
- Legislation, Policy and Strategy
- Research and NSI
- Auditing, Documenting and Preservation
- Human Resources and Institutional Capacity Building

The objectives of the Directorate, which places the responsibility of drafting policy and legislation with DST, were described as follows: To....
1. Undertake an intra and extra departmental audit and international audit of IKS activities and processes
2. Actively co-ordinate national IKS interventions and projects and link relevant ones to international efforts
3. Develop and implement IKS legislation, policy and strategy

---

[90] DACST Presentation to PC ACST: Budget Briefing on Vote 14, 26th April 2002
[91] Provincial counterpart of the PC on ACST

4. Develop IKS human resource and institutional capacity through education and training

5. Provide mechanisms and infra-structure for the codification, documentation and preservation of IKS knowledge and technologies

6. Promote research, monitoring and evaluation of IKS

7. Promote and develop IKS within the NSI

8. Provide proactive support for IKS activities within Arts and Culture

The Directorate of IKS was responsible for liaison and co-ordinating functions which included, 'ring-fenced funding for IKS research at the NRF since 2000', convening an inter-departmental committee on IKS, including 8 government departments[92] and international liaison with e.g. WIPO, Convention on Biodiversity and the Food and Agricultural Organization of the UN.

According to DST, the milestones attained as a result of work in indigenous technologies are outlined as:

1. Transition from indigenous technologies to indigenous knowledge systems
2. Heightened awareness and increased debates on and about IKS
3. Interdisciplinary research teams from varying institutions
4. Greater involvement of indigenous practitioners and community members
5. Establishment of bodies, e.g. Science Council IKS Champions
6. Ring-fenced funding at NRF for IK research
7. IKS programmes and Centres at tertiary institutions[93]
8. IKS Directorate in DACST

Though there are a number of items positioned under the area of 'Motivation for IKS Policy and Legislation', I list a representative few below:

---

[92] Departments of Science and Technology, Trade and Industry, Health, Environmental Affairs and Tourism, Agriculture, Water Affairs and Forestry, Land Affairs, Provincial and Local Government.
[93] A total of 8 study programmes, Institutes, Centres of Excellence and Courses dedicated to IKS are outlined in this presentation

- Addressing marginalisation of non-western cultures

- Piracy and bio-piracy of knowledge and products

- Legitimation of IKS on its own terms by creating enabling environments for the internal development and articulation of all domains of IKS (not just medicinal plants)

- Establish IKS as a source of innovation and part of the NSI

The major difficulties and challenges in IKS as perceived by DST, centred around issues of:

- Access

- Bio-piracy and bio-prospecting

- Benefit sharing

- The term Indigenous Knowledge

- IKS and Commercialisation

- Ownership: Individual or communities

- Partnerships

The NRF had initially appointed Dr George Mukuka as IKS manager and three research issues were identified, namely

- The production, transmission and utilization of IK and technology

- The role of IK in nation building

- IK at the interface with other systems of knowledge

The NRF subsequently appointed Mogomme Masoga[94] as the new IKS manager in July 2002. What is significant is that he is an initiated traditional healer and diviner who

---

[94] Dr Mogomme Masoga, formerly lecturer and Head of the School of Historical Sciences at the University of the North (Qwa-Qwa), joined the NRF as Manager: Indigenous Knowledge Systems (IKS) in July 2002. Masoga firmly believes that IKS should arrange its own space as a science, and be allowed to speak in its own voice. Masoga, under Professors Phillip Nel and Mohlomi Moleleki. His thesis, titled "Dimensions of Oracle-Speech in the Near Eastern, Mediterranean, and African Contexts: A Contribution towards African Orality", was fundamentally about African divination and healing. He also has a solid knowledge of the Classics (Greek and Latin) and taught Classical Greek at the University of South Africa.

completed his doctoral studies at the University of the Free State. Masoga maintains, " IKS is my life. I joined NRF because the ancestors wanted me here. I am here because of my badimo [ancestors]. I become angry when researchers do not show respect for the 'sacred' life of our ancestry'. Recently researchers have jumped on the bandwagon, and everyone speaks the language of IKS. Why? Partly because it pays to speak this language. One thing that has to be taken into account is that local voices (communities that own the knowledge and the wisdom) are continually directed by the ancestors[95]."

He planned to organise an annual IKS Summer School to "remedy the IKS Focus Area's problems of the poor quality of some of the deserving proposals it received, and too few proposals with a real IKS focus. " Among his other initiatives were to introduce better communication between IKS stakeholders by means of an IKS newsletter, a scientific journal to monitor progress and standards, regular conferences, and an IKS website[96].

The International Indigenous Peoples Summit on Sustainable Development took place within the Khoi-San first tribal peoples' territories in Kimberley, South Africa on the 20-23 August 2002, a few days before the commencement of the United Nations World Summit on Sustainable Development (WSSD)[97]. The event was held at the Kuil Rock Art Centre located on property owned by !Xun and Khwe San community near Kimberley.

The main objective of the conference was to bring together indigenous peoples from all parts of the world to share their views on sustainable development and their contributions towards achieving this. The Indigenous Peoples' International Co-ordinating Committee proposed that a single sentence be formulated and sent to Johannesburg in time for the negotiation of the Political Declaration. The committee reached agreement on the sentence: 'We affirm the vital role of indigenous peoples in sustainable development'[98].

---

[95] NRF IKS newsletter, No 1 July-August Issue
[96] http://www.nrf.ac.za/publications/news@nrf/aug2002/iks.stm

[97] NRF Newsletter *People's Science Vote*, Vol 1., No.2, October- December
[98] NRF Newsletter *People's Science Vote*, Vol 1., No.2, October- December

The Johannesburg Declaration was adopted by President Thabo Mbeki and more than a hundred heads of state. This was a significant accomplishment for the indigenous peoples in that the declaration included the term 'indigenous peoples' without a qualifier. The United States delegation would not put a qualifier to the term, which can now be used in any UN documents. In the Kimberley Declaration, Indigenous Peoples called for a world conference on Indigenous peoples and Sustainable Development as a culmination of the UN Decade for the World's Indigenous Peoples (1995-2004) and as a concrete follow-up to the WSSD.

President Mbeki's employment of the concept African Renaissance in the official ANC discourse in 1997 in particular, prompted the organization of the first African Renaissance conference in South Africa in September 1998. This conference prepared the ground for the launch of the African Renaissance Institute (ARI) in October 1999 and the launch of the South African Chapter of the African Renaissance (SACAR) in April 2000 intended to spearhead a social movement of the 'reawakening of the African continent'[99]. On 23rd - 25th February 2001, SACAR's Continental Commission held the first South African Development Community (SADC) African Renaissance Colloquium at the Eskom Centre, in Midrand, Johannesburg. The following definition of AR was adopted:

'African Renaissance is the renewal of Pan-Africanism as we enter the Global Village';
Indigenous Knowledge Systems (IKS) was identified by the colloquium as a strategy to implement the 'African renaissance' dream by the civil society organizations'[100].

Following the 2001 SADC-AR Colloquium, phase two of building the social movement was convened from 25th –26th November 2002 with IKS as the 'theme' underpinning the process.

The South African Chapter of the African Renaissance (SACAR) Colloquium was held in Pretoria in November 2002. Delegates came mainly from the Southern African

---

[99] African Renaissance: Building a Social Movement of African People (November 2002)
[100] African Renaissance: Building a Social Movement of African People (November 2002)

Development Community (SADC) region, viz. from Botswana, Namibia, South Africa, Swaziland, Tanzania, Zimbabwe, Zambia and Mauritius. The following key questions were raised and addressed in breakaway sessions:

- *Strategies must be put in place to ensure that the SADC parliament passes legislation on IKS* – IKS practitioners and their organizations must be urged to make passionate comments and written pleas to the SADC parliament to initiate IKS legislation for the common good of the region
- *Identify IKS Projects in each country and mechanisms to support these projects*-Consensus was reached that all countries must identify IKS projects that could be linked to NEPAD. The following three were identified: The Beadwork Factory, Vlakplaas National centre for Traditional Healing and Reconciliation, and organic vegetable farms
- *Establishment of SADC Chapter of the African Renaissance* In a meeting between the head of the African Renaissance Institute (ARI), the Chairperson of SACAR and Dr Serote it was decided to kick-start a campaign that would negotiate with NEPAD to adopt legislation that would introduce IKS Projects

The positioning of IK, it now seemed, had acquired a continental focus. From the discussions and ongoing developments that took place in SA, the complexity of the debates and the positioning required, the journey would continue to be a challenging one.

Where is IK located now in the South African System?

IK's policy function is located within DST under the Executive Portfolio of Technology for Development

The most recent Annual Report 2002/2003 presents the new organizational structure of DST. There are five executive portfolios one of which is Technology for Development This portfolio then branches out to 'Technology Transfer' and 'Poverty Alleviation'. The Directorate of IKS falls within the portfolio of poverty alleviation. This location could in

itself be representative of a particular train of thought, ie, that IKS is positioned within and seen to be belonging to a 'particular group of people', as opposed to eg Portfolio of S&T for competitiveness where it was positioned in 1997/8 because of the 'potential economic benefits of blockbuster technologies'.

The key focus is on using S&T to reduce poverty and improve quality of life through access to and the spread of technology, and by creating skills for innovation and the use of IK including the use of labour intensive technologies and programmes to modify procurement practices of government through the enhancement of innovation. It is the responsibility of this programme to develop and support.

Research funding of R10million, allocated by DST is administered by NRF, who have dedicated IK research programmes.

Legislation has not yet reached Parliament.

A national task team has developed the draft legislative framework and policy for IKS. The task team was constituted from representatives of government departments, health, agriculture, Trade and Industry, EA&T, the science and academic sector. The task team reviewed the literature and consulted widely with stakeholders to produce an initial draft policy and legislation for IKS. IK is an area of considerable complexity with changes in practice and approach internationally and hence the need for a positive enabling environment locally and the more effective protection of IK holders. The IK policy was subsequently 'served' at the Economic Cluster of Cabinet during October 2004. Various ministers had provided input to the policy which has now been adopted[101].

The Traditional Health Practitioners' Bill is being debated in Parliament B66-2003
On Tuesday, 31 August 2004, the second reading debate on the Traditional Health Practitioners Bill took place in the National Assembly. Various groups such as the Traditional Chinese Healers Association had previously asked that they be covered by the

---

[101] Presentation by DST to PC on S&T, 2 November 2004

Bill, but the Portfolio Committee's position has remained-the Bill applies only to the regulation of indigenous African traditional healers. Chinese healers will therefore not be able to register under the Interim Traditional Health Practitioners Council of South Africa. The Bill had been sent on to the National Council of Provinces.

It appears that although the initial planned legislation has been delayed for some time and has not yet been finalized, some steps were taken to 'validate' and 'protect' traditional healers in the interim.

What is Serote doing?

Serote is very active as Chairperson of the Board of Freedom Park. The programme for 2003 had essentially focused on cleansing, healing and symbolic reparation ceremonies which took place in each of South Africa's nine provinces. These ceremonies 'acknowledge the seven main conflicts in South Africa's past - genocide, slavery, the wars of resistance, the Anglo-Boer wars, the first and second world wars, and the struggle for liberation from apartheid'[102].

According to Serote, Freedom Park will become 'a permanent reminder for us, now and for future generations, that South Africans did take a step forward to put closure to the past while not forgetting it. By doing so we give ourselves a chance to address issues of the present and future, and commit ourselves as a generation to handing over an intact, non-racial, non-sexist, democratic, prosperous and powerful nation to our children.'

The Freedom Park Reconciliation ceremonies held in Africa were part of the preparation for the development of the Garden of Remembrance, which will incorporate the soil from the graves of heroes and heroines of the liberation struggle. There is also a planned USA Cleansing and Healing Ceremony[103] during the week of 16th December 2004. The Park has created the reconciliation ceremony to cleanse and heal the ill-doing of the past, and

---

[102] http://www.southafrica.info/ess_info/sa_glance/history/freedompark.htm
[103] 'For families of the cadres who fell in the US; to lay their spirits to rest in their final resting place at Freedom Park'. Cape Argus, 30th September 2004

to acknowledge the pain and suffering that has been endured by South Africans and all Africans.

Serote as moral entrepreneur had put in place a first set of rules in his attempt to help those 'beneath him to achieve a better status' (Becker, 1963). He had used all the resources at his disposal to ensure that the detail and implementation were 'taken care of'. The crusade, which initially took up so much of his time, passion and energy, was no longer. He had subsequently found 'new wrongs to be righted' and was ready to lend his support to another humanitarian crusade. He has moved on to his new cause.

Chapter 4

A moral entrepreneur in a changing system

4.1. Overview

IK in SA has found a 'space' on the science policy agenda. It moved to a position of prominence as a new research interest which did not exist in the national research system before. Prior to the formalizing of IK on the policy agenda, the broader issues of interest were related to how to tackle the challenges of redress and equality in a post-Apartheid South Africa. One aspect of this legislative process was how a number of actors in the national research system participated and became mobilized to work in the field of IK and how IK as an entity emerged out of these interrelated actions and took up the position or 'space' it currently occupies.

In this chapter I look more closely at the events outlined in the historical reconstruction. I start by providing a brief introduction that positions IK as a category that fits into the area of Strategic Science and subsequently occupies a 'new space' on the science policy agenda. Within the overall story of IK in SA, separate attention will be paid to considering Serote as moral entrepreneur and to try to understand both his personal trajectory and the role he played in the system. The main structure comprises three more or less chronologically arranged parts defined by applying aspects of the agenda building and agenda setting analysis previously applied by Rettig (1977) to Mary Lasker's role in the Cancer Crusade.

The first part very briefly considers a particular context in South African history: a situation (the South African science system) that was perceived as wrong and needing to be corrected or reformulated - the general antecedents to the IK Policy agenda. The second (main) part continues with Serote, in his role as moral entrepreneur (Becker, 1969) and outlines a number of concurrent activities and perspectives that brought IK to the position it occupied in 2000. I also attempt to weave through aspects of how various

actor strategies, policy labels and rhetorical claims were filled up and new social realities were created (Van Lente and Rip, 1998). The last part follows the implementation of the 'first tranche' of legislation and introduces the possible notion of a new cycle of events.

There are three questions which have been asked which provide the structure:

- *The first question relates to the context out of which IK (as item for the science policy agenda) arose. What were the sources of concern and motivations that led to the initial formulation of government's policy towards IK?*
- *Are there unique aspects within this context that could create an entry point for the work of a moral entrepreneur and if so, what are the uniquely associated characteristics of a moral entrepreneur and how do they apply here?*
- *Were there any particular agenda setting activities and/or actor strategies that eventually led to IK being placed on the science policy agenda?*

4.2. The general antecedents to the IK Policy Agenda

Much of the detail supporting this chapter has been outlined in Chapter 3. Only the key points were incorporated here for the presentation of the argument. The section is introduced by sketching the policy context in SA, which turned out to be a suitable entry point for the work of a moral entrepreneur. To chararacterize Serote's actions, parallels are drawn between Serote and Lasker as moral entrepreneurs. These characterizations and comparisons also provide a basis for a discussion on his agenda setting activities until IK was positioned on the science policy agenda in 2000.

4.2.1. New policy directions for SA

The context is post-democratic South African society. A new constitution, new laws and policy documents were put in place and attempts were being made to redress societal imbalances created by Apartheid. The new government now comprised a majority of members of the African National Congress, a liberation movement previously banned by the Apartheid government. There was much to be done: The Apartheid policy

framework[1] brought a barrage of legislation to bear upon South Africans that categorized people by race and then controlled their freedom according to their race groups. Effectively, changing all these rules implied that there was a substantial (policy) space in which there were 'many wrongs to be righted'.

The rhetoric (of fixing what was 'wrong') was in all the new policy documents. The new constitution referred to, amongst others, 'incorporating diverse heritage'. Eleven languages were pronounced as official, (nine of which were African/indigenous languages) and traditional leadership was now acknowledged. In the White Paper on Arts and Culture, Deputy Minister Mabandla expressed the belief that 'indigenous South African art forms can and will reach a standard of excellence (…) because they grow out of the diversity which characterises our vibrant cultural inheritance'. 'Promoting the diverse heritage of our nation' as stated in the White Paper on S&T, was one of the general directions of the time.

Given this pervasive new policy direction of fixing what was wrong and recognizing diversity, Serote, the chairperson of the PC ACST, had the formal task of overseeing and monitoring developments in the areas of Arts, Culture, Language, Science and Technology. His role was bolstered by the necessary political 'clout' and support to ensure that the required transformation processes and transitions could take place. Under Serote's leadership, the PC was giving serious consideration to transforming and expanding the South African Science System[2]. He was concerned about the effects that denying Black people access to science may have had on the people and the country in general, and he was also asking questions about 'what knowledge' Black people used to 'survive' in the past (Serote, 1998) that could be used to bridge the gap.

---

[1] This policy provided whites with access to the most privileged suburbs, education, jobs and positions, and exclusive access to amongst others, beaches, theatres, parks and public toilets. Blacks, conversely, were excluded from these privileges by law, enforced by the police

[2] DST (2002) The National System of Innovation needed to expand to cope with the needs of 40 million people as opposed to a mere 5-6 million.

In summary:

- Fixing in the system what was inherently wrong and recognizing diversity was a pervasive new policy directive in SA.

- Redressing issues were occurring across the board in all government departments: in this case the focus was initially on S&T transformation.

- The challenge Serote took upon himself.

4.2.2. Positioning IK within Science

The question of looking at what 'other' knowledge might be there that people used to survive, had originated during discussions with the science councils and hence within the science system. There was the opportunistic notion that technologies could be 'unearthed' and subsequently make a contribution to the economy. These 'findings' could also potentially bridge the gap between 'science' and the 'people' of SA and held significant promise. The inherited science system, though not designed to cater for the needs of all South Africans, had a sound infrastructure. This resource was something Serote could tap into and he frequently called upon science council heads to provide inputs to issues he was interrogating. In the science system there was also a human resource that could be accessed and challenged and through this interaction, contribute to the transformation process.

4.2.3. Positioning IK within Strategic Science

In SA Indigenous Knowledge had become a new interest during the period under study. IK can thus be positioned within the special category of 'strategic science' since this category is now often used in science policy to accommodate a new interest. The thinking and positioning behind IK fits in with the notion of strategic science as defined by Irvine and Martin (Van Lente and Rip, 222):

'Basic research carried out with the expectation that it will produce a broad base of knowledge likely to form the background to the solution of recognized current or future practical problems'.

Strategic research is seen as basic research in a different way – promises are what are important, rather than achieved understanding or immediate application. The emergence of strategic science as a policy and funding category had created a ' rhetorical space'in which promises could be floated to whoever was willing to listen (Van Lente and Rip, 1998). It was the potential of IK being able to support redress in SA in a number of ways that was attractive to politicians and scientists. For the broader public, it was about acknowledgement of their heritage, acknowledgement of inequities and reclaiming their identity as South Africans.

As described in Van Lente and Rip (1998), promises contain a rhetorical element, in that they try to mobilize audiences. When there is a 'breakthrough' which attracts the attention of many actors and create a new domain or a surge of new activities the rhetorics can be quite 'striking'. In the particular case of Indigenous Technologies in SA, there was no such scientific or technological breakthrough. What had occurred was that South Africa as a nation had made global history in that there had been a smooth transition to democracy. This provided an exciting entry point for exploring and experimenting with new options in all manner of things. Being the time for fundamental change in the country, legislation and policies were being reconsidered and redressed and along with this process, a number of developments were taking place.

4.2.4. Activities and perspectives that brought IK to the position it occupied in 2000
The context described above serves as an entry point for the actions or 'doings' of a moral entrepreneur, someone who is in the enterprise of making rules, to fix something which is wrong (Becker, 1969). These 'doings' are interwoven with activities and possible perspectives that brought IK to its position on the Science Policy agenda in SA in 2000.

Serote initiated the process of transformation by soliciting support from the Heads of Science Councils during 1996. The Heads, all white males, though keen, may not have been left with much choice: it was an opportunity to make right what was wrong, a time to make a contribution and so play a role in redressing relevant aspects of the system. He

was keen to hear their responses to redressing some of the fundamental issues in S&T in the country. This initiative of asking, possibly exploratory in nature, was about transformation and redress and these actions could be viewed within the developmental paradigm in South Africa at the time.

After discussion with a variety of players (Garrett and Heads of Science Councils, Black intellectuals at University in Venda, etc), he initially thought that he could achieve elements of transformation by bringing together Science (and its resources) and IK (Serote, 1998) (with little or no resources) and to create out of this 'fusion', an opportunity for innovation premised on the notion that 'communities (were) authentic sites of long-term innovation' (Paterson, 1997). This innovative space was positioned as a source of wealth creation for the country. A new kind of 'metaphoric' space for exploring the interaction of science and IK may have been created and opened up when the first pilot programme or 'audit of indigenous technology' was born under the auspices of CSIR, a science council.

The use of the word *'technology'* may well have been significant as an entry point for the initial engagement (and stepping stone for subsequent resource allocation from within the research system) of issues inherent in the broader 'indigenous knowledge' debate. It brought together (conceptually) 'science'[3] (and its institutions and resources, within the research system) and the promise of 'technology' (characterized by economic benefit and progress in most policy documents) and in this way linked 'indigenous technologies' and its institutions and practices into the research system in a way that had not been done before in SA.

After the initial success of the Indigenous Technologies Pilot, the programme was extended and rolled-out nationally in 1997. The term 'indigenous technology' initially being used by the University of the North, the CSIR and Members of Parliament was now being used nationally at several Historically Black Universities. A broader programme had been formed, namely the Audit of Indigenous Technology Programme and this

---

[3] CSIR regarded as an institution representative of cross-cutting science and technology in SA

Programme had a dedicated Indigenous Technology Programme Manager. Several of the Science Councils were participating and the term was also being 'floated' there. Scientists and policymakers were using the term 'indigenous technology' more widely during 1997.

The term 'Indigenous Technology' was also introduced to traditional leaders and the benefits and challenges of the indigenous technologies programme were highlighted. Together with the introduction and establishment of this term, a history was created which created a 'field henceforth to be covered by that term' (Van Lente and Rip, 1998).

Similar to Western industrialized nations, South African parliament and government agencies during the post-Apartheid period were keen to present portfolios with programmes which were attractive in that they were aligned with the new national priorities. As the process developed through the ongoing collaboration and strategizing amongst scientists (Heads of Science Councils and in particular, Geoff Garrett from CSIR), politicians (Serote and PC on ACST), academics (from historically Black universities) and policy makers (Senior policy researcher and Executive staff involved) the 'dialectics of promise' (Van Lente and Rip, 1998) emerged. A kind of rhetorical space was created which would eventually position IK on the South African research agenda. Simultaneously also then, with the above strategies in relation to a potentially promising research area, particular actors (Traditional healers; University Departments: Students and staff; CSIR: Executive support, project management support, policy support) were moving into position, creating linkages through their interactions and in the process, defining a new activity for themselves and others.

In the first phase, the dynamics are predominantly rhetorical and it is often necessary to choose the right labels for presentations and debates (Van Lente and Rip, 1998). In the South African context, the first label, which was used, was *indigenous technology*. This term could be viewed as a combination of the two concepts that were relevant to positioning the sentiment in SA at the time: the first one referring to the legitimate return to a mosaic of cultures and pride (reflective of nation building) and the second viewed as

a vehicle for progress and improving the quality of lives of people (reflective of economic growth).

4.2.5. Spokespersons and Promise Champions for Indigenous Technologies
Whilst the many Parliamentary documents and other science council reports and presentations may have referred to 'indigenous' technology, this does not necessarily mean that there was 'actually' such a technology or that the area was developing as a research area. Though there may have been much activity in the area, there was also rhetorical work (Van Lente and Rip 1998). Behind these articles, speeches, reports and presentations, there were authors who positioned the research area and tried to convince its readership. These authors, at this stage, namely the Executive of the CSIR and Serote, may be regarded as spokespersons for 'indigenous technology'. These spokespersons are seen to speak in favour of an area, in the South African context, also of a particular 'political slant'. These persons can be referred to as 'promise champions' working towards realizing an innovation (Van Lente, Rip 1998).

Extending the role of spokesperson in this context, spokespersons are not necessarily academic writers or editors; they may also be leaders who dedicate themselves to the task of uniting a field and pushing a promise. Initially, Serote, who is now referred to as the 'Father' of IKS in his capacity as the chairperson of PC on ACST, and members of the CSIR Executive team were spokespersons and pioneered this concept of indigenous technology in SA. The role of promise champions is connected to the new context of strategic science in SA. If an area can effect transformation, whilst turning aspects of the science system down somewhat, that is acceptable.

When science and technology policy focuses on stimulating strategic areas that potentially lead to innovation and/transformation, policymakers need interesting technologies to fill their portfolios. Promise champions could fulfill those needs, even if promises like indigenous technologies were not as 'clear' as they needed to be in former funding processes. 'With strategic science, a new audience is born – an audience that is

interested in great expectations. The mobilization strategies of promise champions, and the need to fill portfolios of policy makers, now interlock' (Van Lente and Rip, 1997).

4.3. Initiating the first Rule creating phase

In a very short period of time, the first opportunity to consider new rules to fix 'something that was wrong' came about. The completion of the pilot on indigenous technologies brought with it first concerns that the 'protection of the rights of the communities' intellectual property' should receive due consideration[4].

The central characteristic of a Moral Entrepreneur is that he would want to put rules in place to make something right which in his opinion is wrong. One way in which to alter the existing rules is to make new rules. These rules are not made automatically - if something wrong needs to be corrected, it needs effort to supply the push necessary to get things done and direct such energies in the appropriate direction before the rule is created. Making new rules are the products of someone's initiative and people who exhibit such enterprise are considered Moral Entrepreneurs (Becker, 1969). One sees this 'drive' in the proposed legislation: in the 'Protection and Promotion of South African Indigenous Knowledges Bill', the draft bill seeks to protect indigenous knowledge against 'illicit use and exploitation' and other 'prejudicial acts'.

As an anti-Apartheid activist[5] with strong humanitarian overtones of a crusading reformer, Serote was actively involved in opposing the rules and laws of the Apartheid government and would therefore want to help those beneath him. The prototype of the rule creator (but not the only variety) is the crusading reformer. The reformer is interested in the content of rules. 'The existing rules do not satisfy him because there is some evil which profoundly disturbs him' (Becker, 1969). This was an opportunity to redress through aspects of the law injustice and inequity inherited from the Apartheid era. Serote, as chair of the PC on ACST, instructed the state legal advisor to consider the necessary legal steps in this regard.

---

[4] Press statement issued by Serote, 7 April 1997
[5] Profile of IKS Guardian (2003) - As a member of the ANC, he worked in the underground military wing, DST Umkhonto we Sizwe, and has been awarded a 30 years' loyal service medal.

4.3.1. Further agenda setting activities

Henceforth, I will include a consideration of Rettig's notion of attempting to liken the history of IK developments to a dramatic production. This requires a consideration of the processes which precede opening night within a framework of agenda-setting and policy formulation. The key question to be asked empirically then is how do these heterogeneous actors start to interact and become mutually dependent in the same period as the rhetorical entity of indigenous technology becomes a social reality? I attempt to draw an analogy between the roles of Lasker and Serote to make a point that pre-production of agenda-setting activity is an important determinant of what happens on a political stage (Rettig, 1977).

Rettig sees in Mary Lasker the center of the cancer initiative in the United States of America (USA). Lasker and her colleagues were involved in activities (over a period spanning nearly three decades) that attempted to influence the rate and direction of cancer research. Rettig suggests that the cancer initiative would not have been legislated in 1971, had it not been for the actions of Lasker. He argues that effecting the National Cancer Act did not happen by chance- that Mary Lasker was present at every juncture and that she was very influential in terms of getting problems related to cancer onto the agenda of government. In the cancer initiative, Lasker is seen to have perceived a need to influence the rate and direction of cancer research and then transformed that need into a 'preliminary script'. Her marriage to Albert Lasker had provided her with the resources to pursue her lifelong interest in health and his death from cancer reinforced her desire and drive to see medical research provide answers to the major killer diseases (Rettig, 1977). Lasker was passionate about this lifelong interest and subsequently dedicated significant time and resources into pursuing this cause. She had been an active member of the American Cancer Society and pursued her interests 'in concert with a number of long-standing, like-minded friends'.

In similar vein, Serote's name could be viewed as synonymous with all the developments in IK for the period under discussion. Aspects of this characterization and pertinent developments will be presented here. The context described earlier, i.e. one that needs

making right what is wrong (Becker, 1969), is one suited for the work of a moral entrepreneur. Though the period under review here is for a shorter period, parallels can be drawn between the activities of Lasker and Serote's involvement in the IK-Science Policy positioning process.

Serote refers to a number of key issues in his extract below and in essence moved these issues through the required spaces whilst serving as chairperson of the PC on ACST. He made every effort to engage in the issues he referred to in the extract above, namely:

- The 'balance between these two bases of knowledge (that) must change'

- People must work together and co-operate.

- Resources, space and time must be created.

"Modern science and technology might facilitate the transfer of knowledge, but indigenous knowledge will contribute to the development of humanity and will have an impact on the manner in which countries relate to each other. This is why the balance between these two bases of knowledge must change.

Such shifts in the bases of knowledge will empower entire countries as well as their peoples. These shifts require that also the nationals of South Africa generate and articulate new ideas. The Indigenous Knowledge Systems Programme in South Africa is pregnant with this possibility, particularly if effective partnerships can be put into place, and if the resources, space and time for innovation can be created.

To achieve this, the government, the private sector, the universities and the indigenous intellectuals and practitioners themselves must come to see IKS as a national heritage. They must work together as partners to promote competitiveness, create employment, develop human resources, sustain the environment, and promote the exchange of information.

We need to engage in research and training that uses indigenous knowledge as a basis for innovation. For this to happen, indigenous intellectuals must accept university-trained intellectuals as carriers of 'developed' knowledge. Conversely, university-trained intellectuals must accept that indigenous knowledge is based on a deep understanding and familiarity with the natural world; it is a social tool that has maintained and sustained people in country that was otherwise hostile to them. Finally, indigenous knowledge, which needs legal protection, can contribute to the African Renaissance by being integrated into curricula at all educational levels, and by being developed into enterprises.

Serote, W., Indigenous Knowledge and Development Monitor, December 1998

http://www.nuffic.nl/ciran/ikdm/6-3/column.html

Serote's drive was informed by a passion to transform the system (and make right what was wrong). In terms of transforming the science system, he wanted to explore 'what was

there' (Serote, 1998) – an audit of indigenous technologies; he had been asking the question about whether the majority of South Africans had escaped such a system or whether they had found other 'means' to survive. For him, the possibility existed of '*unearthing some blockbuster technologies.*' Serote, similarly, can be viewed as the producer of the 'IK' initiative in SA. He saw a need for a script to redress issues in the South African science system and his position as Chairperson of Parliament's Portfolio Committee on ACST created the space and resources for him to do so. This formed part of a broader interest rooted in 'struggle politics' in which he had been involved for most of his life. He had the parliamentary 'machinery' behind him, as well as the support of high-level politicians in parliament and government. He was well-connected in the African National Congress, SA's ruling party having served the party for more than thirty years.

Lasker selected the 'players' and solicited the support of a Mr Schmidt who had the task of writing the detailed script. Serote too selected the 'players', as did his Cancer initiative counterpart. Serote's position as chairperson of the PC and his drive, interest and commitment ensured that he led the process throughout. Lasker had at her disposal time, money, commitment and the capacity to confer status on others, which she was able to use in a focused and skilled manner to achieve her ends. These resources were also augmented by her access to political leadership and her relationships with the press and broadcast media (Rettig, 1977). Serote, close to ANC political leadership (due to his 30 year ongoing commitment to the ANC), had the access he required. He was able to use the time and position he held as PC ACST Chairperson in Parliament to build a strong network of key people to articulate his thinking and with whom to build strategies. Due to a combination of his political prominence and office at the time, he was able to solicit support from executive staff and a senior policy research team member from the CSIR to assist with drafting the initial script.

From the onset of the indigenous technology initiative, Serote had the strong support of Garrett, president of the CSIR. Serote had raised many questions (amongst these, organizational reform, human resource development issues, Public Understanding of

Science, teacher and student development in S&T,etc.) in their frequent interactions and Garrett responded by making suggestions and inputs. He also offered support in terms of human and financial resources to effect the Indigenous technologies programme (Paterson, 1997). It could be viewed that Serote and Garrett (and his team) were initially co-writing the 'script' that led up to events that would later unfold on the political stage. Their frequent interactions (detailed in Chapter 3) support the view of their close relationship in this initiative. Garrett encouraged Serote during the time when he was conceptualizing his initial thinking on indigenous technologies, provided resources for both the pilot on indigenous technologies and the national roll-out of the audit on indigenous technologies. He also offered all manner of resources in for example offering advice and support from his executive team, provided an indigenous technology programme manager, funding the pilot and the roll-out and advised on several other S&T issues e.g. enhancing output of S&T in schools, the Year of Science and Technology and PEASET.

Lasker had considerable resources, for example, the organizational resource in the Albert and Mary Lasker Foundation, as well as a number of influential and well-connected friends in political circles and links with the media. She had built these relationships over a long period and was able to count on their support and used these links tactfully and skillfully to acquire her end goal. Serote's strength was in his role as Chairperson of PC on ACST and as well-connected politician with access to a number of structures. He also had access to parliament's support machinery and a solid base of relationships within parliament and government. Serote also was able to enlist the support of his fellow ANC 'comrades' and other players due to his senior parliamentary position. So, though he didn't have direct access to financial resources, there were many ways in which he could leverage the necessary finance or support.

What was common to the modus operandi of both individuals were their skilful enlistment of a number of key persons, be they the influential friends or associates (Lasker) or colleagues who were politicians and /or senior persons in the South African Science system (Serote). This group of people was mobilized and in the case of the

Cancer Initiative was referred to as Laskerites, Mary's little lambs, etc. People who worked with Serote saw him to be the 'Father of IKS' in SA and were very aware of the earnestness with which he tackled the issue. They invested both time and political craftsmanship to effect the outcome of the 'play they were producing'.

Though Serote was the entrepreneur driving the IK process, he was well supported by several other actors. In terms of positioning IK in the arena of strategic science and technology (which will be discussed later), these actors came from areas in science, government and social organizations. From within this heterogeneous group of actors, committees were subsequently constituted as described in chapter 3 and together formed teams of promise champions. This support by other actors is an aspect that serves as backbone to the discussion and permeates throughout all the activity.

Senator Yarborough[6] and Lasker are described as co-producers of the cancer initiative with the entrepreneurial skill and commitment ascribed to Lasker in the same way as these characteristics could be ascribed to Serote. It was clear from the initial press release in April 1997 and later documents, that PC on ACST initiated the Indigenous Technologies programme under the leadership of Serote and that the CSIR was asked to assist as project managers. Serote thus also had in the CSIR and Garrett, a 'funding and implementing' arm, a co-producer, because the PC on ACST was not in a position to manage such activity as Members of Parliament.

Initiating and/or formalising processes in a political environment require that documents should be prepared and that these are available for discussion and comment. Serote, not to be bogged down with the detail in characteristic moral entrepreneurial style, commissioned the composition of the Executive Summary regarding IK developments to CSIR Executive. Paterson subsequently drafted the rationale of the pilot and the policy considerations underpinning the process, amongst others. This document was being prepared for a briefing to Deputy President Thabo Mbeki. The concept of indigenous

---

[6] Senator Ralph Yarborough played a critical role as chairman of the Senate Health Subcommittee and of its parent, the Committee on Labor and Public Welfare, in securing passage of the resolution that enabled the Panel of Consultants on the Conquest of Cancer to do its work in 1970. (Rettig 1977)

technologies was receiving high-level political support. Later Deliwe and Odora-Hoppers also assisted with framework documents.

4.3.2. Broadening the context to Indigenous Knowledge Systems
In terms of further building support/actor positioning, an Indigenous technology programme manager, Mogege Mosimege, was appointed by CSIR to facilitate the Audit of Indigenous Technologies Programme. Various structures consisting of members of the PC on ACST, historically black universities, science councils, government departments, the chairperson of the house of traditional leaders were being formed, and every effort made to include traditional practitioners. Several science councils were participating, viz. CSIR, MRC, HSRC and FRD. Because of this broader interaction, the concept of indigenous technologies was further interrogated and expanded. Subsequent to a number of interactions and inputs from science councils and academics in which, amongst others the term was problematized and various definitions were interrogated, indigenous technologies was placed within the broader context of indigenous knowledge systems (IKS). Academic perspectives as well as contextualising what was happening in SA and within a global context, moved the Indigenous Technology Programme (after the Pilot on Indigenous Technologies) to the broader definition of Indigenous Knowledge Systems Programme.

A moral crusader is more concerned with the ends than with the means. He will thus rely on the advice of experts in, for example, drawing up legislation to be proposed to State Legislature. Serote brought on board the State Legal Advisor and solicited the help of senior staff in the science councils, e.g. Deliwe, senior policy researcher from the CSIR and Odora-Hoppers from the HSRC to prepare the background documents and provide input to the PC and other working committees. Serote was in a position of advantage, because as a member of the South African legislature and a member of the ruling party, he was able to initiate new rules.

Initially this Bill focused on an appropriate legislative framework for the protection of traditional knowledge of the indigenous people of SA. An attempt was made to amend

the existing Intellectual Property Laws Amendment Act of 1997 to provide for 'recognition and protection of indigenous technologies and transitional arrangements were made to provide for a National Regulatory Authority to regulate the production and exploitation of indigenous technologies for profitable purposes. The State Legal Advisor suggested that there were problems with simply amending the Intellectual Property Laws Amendment Act and advised that a separate law with a new name be drafted. The 'Protection and Promotion of South African Indigenous Knowledges Bill', introduced as a Private Member's Bill was not able to follow due process in Parliament due to the number of complexities that arose out of the challenges associated with applying intellectual property issues to protection of IK. The challenges presented by bringing indigenous technologies into the sphere of a 'western style' legal system, were to dominate the further articulation and positioning of this Bill. This is still the status quo: the Bill remains in draft form and is currently within the consultation sphere as part of a DST process.

To further organize activity on a national level, in the provinces and also position IK, Serote established a number of committees during 1997 often using the links (and interest shown by) initiated in the science councils, e.g. IKS Working Committee, Interprovincial Operating Structure, Steering Committee and Technical Committee. These committees played an essential role in terms of attending to a variety of functions, e.g. decision-making, policy, funding, making arrangements for the national workshop the details of which are outlined in chapter 3. In addition, Serote solicited the help and support of a senior policy researcher at the CSIR, who assisted with creating a broader context to the understanding and provide strategic direction to their thinking. This also included discussions on positioning IKS within the African Renaissance and many other issues pertinent to the preparation of the policy discussion on IKS.

Representation had broadened out by mid-1997: The PC ACST, under Serote's leadership, played the lead and was well-connected to other members of Parliament and the ANC and government departments. A number of science councils were involved (e.g. CSIR, MRC, HSRC), as were universities, traditional leaders and a number of

government departments (Departments of Arts, Culture, Science and Technology; Environmental Affairs and Tourism; Health; Foreign Affairs; Agriculture and Trade and Industry).

4.3.3. Shift from Indigenous Technology to Indigenous Knowledge Systems

When the term indigenous technology was introduced, it was not an area of focused academic study in SA. The records reflecting how the concept was being positioned were all linked to its occurrence in the political arena. The manner in which Indigenous Technologies became an entity by itself, is visible in the way it appeared in meeting minutes, parliamentary documents and legislation. The term was also used in the Draft Bill entitled 'Protection of Indigenous Technologies'. In addition there were the seven Indigenous Knowledge structures that were set up and referred to in Chapter 3, starting with the Indigenous Technology Technical team.

'Indigenous Technology' was eventually concretely included as an item on the science agenda in the National Advisory Council on Innovation (NACI) Act and the National Research Foundation (NRF) Act due to the efforts of the PC on ACST:

*One of the objects of NACI, amongst others, is to "advise the Minister (….) on the role and contribution of Science, Mathematics, Innovation and Technology, **including Indigenous Technologies**, in promoting and achieving national objectives…"*

*The NRF Act stipulates that the NRF should 'stimulate, promote, support and protect research in the field of **Indigenous Technology** (section 4(b)). And, in anticipation of the nature of the potential products of IK research/technology the NRF is empowered to initiate liaison with structures involved in the protection of Intellectual Property Rights'.*

The first transition of the term *Indigenous Technologies* to *Indigenous Knowledge Systems (IKS) Programme* occurred at a meeting in February 1998. More actors were moving into position as the roll-out of the IK programme extended to the provinces. Various universities had provided leadership and were positioning themselves within relevant departments. An effort to include interactions with traditional leaders was

effected by a study-tour to Mpumalanga and three other provinces. These leaders supported the positioning exercise by agreeing to assist in the broader programme and encourage traditional healers to co-operate with students involved in the audit.

The diversity of inputs by the multitude of role players enhanced the understandings of those involved in the process. There were fresh insights about issues and debates within IK and indigenous technologies was better understood to be part of the broader construct called Indigenous Knowledge Systems. One of the first transitions to the concept of Indigenous Knowledge in the documentation is seen in the Draft Resolution tabled by the PC ACST in Parliament. Expressing its support for Indigenous Knowledge (IK), the PC made the following Draft Resolution:

'That the House expresses its support for
- The audit of Indigenous Knowledge, as it will contribute to
- African Renaissance,
- The Reconstruction and Development Programme (RDP),
- Ensuring the integration of the grassroots as a social group in the mainstream of community,
- Building of self esteem and self respect and
- The moral fibre of our country as its history, culture, sociology, anthropology, traditions and customs are rewritten,

Endorses the launching in Parliament, of 1998 as the year of S&T on 4 February 1998, which should "**conscientise the nation to the importance of S&T and Indigenous Knowledge as national heritage".**

Order Paper of Parliament of SA, 25 November 1997

Subsequent to this Draft Resolution, the roll-out of the pilot on indigenous technologies, became known more broadly as the IKS programme and the activity in this area was to be known by that name. The first National Workshop on the *Indigenous Knowledge* Systems was held at the University of North West in 1998. DACST made R500 000 available during the Year of S&T in the same year for small-scale implementation of 'indigenous knowledge systems projects'. Science Councils had dedicated IKS Champions. Though

the initial link in public documents was made between IKS and the African Renaissance in the above resolution, the connection was made at every subsequent opportunity and IK activity. It appeared to become much stronger after the First conference of IKS in September 1998, which was followed by the First Conference on the African Renaissance a week later.

4.3.4. Locating IK within the NRF: Funding for IK

The NRF received its new mandate from the NRF Act, No 23 of 1998. Its objective is 'to support and promote research through funding, human resource development and provision of necessary infrastructure in order to facilitate the creation of knowledge, innovation and development in all fields of S&T, **including IK**, and thereby contributing to the improvement of the quality of life of all the people of the Republic'. IK was included as a field of S&T and thus positioned alongside S&T activity and the funding allocation process was then able to set in.

By 2000, with the allocation of funding of R10m from DACST, the research area of IK was presented in terms of a generalized promise and significant for its own sake.

4.3.5. Moral entrepreneur initiating second Rule creating phase

The initial bill (intended to protect communities in April 1997) was now referred to as the Protection and Promotion of South African Indigenous Knowledges Bill. Advocate Mapule Masemola introduced it at the IKS Steering Committee meeting in June 1998. She indicated that before the draft bill could be finalized, Cabinet approval was required and then it would be sent off to the State Legal Advisor. The decision was taken to table the bill as a Private Member's Bill in Serote's name. The Bill, which sought to protect IK against 'illicit use and exploitation and other prejudicial acts', was forwarded to the PC on ACST on 10 September 1998. It made provision for the establishment of three bodies, namely, a Regulatory Authority, Collective Community Administrative agencies and a Directorate for IKS. The expansion of the concept of indigenous technologies to be more

inclusive, and the movement of IKS onto the science policy agenda was more pronounced.

The enactment of two laws that incorporated IK without any complications, viz, the NACI Act (No 55, 1997) and the NRF Act (No 23, 1998) was a fairly significant turning point, especially with regard to Serote and the PC on ACST's subsequent actions and programmes. Though the Protection of Indigenous Technologies Bill was still in draft, Indigenous technology featured in the NACI Act alongside S&T, its 'knowledge partner.'

The National Research Foundation (NRF) Act was passed on 18th May 1998, with the planned inclusion of IK in the mandate as prescribed by the PC on ACST, under Serote's leadership. Its objective 'to support and promote research through funding, human resource development and provision of the necessary infrastructure in order to facilitate the creation of knowledge, innovation, and development in all fields of S&T, including IK, and thereby contributing to the improvement of the quality of life of all the people of the Republic'.

The inclusion of IK in the NRF Act was to have significant consequences. The essence of the Act (as it pertained to IK) was that IK as research area should be supported and that the necessary funding, human resource development and infrastructure should be provided to facilitate the creation of knowledge. It positioned IK as 'legitimate knowledge' and the required resources were to be allocated to effect the legislation. The Act now positioned Indigenous Knowledge as a research field within S&T and also positioned it within the science policy agenda. Though IK was positioned in S&T, the Research Support Agency of the NRF (in 2000) introduced a new suite of focus areas for research support and included IKS as a focus area. The journey that started out with the introduction of an indigenous technology pilot by Serote and Garrett, had as its first stop the NRF; IK was positioned and resourced in the national research system as a separate focus area.

4.3.6. IKS and the African Renaissance

The PC on ACST through Serote, dedicated all its available resources and the available resources of the science councils and universities to organizing the first National IKS conference at the University of the North West. A National Workshop Organizing Committee, comprising a wide range of actors in the research system, was dedicated to managing the planning of the conference. The link between IK and the African Renaissance 'movement' gained further momentum and ground. 'How to link IKS to the African Renaissance' was included as one of the themes of the conference. Minister of ACST Lionel Mtshali echoed this sentiment in his letter of support, which referred to 'the systematic revitalisation of IKS and indigenous technology (as) a major aspect of our experience of the African Renaissance'.

The Report on the First Conference on IKS noted that the conference was regarded as an important first (next step) step to building communication and support networks by those who attended. The conclusions of the workshop, which would serve as reference point for later discussions, are outlined below:

- An IKS Structure for SA
- A Southern African Conference must be convened to address issues of protection of IK
- IKS must be put on the national agenda and promoted as national heritage
- IKS Steering Committee to organize provincial workshops to mobilize IKS practitioners
- IKS Centres of Excellence must be identified and mobilized

The National Conference on IKS was followed (within days) by the first African Renaissance conference. Serote would present a paper entitled 'Science and Technology: Towards Prosperity in Africa' and state there that IK is the fallback, when nothing holds for the majority of African people and is a source of innovation both in the social and the natural sciences and that IKS can play a role in the re-awakening and re-emergence of the continent. (Serote, 1999). The utilization of IKS was seen as a significant contribution to the operational aspects of the African Renaissance. Subsequently all references to IK were made within the African Renaissance framework.

4.4.   The next stage: after the Moral Entrepreneur has won his first points

Serote was showing increased interest in the African Renaissance movement and ensured that the Portfolio Committee was kept up to date and that IKS was centrally positioned. The draft legislation was with the State Legal Advisors for drafting, but because of the complexities raised by intellectual property issues and the forthcoming election year in 1999, it would not be ready in time for passage through parliament's National Assembly by the end of parliament's year in 1998[7]. The legislative process would then have to start over again. During the period to follow, there is some indication that Serote may have been disappointed by the manner in which events unfolded in the research system and subsequently positioned himself to taking on a new task.

4.4.1. An IK world emerged

The PC on ACST ensured that IKS featured on their strategic plan and linked IKS to the African Renaissance during the election year of 1999. Some IK projects had started up at Science Councils like the CSIR (dedicated IKS Programme and Manager), MRC (instituted a new IKS initiative to redress health research traditions) and HSRC (refers to cross-cutting themes of IKS and gender and refers to 'facilitating the development of community-conscious scientists across the social and natural sciences') and had dedicated or appointed IKS Champions. It was also evident from available documents that organized IKS activity through the PC on ACST had slowed down significantly by early 2000.

The allocation of a parliamentary grant of R10million to the NRF in 2000 to support research in IK was a milestone event effected through the NRF Act and created a new impetus for IK activity. There was to be a new suite of focus areas for research support, one of which was IKS: IKS had moved through the system and found a 'home' in the NRF. IK was positioned alongside S&T in terms of NRF's mandate, so accessing grants, which were available predominantly through university research programmes, required

---

[7] Personal Communication, Mohamed, I.J.M., October 2003

that practitioners of research in IK were compelled to fit within a dominant (Western) research paradigm to source funds.

The intended outcomes as conceptualized by Serote, were that IK practitioners would be supported and resourced through the process that brought IK onto the policy agenda, and would through their participation, access the financial and structural resources. Though indigenous practitioners were participating throughout the process, they appeared now to be 'outside' of the 'mainstream' because accessing funds would provide particular (and perhaps for the time being insurmountable) challenges.

The type of activity for IK and its dedicated resources were placed in and managed by a 'western style' research funding institution. Participating in the activity and also accessing funds would be virtually impossible for most IK practitioners because they were not familiar with and/ or competent in the 'western style research process' and would also not be able to access funds for activity they might have deemed appropriate for IK. There were also notions expressed of IK being subjected to 'western style' research and in so doing, reformulating the knowledge that already exists in its own context and right. The NRF as dedicated research funding institution is regarded as 'mainstream' in terms of publicly funded research infrastructure. Indigenous knowledge practitioners would not have access to the activity and fund and would not be able to participate meaningfully within this environment, which places them 'outside' of this mainstream activity.

In the earlier part of the discussion, the specific rhetorics of IK appeared to be re-inforced by the space opened up by strategic science and technology. The rhetorics were part of the actor strategies of spokespersons who were seeking and constructing an audience among research institutions and government in general. A next step, guided by Van Lente and Rip's analysis, is to consider how these rhetorical activities had effects and moved actors, and how activities interlocked.

The heterogeneous actors referred to earlier, through their movements and linking up in terms of the scenarios, created through their interactions an IK 'world'. When one considers the available documents, there is a particular group of identifiable and recurring players, many of whom have taken up positions in the IK structures in Science Councils, government departments and universities. This actor-category world refers to a set of heterogeneous actors, related by their shared interest in the promise of IK and also by their mutual dependencies in their activities.

Throughout the process, Serote did not and could not have acted alone. Though he played a key role in driving the initiative as moral entrepreneur and promise champion, he always did so in concert with others. He collaborated with the organizations within the NSI, e.g. science councils, CSIR, HSRC, DACST, Parliamentary research staff, academics, traditional healers and traditional leaders, etc and interacted widely with the public. The IK initiative is clearly not just tied up with one actor; several actors are involved.

A key phenomenon worth looking at is how actors position themselves and others in relation to a future technology (option). When this mutual positioning interlocks, some co-ordination emerges (e.g. organizing structures, committees). There are also practitioners of IK, policymakers interested in innovative areas (for economic development) and researchers seeking funding support. IK has become a social reality and has found its own place. These positioning activities also create dependencies, especially through the articulation of a shared agenda for IK.

4.4.2. Serote as Moral Entrepreneur rather than Moral Custodian
Serote was a Moral Entrepreneur who had a 'wrong that needed to be put right'. He found in IK a way to redress the problems of the Apartheid past for Black South Africans and to find a way to understand (and create a space for this understanding) what it is that is/may still be embedded within IK. Through this process, he also hoped to achieve a better status for marginalized people and to extend this nationally, by implementing the ANC credo of creating a better quality of life for all.

A successful consequence of a crusade is the initiation of a new set of rules with the appropriate set of enforcement machinery provided. Though the Bill on the Protection of Indigenous Technologies, which was drafted in 1997 and initially drove this process, has still not been finalized, Serote ensured that the thinking underpinning IK discussions was present in the legislation of the NACI Act and the NRF Act. So one could suggest that the crusade was *partly* successful because one of the consequences of a successful crusade is the creation of a new set of rules. The NRF (likened to enforcement machinery) took over the administration of the IK research fund and the crusade was in part institutionalized, as these laws would have to be amended if there were to be a change in status quo. The initial piece of legislation is still in consultation phase within government departments and has not yet reached Parliament.

He may have achieved part success, in terms of applying IK to subsequent rules (perhaps not planned for IK consideration), but since his focus was on redress and including IK in society's mainstream, he did not achieve success with the initial rule. The funds for IK were allocated within the science system, and could thus not be accessed by practitioners; neither was the interrogation of knowledge accessible to IK practitioners, so they were essentially excluded from the mainstream indigenous knowledge debate. The process spanning approximately five years did not achieve much for the holders of IK and hence my positioning of the initiation by Serote of a new cycle of 'fixing wrongs'.

Serote, after reaching this point in the IK initiative, chose to generalize his interest and took up a new position at Freedom Park, a place where he could put in place mechanisms to deal with the evil/s of the South African past, which have to be addressed and to concentrate on reconciliatory issues. The IK initiative he started in Parliament was no longer. He was the moral entrepreneur for this aspect of IK, but not to be its moral custodian.

Custodianship[8] is defined as the protective care or guardianship of something or someone. He did not wait around to perform his oversight responsibility as Chairperson of the PC on ACST to ensure that the rules were properly implemented. He may well prefer to be a professional discoverer of wrongs to be righted, of situations requiring new rules as opposed to guarding the process and staying close to the implementation.

Serote was prepared to take the risk of going the route of the moral entrepreneur, but when the process had reached the required level of institutionalization, he left. Because of the importance of their humanitarian motive, moral crusaders (despite their relatively single-minded devotion to their particular cause) often lend their support to other humanitarian crusades. Serote is now prepared to leave 'driving of the IK movement within the research system' to its current caretakers within the respective homes. He has broadened his interest and is considering issues of IK on the continent as it is viewed from the perspective of the African Renaissance.

Serote's success is not just about how well he could enroll others, but depended on the way in which the area was positioned and how goodwill (political correctness) was mobilized. Serote is seen as the central actor and spokesperson which is indicative of the world he initiated and, in a sense, deserves the label bestowed on him as 'Father of IKS'.

This concern then possibly facilitated the move to the next challenge that required correction.

4.4.3. The beginnings of a new cycle

The earlier discussion started off by presenting a context where there were 'inherent' wrongs in a system that needed redress. It characterized Serote as a moral entrepreneur, an initiator of new laws who wanted to fix what is wrong, and drew comparisons between his modus operandi and that of Lasker of the cancer initiative in the USA. As Serote moved through the next stages of the process, discussion was devoted (concurrently) to

---

[8] Oxford Dictionary ; 10th Edition

how various actors were positioned, how the concept of IK moved through the system and subsequently took up 'new space' as well as the accompanying legislative processes. This section is devoted to following what happened after and considering whether this activity constituted a new cycle of events starting out after 2000.

The NRF had been allocated the R10million to fund IK research; the Bill had been through an intensive process of Public Hearings and the legislation remains in draft as it becomes ever more complex. A number of new recommendations had come out of the Hearings, which now required additional attention.

4.4.4. The main point is won for the moral entrepreneur
It is also stated that for the Moral Entrepreneur it is enough that the main point is won (Becker, 1969). In Serote's instance this may appear to have been achieved by getting IKS on the national research agenda with funding through DACST for the IKS research programme (managed by NRF) by early 2000.

The status quo was that the CSIR had in its possession the collection of indigenous technology data (from the national audit of indigenous technologies) and had agreed that this knowledge would be 'protected'. The NRF had presented a framework for its IKS Research programmes which would be introduced. Science Councils were to develop and share their participation in IK through the forum of IK Champions who would meet once every 2 months. Various new positions in IK were being created in the NSI e.g. Directorate in DST, research areas in science councils, projects funded by DST, etc. The crusade though not fully institutionalized in terms of the first law it initiated, had at this stage, managed to get IK onto the NRF's research agenda and also on the science policy agenda by DACST's Directorate for IKS.

Though a new set of rules/laws had been drafted, the work on preparing the legislation was ongoing. As chair of the PC on ACST, the broadest possible participation on the Bill was solicited through the Public Hearings process. That the initial draft legislation was being held up due to the pending elections and drafting challenges (posed by the blending

of indigenous knowledge and intellectual property issues at the time), did not prevent Serote from moving along a new trajectory.

The development of IK along the research system route had perhaps reached a conclusion and needed not to be pursued further along that course. Serote may have realized that it would require a different type of intervention to achieve the goals of mobilizing and supporting IK practitioners.

4.4.5. A New Cause – bringing IK practitioners to center stage
The focus on the interrelationship between IKS and the African Renaissance continued in 2001. The IK programme had spread out, primarily within the 'western system' of universities, science councils and the NRF; Serote, however, responded to bridging a new gap which had been highlighted. IK and the resources allocated to its programme and the momentum gathered during the process was located within the science system and did not necessarily 'reach' IK practitioners.

He moved the 'Vlakplaas project' to center stage during this year, focused all the available resources to ensure success and was intent on mobilizing traditional healers to engage and 'own' the development of IK processes. Serote's new cause can be described as 'bringing the traditional healers to center stage'. Serote referred to this event at Vlakplaas as going back to the drawing board, an 'opening of a dialogue with the poor, disadvantaged and marginalized sections of our society, through their most trusted healing and health institution; it is a means to go back to the drawing board to consider the moral fibre (…) the spiritual, mental and physical health of the nation' (Serote, 2001).

Serote also initiated a cleansing and reconciliation ceremony at Vlakplaas, the first of many – some still occurring during the time of writing this thesis. (Cleansing ceremonies were arranged for each of the nine provinces of SA, some countries on the African continent and one is also currently planned for 'cadres who fell in the USA' [9].

---

[9] www.freedompark.co.za and Cape Argus, September 30 2004.

Traditional healers were amongst others to be integrated into the IKS secretariat and to negotiate with the NRF to start a feasibility study in partnership with traditional healers. Though there was an initial space created for IK in the 'western style' NRF, it was evident that almost the entire 'knowledge force' of IK practitioners would not be able to participate. There would be opportunities for IK and western style research processes to interact and perhaps create different 'types of knowledge' and new learning spaces. One of the objectives from the meeting at Vlakplaas was to reach broad agreement on establishing Vlakplaas as a National Centre for Traditional Healing and Reconciliation (Serote, M. Vlakplaas Report, 2001). This 'research' institute would present a stepping-stone for IK practitioners to access resources and infrastructure and present opportunities for development and interrogation of IK knowledge and practices by practitioners of IK and 'western style researchers' would be welcomed[10]. This proposed initiative could be viewed as an additional/ 'third' space to bring together western science and IK, but in this way, with the possibility of IK having a better vantage point.

Serote may well have started with a new 'cause'. He vacated his portfolio in parliament after an announcement by President Mbeki that he would be taking on the role of Chairperson of the board of Freedom Park. In the State of the Nation Address by President Mbeki early in 2002, South Africans were informed that Serote had been appointed as the Executive Chairperson of the Board of Freedom Park[11]. He would be stepping down from Parliamentary duties to take up his new position. This project was given considerable resources and his new position would enable him to 'deal with other wrongs that need to be righted' in the 'New South Africa'.

It could also be noted that a moral entrepreneur's pre-occupation could become his occupation because the (IK) crusade had taken up so much of his time and once over, there could be a perceived void. (Becker, 1969). Considering Serote's thirty year service record to the (now governing) African National Congress (ANC), where a large

---

[10] Serote, Personal Communication, September 2001

[11] Freedom Park Conceptual Framework, March 2003: The primary objective of Freedom Park Trust is the creation of a monument to South Africa's heritage. Its secondary objective is the development of a resource for research and education aimed at developing a deeper understanding of South Africa and its people

proportion of his time was spent 'underground', one could probably consider the powerful impact that belonging to a 'deviant group' (within an Apartheid context and legal framework) like the ANC had had on Serote.

The year 2001, a busy year with regard to IK for Serote, culminated with the historic meeting of 700 traditional healers at Vlakplaas. Serote referred to the aim of this 'unprecedented' event as 'considering the future of traditional healing in the new SA and to signal to the nation the reconciliatory role of traditional healing (Serote, 2001). Though the IK crusade was not completely over, most of the fundamental work to ensure its positioning on the science policy agenda had been effected.

An interesting follow-up to this notion of Serote's engagement with Vlakplaas and his commitment to supporting the 'cause of the traditional healers, is the appointment of Mogomme Masoga[12] as the new IKS manager at NRF in July 2002. Masoga is an initiated traditional healer and diviner who completed his doctoral studies at the University of the Free State. He firmly believes that IKS should arrange its own space as a science, and be allowed to speak in its own voice[13]. Masoga is a practitioner in both IK and western science and has, in essence, also been accepted and welcomed in both institutional frameworks. A practitioner had been brought to center stage.
By August 2002, IK had occupied a formal space within the newly formed Department of Science and Technology (DST). A Directorate of IKS had been established along the lines of the structure that was suggested at the First National Workshop of IKS. IKS is also elevated as an area that should be focussed on to achieve national excellence alongside South African astronomy and human paleontology in the National R&D Strategy by President Mbeki.

According to Becker, when the moral entrepreneur is successful in the enterprise of getting a new rule established, he is out of a job. The crusade, which had taken up so much of his time, energy and passion, is no longer there. He had engaged in the struggle

[13] NRF Newsletter

as a person in opposition to the rules/laws of the country of his birth. In doing so, he was seen to behave in a deviant manner, as he was intent on infracting the country's rules. He was thus classified as an outsider and due to this, he worked in the underground as a member of the ANC. At this time, the South African society would have been divided on whether he was a rule-breaker as he was opposing non-humanitarian rules. The Apartheid machinery, though would have labeled him deviant.

Serote may have been an amateur during this first crusade as a rule maker when moved from a position of being a 'deviant' rule breaker to a legitimate rule maker after the transition to an ANC-led democracy. As a combination of a number of factors, he could have, through all these experiences, developed the drive of a moral entrepeneur. He started out trying to correct the wrongs of Apartheid and engaged in this crusade because of his passion for equality. So the striving for aspects of political freedom became an occupation. It can be argued that this occupation became his pre-occupation and so what was initially a moral issue became a full-time job (Rettig, 1977). Moving onto Vlakplaas could be considered a move along that continuum.

4.5. Discussion

4.5.1. IK in its own place

IK is not a new label in SA anymore. Various actors have arranged themselves around IK, and a new world of IK has emerged. This world is evident in the structural changes in institutions, e.g. universities now have centers of excellence in IK, have IKS programmes and course offerings, there are programmes at science councils, DST has a Directorate of IKS, the NRF has IKS as research focus area with a dedicated manager, there are directives for IK in the National R&D Strategy and the enactment of legislation such as the NACI Act and the NRF Act. Some interactions have been shown during the emergence of the IK world and how these may have worked because of the rise of the notion of strategic science and technology.

4.5.2. IK moves across the research system

Though the moral entrepreneur played a key role, he initially worked within a structural framework and used that framework to make the necessary changes. The nature of these frameworks themselves provided a context and also changed and so the system moved along incrementally with these changes. In effect, as the initiative grew and developed, the system changed synergistically and independently of the moral entrepreneur as there were now several more actors responding to the environment e.g. once the NRF Act was enacted, the IK Programme was out of Serote's hands and was implemented by the NRF. Now within the research system, it will continue to evolve within that context, independently from the entrepreneur.

During the process, new structures were put in place and actors had moved into 'position' to take up office there, e.g. Science Council IKS Champions, Directorate in DST, Research area in NRF, University Programmes, Centres of Excellence, etc. What happens is that actors take up positions and make linkages. In this way, nodes were created which then introduced irreversibilities in the process. Locations in research institutes (IK programmes located in CSIR and other science councils, IK programmes at universities, NACI and NRF Acts) were nodes and played key roles in the emerging world.

The structure below though basic, does begin to show the activity and relevant stages as the IK initiative evolved with its participating actors:

Date	Activity	Participating actors
Nov 96	Indigenous technologies Pilot programme came about ………………………………. *Introduction of indigenous technology as generalized promise*	PC on ACST, CSIR, University of the North ………………………………. *Co-producers of the play*
Feb 97	Roll-out of IKS programme	PC on ACST, CSIR, 9 Historically Black Universities, IKS Programme manager
June 97	New organizing structures formed	PC on ACST, CSIR, 9 Historically Black Universities Government Departments, traditional leaders, science councils, Parliamentary support structures, representatives from the provinces, IKS Programme manager

	………………………………. *Mutual positioning, creating nodes and irreversibilities*	………………………………. *Multiple actors creating dependencies and articulation of shared agenda for IK*
Nov 97	Parliamentary Draft Resolution …………………………………… *Connecting the Audit of IK to the African Renaissance*	Parliament
Feb 98	Launch of Year of S&T – positions IK alongside S&T IK Programme in YEAST …………………………………….. *Mutual positioning, creating nodes and irreversibilities*	Parliament, government departments, science councils, public ………………………………….. *Multiple actors creating dependencies and articulation of shared agenda for IK*
Sept 97	NACI Act - positions IK alongside S&T	Enacted
May 98	NRF Act - positions IK within S&T	Enacted
Sept 98	Protection and Promotion of South African Indigenous Knowledges Bill …………………………………………. *IK Legislation – turning point*	Referred to PC on ACST
Sept 98	National IKS Workshop Revitalisation of IKS and indigenous technology is a major aspect of our experience of the African Renaissance. …………………………………. *Connecting IK to the African Renaissance – precursor of new phase*	MP's, science councils, government department officials, universities, IKS practitioners ……………………………………..
Sept 98	African Renaissance Conference IKS is identified by the colloquium as a strategy to implement the 'African Renaissance dream' by civil society organizations …………………………………. *Connecting IK to the African Renaissance-precursor of new phase*	Cross section of society ……………………………………………
March 00	DACST makes R10million available to NRF to support research in the field of IK	DACST, NRF, Universities

	IK in its own space	
May 00 – Jul 00	Public Hearings on the Draft Bill on Protection and Promotion of IKS ……………………………… *New Phase starting*	PC on ACST, representatives of the public, NGOs, civil society, science councils ……………………………… *Traditional Healers, parliament and Public*
Dec 01	Vlakplaas Reconciliation and Healing Ceremony ………………………………….. *New Phase starting*	Traditional Healers, PC on ACST, Department officials, Science Councils, Universities, Politicians ……………………………… *Traditional Healers, Parliament, Government and Public*
Aug 02	IK Directorate established at DST IK recognized as a research area that should be pursued to achieve scientific excellence. National Research and Development Strategy. ………………………………….. *Implementation of prior agenda setting activities, taking place irrespective of moral entrepreneur*	Government Department Inter-departmental collaboration

4.5.3. IK ends up in different places than where it started.

Though the transformation theme is cross-cutting, one can trace the path of the IK

initiative within the South African research system. It started off within the Portfolio

Committee in conjunction with a science council and university, then several universities,

and other science councils became involved and took up further projects. Because IK

operated in the research system, its administration landed up with the NRF and there is

now also policy capability in DST. There are also IKS Centres and programmes at higher

education institutions[14].

IK ended up in a different place to where it started, and as the concept itself grew it took

up new and different spaces. The fate of IK is in essence bound up in the system in which

---

[14] Listed in the presentation by Mosimege to PC on ACST in August 2002

it currently finds itself and it will co-evolve as it evolves as an entity and also within the movements of the system.

4.6. Concluding remarks

The dynamics of the world of IK may offer some general points. Possibly the timely emergence of IK on the South African scene show that the field of IK was an example of the emergence and stabilization of strategic science and technology as an intermediate kind of research. The rhetorical space is initially filled with a rhetorical entity like 'indigenous technology'. These activities created a certain atmosphere in science circles and through the interaction of the actors in science councils, universities, government departments and traditional leaders and healers, an IK world emerged and the rhetorical entity became a reality.

In the South African example, the role of the moral entrepreneur-cum-spokesperson was central as the drive of Serote was a key factor in terms of creating the current position of IK. The interaction with other players created additional teams of spokespersons and together they journeyed along the process creating nodes and irreversibilities, many of which became independent of the moral entrepreneur and were able to function on its own subsequent to his departure. The data at my disposal suggest that the rule enactment of the NRF Act spurred on further questions for the moral entrepreneur and though positive in some respects also carried 'heavy burdens in another', e.g. the position of the traditional healers, which did not appear to be favourably affected by the new rules.

Chapter 5

Conclusion and Discussion

5.1. Introduction

The history of IK in SA during the 6-year period under study raises a number of issues with respect to how easy or difficult it is to embed new initiatives. It also provides some reflections of the dynamics of these developments and its co-evolution within the system and shows some effects of how things turn out.

The structure of the chapter consists of four broad sections, namely:

1) Asking whether there was success. There are many layers in this complex story; and considering what constitutes success would depend on reducing the complexity of the 'mixed bag' and looking more closely at components with the view of evaluating intended objectives.
2) Presenting some thoughts on how IK was refracted through the national research system, looking at new spaces for IK and considering intended objectives and eventual outcomes
3) Interesting developments for IK and
4) Some final reflections concluded by a 'short story'.

A. Was the process a success?

Looking at the success of any process depends on what perspective is being taken of the issue. There are often several perspectives and an attempt is made here to look at a few that may have become visible:

- IK as stepping stone to bigger development issues
- IK, Agenda setting and space in the national research system
- The expansion of IK on the policy agenda regionally and on the continent
- The origins and intended outcomes

5.2. IK as stepping stone to bigger development issues – success?

If one were to look at IK's position on the Science policy agenda as a stepping-stone to 'other/bigger' developments in terms of addressing inequalities in South Africa, then one could confer on it the status of 'reasonable' success. Success, because it brings with it opportunities to reflect on and learn from various issues inherent in its movement. The study has provided a first glimpse of the breadth of introducing IK (and its accompanying debates) into SA - it is a wide area - impacted by political developments nationally, continentally and globally. Epistemological, legislative, demarcation and development debates abound and what is presented in SA is perhaps a first pragmatic and exciting opportunity for the country to entertain the playing out of interactions between Indigenous Knowledge and Western Science in new kinds of knowledge spaces.

5.3. IK, Agenda setting and space in the national research system – success?

What was significant about the IK process, from its initial conception by Serote and his subsequent entrepreneurial drive, was the manner in which it grew (and flourished) due to the ongoing interactions with stakeholders (agenda setting) within the broader political and system developments within SA.

'Indigenous Knowledge' as a term and subsequently as research area and activity focus did not feature anywhere on the science policy agenda in South Africa prior to 1994. Now there are certain structural changes embedded in the system: it is legislated to be incorporated into the NRF's function; a research focus area in the suite of NRF's research programmes; universities have dedicated IK programmes, courses and Centres of Excellence; the concept of indigenous technologies is incorporated into the NACI legislation; DST has a Directorate for IKS, and IK as research area is referred to as an important area for national competitive advantage in the National Research and Development Strategy.

Various actors have, during this period, arranged and re-arranged themselves with respect to IK. Some, who were involved from the beginning, now hold senior IK positions. As the concept developed and IK was integrated into the existing system,

there were certain ideological and system challenges. The structural changes that occurred were accompanied by certain cultural changes, where research behaviours and expectations were continuously changing within the spaces affected by IK(in western style institutions). IK (or its name as cognitive space) that would 'shine a light on work that has been dismissed and denied'[1], while refracted through the system, is now featured on the national science policy and research agendas.

In terms of getting onto an agenda from nothing (no mention in policy documents prior to 1994) and having followed a process led by Serote with the support of a number of actors in the research system, the IK initiative can be viewed as a success and an opportunity. The IK research area now has dedicated resources, (that it is within a western style system, will be discussed later) and there are opportunities for IK and western science to play out their relationship within this space.

5.4. The expansion of IK on the policy agenda regionally and on the continent – success?

From its initial debut, IK as concept has expanded and now also features as a policy item regionally (on the SACAR agenda) and continentally (on the NEPAD agenda): this in support of ongoing political developments (driven by the Africa Renaissance agenda) and also generalized support for what is perceived by IK in policy and government circles in the country.

As a stepping-stone to facilitating broader development issues, the expansion of the initial IK process to broader contexts may be deemed as constituting a measure of success.

5.5. The origin and intended outcomes of the IK initiative – success?

Having considered what can be viewed as elements of success, I now introduce some of the challenges that are contributing to the perspective of the lesser or unsuccessful.

---

[1] IKS Funding Proposal, 1998

Serote introduced IK into the science system as an option for a transformation 'solution'. The initial thoughts of transforming the science system through introducing indigenous knowledge as an opportunity for redress, was part of a broader political 'cause' of 'closing the inequality gap'. The initial focus, driven by Serote, was on trying to 'fix' the general inequality issues inherent in the Apartheid designed-S&T system whilst simultaneously attempting to address the effects that this science policy had had on the majority of South Africa's people. The 'kernel' or core within the initial idea was that students from historically Black universities would interact with indigenous knowledge practitioners and 'through their interaction move toward closing the gap between science and indigenous knowledge'. Central to this position was that every effort ought to be made to ensure that indigenous practitioners were to be brought into 'mainstream'; their voices heard, their knowledge protected and opportunities created so that they form part of the mainstream economy. 'Indigenous knowledge' projects would be introduced into structures in the science system and were intended to transform them and vice versa[2].

It was subsequently discovered that the gap (between IK and the science system) was wide; this could be viewed a first attempt by IK as David interacting and sharing ground with western science as Goliath. There was a deviation in this plot of the David and Goliath story though, because the idea was that as the novelty gained strength, it would not necessarily overthrow the giant; it would together with the giant, address further problems.

When IK was introduced into the research system and moved through the process with participation from actors in the system, the gap was soon evident. This was so, because once IK was refracted through the system, its introduction as research focus within the NRF and its implementation took on (most of) the characteristics of western style research. With David (IK) standing alongside Goliath (Western science) in Goliath's territory, the difference in manoeuvrability and power would in all likelihood be felt.

---

[2] Serote, 1998, IKS Review: Practitioners must accept that IKS is dynamic and for the issue to be accepted as IKS, to understand that it does not have as its basis the reference and logic that they are familiar with which emanates from their training. This partnership and shift in paradigm offers a potential to Africa and humanity in general that multidisciplinary approaches to solving current world problems (…) and further development of S&T potential are a quality source for the 21st Century.

Here are perhaps two key issues:

1) That IK (and its structures and irreversibilities) is now within the (western style) research system brings with it opportunities for western science to interact with the development- and other issues of IK; so there may be opportunities for transforming aspects of both IK and western science.

2) IK was initiated into and moved through the research system. Most of the actors who participated in the initiative and the infrastructure that supported the process, were a 'part' of the larger composition of this system and subscribed to its norms and standards. That IK 'ended up' in the NRF appears to be an (inevitable) outcome of a process where the thinking would have been guided by particular 'constructs' and may invariably have gone in that direction (western science). IK practitioners and structures may not have stood much of a chance. By virtue of this process, the participative voice of the indigenous practitioners and their access to IK resources may well be outside of the ambit of this arrangement.

B. Understanding what happened

5.6. IK refracted through the national research system

The indigenous knowledge initiative moved through the national research system and was refracted[3] through the various institutional levels:

At the top level, (consisting of government, ministries, parliament), there clearly was priority given to implementing politically correct aspects of the Constitution and politically correct goals. In the intermediary layer consisting of funding agencies, e.g. NRF and boards of science councils, these organisations had to appear to be responsive and pay attention to this new initiative as was demonstrated by the NRF. It was their task to translate the broader national goals and make them concrete and practical. The NRF had been attempting to do this since 2000[4], with the intended

---

[3] Rip, A, Spaces for IK in Western Science and Science Policy, unpublished manuscript; Refraction is a general phenomenon, not limited to the case of IK.
[4] After the NRF Act in 1998 and their presentation to PC on ACST in Feb 2000.

premise that research into IKS should ideally be carried out with the participation of the communities in which it originated and is held. The modus operandi for participating researchers during this initial phase (from 2001) was predominantly 'western science' in nature and had to comply with the requirements at (typically western style) research institutions.

IK was placed as a focus area on the research agenda. The research system has its own resources and actors; it also has its own structure and rules and this system is dynamic. One may argue that if IK practitioners had been on board as full and regular participants throughout the process in their own knowledge 'infrastructure environment' and other (relevant) types of resources provided as requested by them, that there might have been a different outcome.

Within the science councils (research performing organizations), there were pressures to be operational and safe and accommodate the nature of indigenous knowledge. The CSIR, as the first science council to engage with IK has a comprehensive list of entries on its website which include the various research areas in IK, the relevant business units involved with IK projects, projects by name, newsletter articles and press releases on the CSIR's contribution within the development of IK. The MRC has a dedicated IK unit; the HSRC has IKS as an important cross-cutting theme occurring in each of the HSRC's New Priority Areas. The Agricultural Research Council (ARC) presents a number of research items under indigenous crops, shrubs, etc.

There was pressure on all Science Council heads to conform politically whilst still keeping within their operational requirements. The PC on ACST exercised political oversight over the science councils and it may not have been wise to resist during the early stages. At first glance, it appears that most of the activity/programmes/projects that are detailed on the respective websites fit predominantly into one of the three types of projects which are distinguished by Rip[5]. These show up mainly as examples

---

[5] Rip, A. Spaces for Indigenous Knowledge in Western Science and Science Policy, STHV Special issue

of 'findings and insights from indigenous knowledges, which are picked up as data[6]'
or could be viewed as 'compartmentalized research of a more traditional kind'
(Nowotny et al as quoted in Rip).

IK in the system was further enhanced by the appointment of IK research managers at
the CSIR and MRC. There were numerous proposals from science councils for
accessing funds from and wanting to co-operate with DST on IK projects. Universities
had varying programmes with respect to IK. Some had established Centres of
Excellence, some had research programmes and others offered courses[7]. University
programmes also accessed funds for research on IK through the NRF.

5.7. New spaces for IK

Even so, there were a few initial spaces to explore some alternative knowledge
approaches. A variety of spaces, as science councils may well have different
approaches and could vary from university research programmes and also the
'poverty-alleviation-IK linked projects' initiated by DST (and also because IK and
western science are not in themselves unitary).

Within these new spaces there may be opportunities for aspects of IK and Science to
interact. These interactions present opportunities for incremental change within the
system and whilst extrapolating quite a bit, perhaps also translate into other positive
social change in the country. These changes impact on the various actors, their
programmes and their understandings, and their approaches may be altered with time
because of it.

5.8. Considering Intentions and Outcomes

The time between 1997 and 2000 was a relatively short time to effect the kind of
change Serote was looking for. He wanted to see science councils and tertiary
institutions transformed through the interaction with IK and vice versa[8].

---

[6] e.g. biochemical components which are attributed to medicinal uses of plants, and application of
technologies to IK in arts and crafts, e.g. how to manufacture more African masks or enhance African
games through technology, cashmere beneficiation, essential oils propagation and processing
[7] Mosimege, M (2000). Briefing to Select Committee on Education and recreation on www.pmg.org.za
[8] Personal Communication, September 2001, Serote wanted to know at one stage whether the CSIR
had not changed at all due to the injection of R2m for IKS.

Not all participants in the system necessarily grasped the developments, followed the debates and understandings accompanying the IK programme. Nor could it all occur in quite the same way. So there were a multitude of departure points, philosophies and views by people in the research system of what constituted IK and this impacted on what they did, how they did it and how all of these individuals compositely impacted on the system through their multiple interactions.

That IK features within the research system and on the science policy agenda is a measure of success. By its very presence on the science policy agenda and its position in the national research system and the positioning of the actors, the irreversible nodes that were created and the legislation that was passed, the IK research focus area (and all its parts) will move along within the system independent of the moral entrepreneur - and this IK integration will impact on the research system as it moves along.

But the rationale behind the cause was about addressing inequalities within the system and then also moving practitioners of IK to centre stage and offering more (resources and infrastructure) to them. By the time IK was positioned within the NRF and Serote and the PC on ACST was doing its round of visits to the science councils 1999/2000, Serote was having doubts about the success of the initiative. He raised the issue of 'IK being placed under the Western science lens and being subjected to the requirements prescribed by its research institutions'[9]. The IK initiative had come 'this far' in time and even with the political will and support, and the drive of a moral entrepreneur, certain irreversibilities had set in. IK and its resources was placed in the care of the NRF (research system) with policy and other functions residing in DST; the 'might' in the 'composite movement' of actions of those participating in the research system had taken over and were now not easy to change.

Practitioners of IK did not have access to any resources within this system (through the NRF) and the overwhelming majority were not eligible for funding because they did not comply with the requirements of the research process. That indigenous

---

[9] Serote, Personal Communication, September 2001

practitioners did not in effect have access to IK resources was a significant challenge and could be viewed in part as weighing down the success of the IK initiative.

C. Interesting developments

5.9. Appointment of new manager at NRF

But the situation is not static. The appointment of Masomme Masoga as manager of the NRF's IK focus area in July 2002 was a very interesting development. His appointment presented an interesting opportunity to follow the 'space' because he is both a 'western style' academic and an 'initiated divine healer'/IK practitioner. He is therefore schooled (in 'both ways') and so it may be interesting to see what new elements he would introduce into the IK focus area of the research system.

Masoga has since left the NRF in April 2004. No new appointment has been made in the position of IK manager. Currently Dr Tessa Marcus, the executive director of the programme 'Research Promotion' is the custodian of the IK focus area. She is supported by a professional officer for IK, Ms Skami Mthembu[10].

5.10 Serote's new cause and course

Another interesting development started earlier. Concerned about the fate of IK practitioners, Serote ventured out on a new course. With IK now positioned as the key driver for the African Renaissance, a vision through which 'people should engage in soul searching and vigorous pursuits of the meaning and value of their past'[11]. The structures and processes that had been put in place would take their due course. DST had the responsibility of finalizing the IK legislation. Not to be bogged down with the detail and perhaps not being too satisfied with the outcome, he accepted his role as Chairperson of the Board of Freedom Park. In this role he had access to more resources, more control and could attend to a process he now thought required his priority attention.

---

[10] Personal Communication, 18 November 2004
[11] Ministry of Arts, Culture, Science and Technology, Minister L Mtshali, Letter of Support to IKS Systems Workshop, 30 September 1998

Serote kick-started this process with a healing and cleansing ceremony at Vlakplaas, the intent of which was to 'mobilize the practitioners, so they could now own the high speed IK process' (Serote, 2001). Subsequently healing and cleansing ceremonies were rolled out, presenting several opportunities for mobilizing healers in the other eight provinces. These were followed by similar ceremonies in the SADC region (Botswana, Mozambique, Lesotho and Swaziland) and more were being planned for countries in which liberation movements found asylum (Cape Argus, 30/9/2004) such as UK, Russia and America[12].

5.11. Final reflections

Perhaps there was in the beginning a romantic embracing of all things local in terms of the exciting possibilities that were presented by the potential of revealing 'blockbuster technologies'. This was accompanied by the rhetoric of positioning a promising area on the strategic science agenda with the appropriate political will and a moral entrepreneur with the passion to drive the process. There was no overt repression by a dominant regime (and there was strong political support), but the dynamics of evolution of an item, once placed within the established western style research system with its structures in place, and actors positioning themselves, were underestimated.

Serote identified new possibilities for bringing IK (which he saw as a valuable resource and as vibrant cultural heritage) and western science (with its well-established resource base and structure) together. He was keen to identify new spaces for the interaction between these different 'knowledge resources' and their different 'knowledge traditions'. Protecting IK, a central issue throughout the development of the IK agenda, led to struggles and tensions that also required rethinking the epistemic aspects of both western science and indigenous knowledge. Ironically attempting to protect IK put most of the challenges on the table. DST[13] subsequent to participating in this initial process, referred to IK as 'an area of considerable complexity, and hence

---

[12] The roll-out of these ceremonies were advertised widely in daily newspapers and on the Freedompark website www.freedompark.org.za

[13] DST's Corporate Strategy 03/04-05/06

the need to provide a positive enabling environment locally and (to further support) the more effective protection of IK holders'.

Political developments in SA had put pressure on western style organizations. Through such forced attention to IK, opportunities were presented for creating spaces for new ventures for IK in western style organizations. This initiative became refracted in the existing research system with its multiplicity of existing spaces and this was possible because IK is not unitary. This science policy space is located within the existing research system, but it does open up new epistemological space – to be exploited by further moral entrepreneurs, as well as various research performing actors, and perhaps also IK practitioners.

In the meantime, Serote, moral entrepreneur and 'Father of IKS' has left the portfolio where he started the IK initiative and where he could impact on the national research system. He has moved, changed his course, but not his cause! There is now talk emanating from the SACAR Colloquium (November, 2002) about initiating legislation at the SADC parliamentary level for the common good of the region. The legislation is aimed at introducing IKS projects regionally and more broadly on the continent. He has found a new cause and a new cycle for this moral entrepreneur has started.

I enjoyed the metaphor summarising IK as a growing seedling

An IK story

The seedling in the soil

The metaphor of 'IK as growing seedling in SA' is useful to frame the development of IK and to make some comments on the 'fruit' or 'outcomes' of the process.

The initial seedling planted could be viewed as representative of the fusion of two (parent) components, namely, the potential products offered by the 'indigenous' and the economic promise that came with 'technology'. The research system, 'its soil' which provided a medium for and supported its

growth can be considered in terms of the constitution of the soil, *i.e.* what it had to offer in terms of components, support, etc.

The seedling had much promise of blossoming and bearing good fruit and was nurtured (by particular caregivers and Serote) and fed with the necessary nutrients e.g. water (political support) from external sources (outside the research system). It was however planted in soil (national research system), which was not really suitable for its optimal development. The seedling continued to grow into a plant (IK committee structures) and many caregivers helped look after it and feed it. However, when it bore fruit, the fruit had adapted to the soil conditions. It did not bear the seedling's anticipated fruit, even with all the externally provided nourishment (political will, resources). The ability of the soil (system) to contribute to the formation of the fruit may have been underestimated.

This seedling of 'indigenous technology', once sown, was intended to grow and blossom (in the 'soil'/science system) and bear wholesome fruit, i.e. 'new kind of knowledge' (which would sprout innovation) that in turn would possibly 'enrich the soil' (the research environment - by bringing indigenous practitioners and their knowledge into mainstream with access to system resources and vice versa). This particular fruit may well be able to enrich the soil, but the process may be slow and also depends on how the soil will adapt (evolve) to accommodate this enrichment.

Perhaps the new seedlings formed could be planted in different soil (within IK structures, e.g. Vlakplaas institute) or alternatively brand new seeds could be planted in more appropriate soil. All of the flowers that come from these seedlings could cross-pollinate to create interesting new fruits…

References

Agrawal, A. (1993). Indigenous and scientific knowledge: Some critical comments. *Development and Change* 26: 413-439

Agrawal, A. Indigenous Knowledge: some critical comments. *IK Monitor 3(3)* from http://www.nuffic.nl/ciran/ikdm/3-3/articles/agrawal.html

Becker, H.S. (1973). *Outsiders*. New York: The Free Press

Commission on Human Rights. *The Mataatua Declaration on Cultural and Intellectual Property Rights of Indigenous Peoples: June 1993*. Visited on 20/5/1998. http://www.ankn.uaf.edu/mataatua.html

CSIR. *The State of Indigenous Knowledge Systems in South Africa 3*: Protection and Promotion'. Visited on 02/05/2000 on http://corporate.csir.co.za/PolGrp/iksstate.html

CSIR. *Draft Bill on Protection and Promotion of IKS in South Africa*. Visited on 02/05/2000 on http://corporate.csir.co.za/PolGrp/draftbil.html

Department of Arts, Culture, Science and Technology Portfolio Committee. *Indigenous Knowledge Systems: Briefing*, 9/2/2004, 1-10, accessed 17/12/2003, http://www.jutastat.com

Department of Arts, Culture, Science and Technology. *Annual Report 2001/2002*.

Pretoria: Government of the Republic of South Africa.

Department of Arts, Culture, Science and Technology (1996). *White paper on Science and Technology: Preparing for the 21st Century.* Pretoria: Government of the Republic of South Africa.

Department of Arts, Culture, Science and Technology.(1996). *White paper on Arts, Culture and Heritage.* Pretoria: Government of the Republic of South Africa.

Department of Arts, Culture, Science and Technology. *5 Year Strategic Plan: 2000-2004*. Pretoria. Government Printers.

Department of Arts, Culture, Science and Technology (2000), *Plan of Action for Committee*, 1-8, accessed 17/12/2003, http://www.jutastat.com

Department of Science and Technology. *Indigenous Knowledge Systems in India: Contents of Report*. Visited on 13/01/2004
http://www.dst.gov.za/programmes/indigenous_knowledge/India_visit_2K_rpt/main.htm

Department of Science and Technology. (2002). *South Africa's National Research and Development Strategy.* Pretoria: Government of the Republic of South Africa.

Department of Science and Technology. *Annual Report 2002/2003.* Pretoria: Government of the Republic of South Africa.

Department of Science and Technology. *Corporate Strategy 2003/4 – 2005/6.* Pretoria: Government of the Republic of South Africa.

Department of Science and Technology. *Indigenous Knowledge.*Visited on 11/11/2002 http://www.dst.gov.za/programmes/indigenous_knowledge/indigenous_knowledge.htm

Estimates of National Expenditure (2002), *Arts, Culture, Science and Technology Vote 14*, Government Printers Parliament of South Africa

Estimates of National Expenditure (2003), *Science and Technology Vote 18*, Government Printers Parliament of South Africa

First South African Academic Colloquium on Indigenous Knowledge Systems, 29 February – 3 March 2004, University of the Free State, Bloemfontein, South Africa, accessed 13/01/2004, http:// www.z2a.co.za/iks/

Government Gazette, 1997 No 18425, *National Advisory Council on Innovation Act No. 55, 1997*, Cape Town: Government Printers, 14 November 1997

HSRC Annual Report 2000/2001, *Indigenous Knowledge Systems* 1-1, accessed 14/1/2004, http://www.hsrc.ac.za/about/annualreport/2001/iks.html

UNHCHR. *Indigenous Peoples*. Visited on 18/12/2003.

http://www.unhchr.ch/indigenous/main.html

Le Grange, L. (2001) Challenges for participatory action research and indigenous knowledge in Africa, *Acta Academica* 33 (3): 136-150

Indigenous peoples and the United Nations System: An Overview, Leaflet 1. www.unhchr.ch/**indigenous**/**group**s-01.htm

Makgoba, M.W. (Ed). (1999). *African Renaissance*. *The New Struggle*, Cape Town: Mafube Publishing

Matsabisa Dr MG, Medical Research Council of South Africa (2002-2003), *Corporate Reports: Indigenous Knowledge Systems Annual Report 2002-200*', accessed 14/1/2004, 1-1, http://mrc.ac.za/annualreport/culture.htm

Medical Research Council of South Africa, *Indigenous Knowledge Systems Initiative*, accessed 14/1/2004, 1-1, http://mrc.ac.za/innovation/indigenous.htm

Mosimege, M. (2002). *Indigenous Knowledge Systems in South Africa: An Overview*-Briefing to Select Committee on Education and Recreation on 13/08/02 on www.pmg.org.za

Mthembu, S & Mosoga, M (Jul-Aug 2002), *NRF IKS Newsletter*, 1-4

National Research Foundation (NRF), *Focus Areas, Indigenous Knowledge Systems*, accessed 14/1/2004, http://www.nrf.ac.za/focusareas/iks/

National Research Foundation (NRF), *Indigenous Knowledge Systems Focus Area: Second Call for Proposals for Funding in 2001 and Beyond*, accessed 14/1/2004, http://www.nrf.ac.za/news/ikscall.stm

National Research Foundation (NRF), *Proposed programme for the NRF's Indigenous Knowledge Systems (IKS) Research Programme*, accessed 25/04/2004. http://www.pmg.org.za/minutes/000412NRF1.htm

NRF People's Science Voice Newsletter, Vol 1 No 3, April-May 2003

NRF People's Science Voice Newsletter, Vol 1 No 2, October-December 2002

Odora Hoppers, C.A. (1999). *Indigenous Knowledge and the Integration of Knowledge Systems: Toward a Conceptual Framework.* Pretoria: Human Science Research Council. A discussion document prepared as part of a Comparative Study of the Development, Integration and Protection of Knowledge Systems in the Third World, initiated in consultation with the Parliamentary Portfolio Committee on Arts, Culture, Language, Science and Technology of the Parliament of South Africa, and endorsed by the Science Councils of South Africa.

Odora Hoppers, C.A. (Ed). (2002). *Indigenous Knowledge and the Integration of Knowledge Systems: Towards a Philosophy of Articulation*. Claremont: New Africa Books

Odora Hoppers, C.A. (1997). *Science and Technology in Africa: Research without Programmes, Scientists without Community* - Presentation to Portfolio Committee on Arts, Language, Science and Technology, 16 October 1997

Parliament of South Africa. (1996), *Council of Traditional Leaders Bill*, Government Printers Parliament of South Africa

Parliament of South Africa. *National Assembly, Order Paper, No 81-1997*, Tuesday, 25 November 1997.

Parliament of South Africa. (1998). *Parliament Launch: The Year of Science and Technology*. Wednesday, 4 February 1998.

Parliament of South Africa (1998), *Programme of Action: Sub-Committee: Science and Technology*

Posey, D. A. (2002) *Upsetting the Sacred Balance: Can the Study of Indigenous Knowledge Reflect Cosmic Connectedness.* Visited on 11/11/2002.
http://www.asa2000.anthropology.ac.uk/posey/posey.html

Portfolio Committee on Arts, Culture, Science and Technology. *Indigenous Knowledge Systems*. Visited on 15/09/1999.

http://www.polity.org.za/govdocs/p...ment/committees/acst/indigeno.html

Ravjee, N.(2002). *A review of the literature related to the project titled 'Beyond knowledge dichotomies: a critical analysis of the dichotomy between indigenous knowledge and western science. Two case studies in South Africa – health research and agricultural research.*

Rettig, R.A. (1977). *Cancer Crusade: The Story of the National Cancer Act of 1971.* Princeton: Princeton University Press

Rip, A. (1997). A cognitive Approach to Relevance in Science, *Social Science Information*, 36(4): 615-640

Rip, A. *Heterogeneous Knowledge Management as discussed in the AGRINOVUM Project*

Rip, A. (2000). *Indigenous Knowledge and Western Science- In practice.* Paper presented at Cardiff Conference on 'Demarcation Socialized' in Wales, UK

Rip, A. (2001), Spaces for Indigenous Knowledge (and Western Science), 4S Meeting, Cambridge, Massachusettes

Rip, A. *Spaces for Indigenous Knowledge in Western Science and Science Policy*, Unpublished manuscript

Serote, M.W. (1998). Column in the Year of Science and Technology, *Indigenous Knowledge and Development Monitor,* 36 (4):December 1998

Serote, M. W. (1999). 'Science and Technology: Towards Prosperity in Africa', in

Makgoba, *African Renaissance.* (1999): 351-355

Smith, L.T. (1999). *Decolonizing Methodologies: Research and Indigenous Peoples*.

London: Zed Books

South African Musuem. *Indigenous Knowledge in South Africa-online exhibition.* Visited

on 14/01/2004 http://www.museums.org.za/sam/ulwazi/intro.htm

UNESCO (1998), *World Science Report,* Paris

Van Lente H, & Rip,A. (1998). The Rise of Membrane Technology: From Rhetorics to

Social Reality. *Social Studies of Science*, 28 (2): 221 – 254

Weingart, P. *Knowledge and Inequality,* M Phil IKS Discussion notes