

https://dspace.org/

Indigenous knowledge systems and intellectual property laws in South Africa

Mukuka, George Sombe

2010-07-02T11:46:27Z
http://hdl.handle.net/10539/8257

Downloaded from a DSpace repository. https://dspace.org/

Indigenous Knowledge Systems and Intellectual Property Laws in South Africa

George Sombe Mukuka

Index

List of contents	Page number
Declaration	iii
Dedication	iv
Abstract	v
Acknowledgements	vi
Table of contents	vii
List of abbreviations	xii
List of tables	xiv
List of graphs	xiv

Declaration

I, George Sombe Mukuka, declare that this thesis is my own, unaided work. It is being submitted for the Degree of Doctor of Philosophy, Faculty of Science, University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in any other University.

George Sombe Mukuka

20th day of February 2010

Dedication

To the voiceless indigenous communities and practitioners of South Africa.

Abstract

The aim of this study is to analyse the current status of indigenous intellectual property rights protection in South Africa. The current intellectual property laws and legislations in South Africa do not fully protect indigenous knowledge systems and in some instances the indigenous knowledge is misappropriated, abused without proper recognition and acknowledgement of the custodian of this knowledge. The thesis suggests that in order for us to fully understand the developments of intellectual property in South Africa, we need to look at similar developments in the United States and Australia. Using conceptual tools dealing with post-colonial, contested culture and legal theories such as the natural-law and the economic model, the thesis tries to analyse the current predicament, in the light of the research main question: how can one possibly marry indigenous property rights and the western legal frameworks in a practical and ethical way?

Acknowledgements

I would like to express my sincere gratitude to Dr Ben Smith, my supervisor, whose expert guidance, encouragement and comments made the thesis to be in its present form.

Ms Anne Stern my co-supervisor, for her expert legal guidance, encouragement, professional advice, and all the hours generously spent, which made this research exciting in the end.

Arthur Champkins of Himeville in KwaZulu-Natal for assisting in editing the final text.

This thesis has been greatly assisted by the financial support of the Technikon Witwatersrand Research Fund, University of Johannesburg and the National Research Foundation.

All members of my family for their endless patience, support and encouragement.

Table of contents

Chapters	Page number
Chapter one	1
Introduction	1
1.1 Indigenous knowledge systems	1
1.1.1 What is indigenous knowledge?	2
1.1.2 What are indigenous knowledge systems?	3
1.1.3 What is indigenous technology?	4
1.2. Intellectual Property Laws of South Africa	5
1.2.1 Patents	6
1.2.2 Copyright	7
1.2.3 Designs	8
1.2.4 Trademarks	8
1.3. Aim of the study	9
1.3.1 Postcolonial theory	15
1.3.2 Contested cultures	17
1.3.3 Natural-law theory	19
1.3.4 Economic theory	19
1.4 Chapter outlines	21
1.5 Conclusions	22
Chapter two	24
Conceptual framework	24
2.1. Conceptual framework	24
2.2. Orientalism as a way of describing postcolonialism	24
2.2.1 Power as defined by Foucault and Gramsci	27
2.2.2 Central thrust of Orientalism	27
2.3 Contested Cultures	30
2.4. The natural law theory	32
2.4.1 The theory of personality rights	35
2.4.2 Individualism versus Communalism	37
2.5. The Economic Philosophy	40
2.6. The use of the theories	42
2.7. Conclusions	43
Chapter three	45
The role of indigenous knowledge in South Africa: *The Hoodia* (*Hoodia gordonii)* and the African Potato (*Hypoxis rooperii*)	45
3.1. Introduction: a need for protection	45
3.2. The *Hoodia gordonii*	47
3.2.1 Species	47
3.2.2 Intellectual Property Rights	48

3.2.2.1 San rights regarding *Hoodia Gordonii* 49
3.2.2.2 WIMSA media and research contract 53
3.2.2.3 Recent developments regarding the *Hoodia gordonii* 54
3.3. The Africa Potato *(Hypoxis rooperii)* 57
3.3.1 Species 58
3.3.2 Economic and cultural value 59
3.3.3 Western exploitation of the African potato 61
3.3.4 Questionnaire on the African Potato 67
3.4 Conclusions 93

Chapter four 96
Divergent approaches to indigenous communities: The legal regimes of the United States and Australia 96
4.1. Introduction 96
4.2 The need for protection of Native American graves 97
4.2.1 State Statutory Law 101
4.2.2 Legal Theories Supporting Protection and Repatriation of Native Dead 101
4.2.3 Pre – NAGPRA State Legislation 102
4.2.3.1 Protection for unmarked graves and repatriation legislation 102
4.2.3.2 Federal Legislation 102
4.2.3.3 National Museum of the American Indian Act 103
4.2.3.4 Panel for a national dialogue on Museum - Native American relations 104
4.3 The Native American Graves Protection and Repatriation Act (NAGPRA) 104
4.3.1 Legislative Intent 104
4.3.2 Repatriation: Human Remains and Associated Funerary Objects 105
4.3.3 Repatriation: Unassociated Funerary Objects, Sacred Objects, and Items of Cultural Patrimony 105
4.3.3.1 Identification of the item 105
4.3.3.2 Cultural affiliations and prior ownership or control 106
4.3.3.3 Right of possession: claimant's prima facie case 106
4.3.3.4 Right of possession: burden of proof 107
4.3.4 Inventory: Human Remains and Associated Funerary Objects 107
4.3.5 Summary: Unassociated Funerary Objects, Sacred Objects, and Items of Cultural Patrimony 107
4.3.5.1 Tribal Ownership and Control: Imbedded Cultural Items 108
4.3.6 Prohibitions against trafficking 108
4.3.7 Review committee 109
4.3.8 Enforcement and implementation of NAGPRA 109
4.3.9 Contentious issues of NAGPRA 112
4.3.10 What can South Africa learn from this? 115
4.4 Indigenous Cultural and Intellectual Property (ICIP) Project in Australia 118
4.4.1 Indigenous cultural and intellectual property 120
4.4.2 How far the existing Australian legal system protects indigenous intellectual and cultural property? 123
4.4.2.1 Copyright in Australia 123
4.4.2.2 The Designs Act 125

4.4.2.3 The Patents Act 124
4.4.2.4 Trademarks 125
4.4.2.5 Legislation governing breach of Confidence 125
4.4.2.6 Passing Off 125
4.4.3 Possible solutions 126
4.4.3.1 Amendments to the current Australian legal system 129
4.4.3.2 Key conclusions of the ATSIC discussion paper 130
4.4.3.3 Application to South Africa 131
4.5 Conclusions 132

Chapter five 136
Intellectual Property Laws in South Africa 136
5.1 Introduction 136
5.2 South Africa's intellectual property system 136
5.2.1 The Current intellectual property law implementation and enforcement 138
5.2.1.1 Patents Act 57 of 1978 138
5.2.1.1.1 Intrinsic requirement 139
5.2.1.1.2 Extrinsic requirements 140
5.2.1.1.3 Procedure 143
5.2.1.2 Copyright 144
5.2.1.2.1 Various approaches to the nature of copyright 145
5.2.1.2.2 Balance of interests 147
5.2.1.2.3 South African law of copyright 147
5.2.1.2.4 Sources of South African law of copyright and related legislation 148
5.2.1.2.5 Requirement for vesting of copyright 149
5.2.1.3 The Designs Act no. 195 of 1993 153
5.2.1.3.1 Novelty 154
5.2.1.3.2 Originality 155
5.2.1.3.3 Not Commonplace 155
5.2.1.3.4. Articles must be intended to be multiplied by an industrial process 155
5.2.1.3.5 Further requirements 155
5.2.1.3.6 Procedure 156
5.2.1.3.7 Term of a design 156
5.2.1.3.8 Effect of the design 156
5.2.1.4 Trade Marks Act, 1993 157
5.3 International obligations 161
5.4 Intellectual property advisory committee 161
5.4.1 Protection of indigenous knowledge systems 162
5.4.2 Protection and Promotion of South African Indigenous Knowledge Bill 163
5.4.3 Promotion of South African Indigenous Knowledge Systems Bill 163
5.4.4 Submissions on the first draft Bill 164
5.4.5 Recent developments 166
5.4.6 The Draft National IKS Policy 167
5.4.7 Comments on the policy process 169
5.4.8 Indigenous Knowledge Systems (IKS) Policy, November 2004 169

5.4.9 Indigenous Knowledge Systems (IKS) Policy, November 2007 171
5.5 International practice in protecting indigenous knowledge systems 171
5.5.1 The protection of indigenous knowledge systems locally 174
5.6 Other relevant legislations 176
5.6.1 The National Heritage Resources Act, No. 25 of 1999 176
5.6.2 World Heritage Convention Act No 49 of 1999 177
5.6.3 National Environment Management: Biodiversity Act (no 10 of 2004) 178
5.6.4 Plant Variety Protection, Farmers' Rights and Farmers' Privileges 180
5.6.5 National Heritage Council Act, 1999 182
5.6.6 Trips Article 27.3(b) 183
5.7 In terms of the Acts and legislations – scope of protection 185
5.7.1 Patents Act 57 of 1978 185
5.7.1.1 Patents Act 57 of 1978: Major gaps and areas of concern 190
5.7.2 Copyrights Acts 192
5.7.3 Trade Marks Act 194
5.7.4 Other developments 196
5.8 Conclusion 199

Chapter six 201
The Protection of Indigenous Knowledge through the Intellectual Property System: Policy and Bill (2007) 201
6.1 Introduction 201
6.2.The Protection of Indigenous Knowledge through the Intellectual Property System: A Policy Framework (2007) 202
6.3 Protection using the intellectual property system of South Africa 204
6.3.1 Patents 204
6.3.2 Trademarks 207
6.3.3 Industrial Designs 209
6.3.4 Copyright 210
6.3.5 Performers' Protection Act, 1967 212
6.3.6 The law of Trade Secrets 212
6.3.7 *Sui generis* Protection 213
6.4 Conclusions 217

Chapter Seven 219
Way forward 219
7.1 Introduction 219
7.2 The theories which informed this study 220
7.3 Protection of indigenous knowledge systems under current intellectual property laws 222
7.3.1 The likely reaction to the current amendments of the intellectual property 224
7.4 Broader issues with regard to protection of indigenous knowledge systems 226
7.4.1 Preventing misappropriation of indigenous knowledge 227
7.4.1.1 Use of existing intellectual property laws as amended in South Africa 228
7.4.1.2 Adaptations of existing IP through *sui generis* measures 228

7.4.1.3 Use of *sui generis* exclusive rights 229
7.4.2 Protecting indigenous intellectual property matters 229
7.5 Areas to be addressed in indigenous property right protection 230
7.6 Input from some international legal systems 232
7.7 Ways of protecting indigenous property 234
8. References 238
9. Appendix 252
A. Sample of questionnaire 252
B. Misappropriation 253

List of Abbreviations

ABS:	Access Benefit Sharing
AGM	Annual General Meeting
AIATSIS:	The Australian Institute of Aboriginal and Torres Strait Islander Studies
AIDS	Acquired Immune Deficiency Syndrome
ATSIC	Aboriginal and Torres Strait Islander Commission
CBD	Convention for Biological Diversity
CD4-T	A specific type of lymphocyte in thymus gland that plays an important role in immunity
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CSIR	Council for Scientific and Industrial Research
DAC:	Department of Arts and Culture
DACST:	Department of Arts, Culture, Science and Technology
DEAT:	Department of Environmental Affairs and Tourism
DST:	Department of Science and Technology
DTI:	Department of Trade and Industry
GI:	Geographical Indicators
HIV	Human Immunodeficiency Syndrome
ICIP:	Indigenous Cultural and Intellectual Property Project
IDC:	The Inter-Departmental Committee
IGC:	Intergovernmental Committee
IKS:	Indigenous Knowledge Systems
IP:	Intellectual Property
IPR:	Intellectual Property Right
IRG:	The Indigenous Reference Group
ITPGRFA:	International Treaty on Plant Genetic Resources
MTA:	Material Transfer Agreements
NAGPRA:	The Native American Graves Protection and Repatriation Act
NDA:	The National Department of Agriculture
NEMA:	National Environmental Management Act 107 of 1998 (NEMA)
NGO	Non-Governmental Organisation
NHR:	National Heritage Resources Act, No. 25 of 1999
RSH&CC	Regional San Heritage and Culture Committee
SA	South Africa
SADC	Southern African Development Community
SAHG	South African *Hoodia* Growers
SCA:	Supreme Court of Appeal of South Africa
TCE:	Traditional Cultural Expressions
THRHR:	Tydskrif vir Hedendaagse Romeins-Hollandse Reg
TIP:	Traditional Intellectual Property
TRIPS	Trade Related Aspects of Intellectual Property Rights.
UNCTAD:	United Nations Conference on Trade and Development
UNEP:	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization.

UPOV:	International Union for the Protection of New Varieties of Plants
WHC:	World Heritage Convention Act no 49 of 1999.
WIMSA	Working Group of Indigenous Minorities in Southern Africa
WTO	World Trade Organisation

List of tables

TABLE 1:	Summary of questionnaire	68
TABLE 2:	The respondents to the questionnaire	68
TABLE 3:	Key Zulu / Xhosa words used in questionnaire	70
TABLE 4:	Products sold and which one sell the most?	71
TABLE: 5:	Division of products and services offered by traditional healers	72
TABLE 6:	Products that have been converted to pill/tablet/capsule	74
TABLE 7:	Responses from the questionnaire as to whether or not the respondents knew any traditional medicines which had been converted to a pill/tablet/capsule?	74
TABLE 8:	What do you know about the African potato?	76
TABLE 9:	Types of uses for the African potato	77
TABLE 10:	Ancient use of African potato/Benefit to communities/Should government do something about it?	79
TABLE 11:	Ancient use of African potato? (From Table 10 column 1)	80
TABLE 12:	Are communities benefiting from the medicinal plant which have been converted to pill/tablet/capsule? (from table 10 Column 2)	82
TABLE 13:	If you do not benefit from the conversions should government do something about it? From Table 10 column 3.	84
TABLE 14:	Rituals and ceremonies: planting and harvesting African potato	87
TABLE 15:	Spreadsheets and graphs from twenty respondent numbering 1-20 above.	88
TABLE 15.1:	Are there any indigenous laws protecting plants/Rules when harvesting/ Any other comments?	88
TABLE 16:	Sample I: Responses to the questionnaire	90
TABLE 17:	Sample II: Responses to the questionnaire	91
TABLE 18:	Sample III: Responses to the questionnaire	92
TABLE 19 :	Summary and Inventory Overview: What museums and Federal agencies must prepare	110
TABLE 20:	Government departments dealing with IP protection South Africa	161
TABLE 21:	Indigenous knowledge systems protection must take cognizance of the lived experience of indigenous communities.	235

List of graphs

GRAPH 1:	What type of products do you sell?	73
GRAPH 2:	Have any products you know been converted to pills or capsule?	75
GRAPH 3:	What do you know about the African Potato?	78
GRAPH 4:	Does the African potato have any ancient usage in the communities?	84
GRAPH 5:	Are communities benefiting from medicinal plants which have been converted to pills?	83

GRAPH 6: Do you think government should do something about it? 85
GRAPH 7: Are there any laws in your community protecting these plants? 89
GRAPH 8: Are there any rules/laws when planting or harvesting medicinal plants? 89

CHAPTER ONE

INTRODUCTION

1.1 Indigenous knowledge systems

The impact of the rapid advancement of scientific knowledge over the last fifty years has brought about profound societal changes. Through new international regimes, knowledge has become a commodity to be bought and sold. At the same time, indigenous knowledge has also continued to flourish and develop, though at a different pace. Among some indigenous people, indigenous knowledge remains protected by a traditional way of life, values, and norms that have changed little over the last millennium. Increasingly, however, the worlds of indigenous and Western knowledge are in contact and conflict, and the result can only be viewed as a clash of cultures. To date, approaches to indigenous knowledge development are dominated by the kind of exploitation that maximises gains for the industrial world while limiting benefits for the originators of such knowledge.

Indigenous knowledge has always had spiritual and utilitarian value to indigenous peoples, but only in the last few decades has its value for commercial uses also been recognised (Mqotsi 2002: 160-164). At the same time, the intellectual property rights designed to protect commercial innovations have been deemed inappropriate for protecting traditional knowledge (Dutfield 2004: 100; Sillitoe 2006: 198; Nwabueze 2007: 234). This has sparked an international debate about how to recognize and protect traditional knowledge, which is presently largely unprotected by current intellectual property law (Halbert 2005: 40; McManis 2007: 3). In response, policy makers who deal with trade, development, agriculture, health, culture and the environment have begun to give careful consideration to the implications of intellectual property laws on indigenous peoples. Despite this concern, indigenous peoples have largely been excluded from these debates, seeing the fate of their knowledge decided without adequate consultation and meaningful participation (Hountondji 1997; Odora-Hoppers 2002: 6-7).

1.1.1 What is indigenous knowledge?

Like many social terms that arise in different social, economic and political contexts for different roles and functions, indigenous knowledge is referred to under a number of epithets: indigenous knowledge, indigenous knowledge systems and indigenous technology. However, the key feature of all the definitions is their perspective on the words 'indigenous' and 'knowledge'. Presented here are elucidatory definitions of the role of indigenous knowledge, and how such knowledge is generated, 'stored' and transmitted. The thesis limits itself to indigenous knowledge generated in South Africa and considered by indigenous users to be communal property attracting collective rights and responsibilities. The indigenous communities in this thesis are limited to the following groups: The Khoisan communities, the Nguni peoples (Zulu, Xhosa, Swazi, and Ndebele), the Sotho-Tswana peoples (Tswana, Pedi, and Basotho) and the Venda, Lemba and Shangaan-Tsonga. Other scholars include other ethnic groups (such as Afrikaners and the so-called coloureds) in their definition of indigenous communities in South Africa. However, for the purpose of this research I have limited myself to the Khoisan, Nguni, Sotho-Tswana and Venda communities.

Grenier provides a succinct definition of indigenous knowledge as being: "…the unique, traditional knowledge existing within and developed around specific conditions of women and men indigenous to a particular geographic area" (Grenier 1998: 1). What makes the knowledge *indigenous* is its inalienable link to the native people or aborigines of a particular locality: "It is knowledge peculiar to the cultural system of such communities in a given locale" (Grenier 1998: 1). It has been found to be structured and systematic, with gender and age-specific training taking place, "is stored in peoples' memories and activities and is expressed in stories, songs, folklore, proverbs, dances, myths, cultural values, beliefs, rituals, community laws, local language and taxonomy, agricultural practices, equipment, materials, plant species and animal breeds. Indigenous knowledge is shared and communicated orally, by specific example, and through culture. Indigenous forms of communication and organisation are vital to local-level decision-making processes and the preservation, development and spread of indigenous knowledge" (Grenier 1998: 2).

For indigenous knowledge is about social capital – a concept that "captures the idea that social bonds and norms are important for people and communities" (Pretty 2003: 1913). It is intimately linked with a traditional economy and entails considerable innovation in its attempts to adapt to change. For instance, indigenous knowledge has been known to alleviate poverty and stabilise the traditional economy. For instance, in a study conducted in Kenya, Tanzania, Swaziland and South Africa by United Nations Environment Programme (UNEP), it emerged that the value of indigenous knowledge was in its ability to deliver social and economic goods: "that certain traditional practices if popularised, and integrated with modern (sic) knowledge systems, can help to alleviate poverty" (UNEP: 2010). A disregard for indigenous knowledge could have a negative effect on the environment as most of the communities in the UNEP study areas derived their livelihood from the environment in which they lived, it followed that this would have had direct effect on their economic status. Application of indigenous knowledge can alleviate poverty through traditional food production and preservation (UNEP: 2010)

1.1.2 What are indigenous knowledge systems?

Indigenous knowledge systems are a collection of societal systems represented by the totality of products, skills, technologies, processes and systems developed and adapted by cohesive traditional societies, and produced, applied, practised, and preserved over generations to ensure their long-term persistence, sanctity and progress within their natural, social and economic environments (Odora-Hoppers 2002).

An indigenous knowledge system is characterised by its embeddedness in the cultural web and history of a people, including their civilisation, and forms the backbone of the social, economic, scientific and technological identity of such a people. An indigenous knowledge system consists of a total system of knowledge that encompasses soil and plant taxonomy, cultural (identity, history and language) and genetic information, animal husbandry, medicine and pharmacology, ecology, education, religion and philosophy, climatology, zoology, music, arts, architecture, judicial, political and many others (Hountondji 1997).

1.1.3 What is indigenous technology?

The term ‘technology’ is generally understood as the practical use of knowledge and/or tools in the manipulation or control of the environment in the form of products, processes, artefacts, cultural systems and laws that enable the society to survive. Technology is about a skill or applied expertise: it is applied knowledge in the management of the ecosphere. It is innovative and entails the fashioning and utilisation of tools, and results in economic activity (management of scarce resources). Nevertheless, since technology arises out of direct interaction with the natural environment, it is also concerned with bio-diversity. According to Massaquoi (2004), technology is made up of hardware (equipment, tools, instruments and energy sources) and software (which is a combination of knowledge, processes, skills and social organisations) that focus attention on particular tasks. Indigenous technology, therefore, could be loosely defined as the collective hardware and software of indigenous communities and/or societies.

Indigenous knowledge systems represent both a national heritage and a national resource, which should be promoted, developed and, where appropriate, exploited for the economic benefit of the majority. It covers all aspects of life and provides a rich resource for development - a crucial aspect for a country like South Africa, which has a large under-developed sector. Apart from indigenous knowledge adding to the repertoire of development options, understanding it can help determine the appropriateness of interventions and form the basis for encouraging local people to foster their own locally-driven development. Indigenous knowledge adds to the self-esteem and empowerment of local people, thus providing a basis for self-determination and sustainability (Odora Hopper 2002: 7).

Indigenous knowledge is stored in peoples’ memories and activities and is expressed in many forms. It is shared and communicated orally, by specific example, and through culture. Given the rapidly changing global environment, there is an irrevocable loss of indigenous knowledge. Apart from the fact that indigenous knowledge is lost naturally as traditional techniques and tools are either modified or fall out of use, the recent and current rate of loss is exacerbated by factors such as rapid population growth, international market growth, educational systems, environmental

degradation and development processes. These are all factors that relate to rapid modernisation and cultural homogenisation.

1.2. Intellectual Property Laws of South Africa

A key aspect of the indigenous knowledge systems which incorporates all indigenous knowledge is the fact that this knowledge is deeply entrenched in and owned by the community. So indigenous knowledge belongs to the community and generally, immaterial rights are protected by intellectual property rights which can be owned by individuals or groups. However, intellectual property rights have certain limitations when applied to indigenous knowledge: for instance, the author-centred notion of copyright in intellectual property law makes it difficult to protect folkloric productions. The nature of indigenous communities may prevent one from designating a particular person, group or even the owner as being the author in its modern sense. There are also the problems of the age and the material form in which the knowledge is presented (Woodmansee *et al*. 1994: 1-15). There is accordingly a need to understand what is meant by intellectual property rights, how these rights are related to indigenous knowledge systems and how they protect indigenous knowledge systems.

Intellectual property rights are awarded by society through governments and mandated international bodies to individuals or companies over their creative endeavours evidenced in their inventions, literary and artistic works, musical performance, symbols, names, images and designs used for commerce. Intellectual property rights give the creator the exclusive right to prevent others from making unauthorised use of their property for a limited period (IPR Commission: Online). When this period expires, the work then falls into the public domain and can be used freely by anyone (Burrell 1999: 1; Premier Hangers CC v Polyoak (Pty) Ltd 1997 (1) SA 416 (A) at 4241). Intellectual property law is categorised as industrial property (functional innovations), and artistic and literary property (cultural creations). I specifically focus on the *Patents Act 57 of 1978, Copyright Act 98 of 1978, Trademark Act 194 of 1993* and the *Design Act 195 of 1993,* as only these are relevant to the indigenous knowledge systems that are examined in this thesis. I must point out that intellectual property laws also cover aspects such as industrial designs, trade secrets

and moral rights. The content of these laws is briefly introduced (in section 1.2.1) below and elaborated in chapter five.

Furthermore, it should be noted that when the proposal for the thesis was submitted to the Faculty of Science Graduate Studies Committee in 2004 there was very little recognition or protection of indigenous knowledge systems in South Africa. However, in 2005 the Patents Act, 1978 was amended so that applicants for patents should furnish information relating to any role played by indigenous biological resources, genetic resources or traditional knowledge. Furthermore, in 2007 the Department of Trade and Industry (DTI) issued a policy framework headed: The Protection of Indigenous Knowledge through the Intellectual Property System, which included the Patents Amendment Act, 2005, and the Intellectual Property Laws Amendment Bill, 2007. The proposed policy and Bill will be discussed later in the thesis.

South Africa is also party to various international agreements and conventions relating to the protection of intellectual property, including Patents, Trademarks, Designs and Copyright. Moreover being a party to the World Trade Organisation Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS), South Africa is obliged to comply with the minimum standards set by that agreement for the protection of intellectual property.

1.2.1 Patents

The Patents Act 1978, states that a patent may be granted for any new invention which involves an inventive step and which is capable of being used or applied in trade or industry or agriculture. Therefore, a patent is a negative right, awarding inventors the exclusive right "to prevent others from making, selling, distributing, importing or using their invention, without licence or authorisation, for a fixed period of time" (Flint *et al.* 1989: 159-162; Jacob *et al.* 1993: 21-33). TRIPS stipulates twenty years minimum protection from filing date and in South Africa the duration of a patent shall, unless otherwise provided, be twenty years from the date of application (Ss 46 (1); Burrell 1999: 547). In return, society requires that the patent applicant disclose the invention in a manner that enables others to put it into practice (Ss 32). This in turn increases the body of knowledge that is made available for further research. An invention can be patented if it satisfies the following three

requirements as stipulated in Section 25 (1): it must be new; it must involve an 'inventive step' not obvious to one skilled in the field, and it must be industrially applicable.

South Africa is a member of the Paris Convention which entails that the intellectual property systems including patents, designs and trademarks are accessible to nationals of other states party to the Convention. The Convention also provides that an application from one of the contracting countries shall be able to use its filing date in another member country as long as the application is received with six months for industrial designs and trademarks and twelve months for patents from the first filing. The World Intellectual Property Organisation (WIPO) in Geneva, Switzerland administers the Paris Convention.

1.2.2 Copyright

Whilst patents protect the idea or concept of an invention, copyright protects the material form in which the idea is expressed. Copyright is defined as:

> …the exclusive rights in relation to work embodying intellectual content (i.e. the product of the intellect) to do or to authorise others to do certain acts in relation to that work, which acts represent in the case of each type of work, the manner in which that work can be exploited for personal gain or profit. The right to control the use of a work in all the manners in which it can be exploited for personal gain or profit is an essential right under law of copyright and that law does not achieve its objective unless such essential right is granted to the full. This is the function and purpose of the law of copyright (Dean 2001: 1-1).

In other words, copyright prevents unauthorised reproduction, recording, public performance, adaptation and translation of certain works, as defined in the Act, and allows for the collection of royalties for authorised use. Unlike patents, copyright protection does not require registration or other formalities although this was not always the case (Flint *et al.* 1989: 5-21; Jacob *et al.* 1993: 125-130). Copyright is granted for a period of fifty years after the death of the author or from the date of publication of the work (Dean 2001: 1-31).

South Africa is a member of the Berne Convention relating to copyright and, as such, extends copyright protection to any works of qualified persons eligible for copyright protection emanating from a convention country designated as such by proclamation in the South African Government Gazette. TRIPS gives effect to the Berne Convention in the sense that it enforces these protection laws across borders internationally among World Trade Organisation (WTO) members.

1.2.3 Designs

The Designs Act provides for the registration of both aesthetic and functional designs: aesthetic design is applied to any article, whether for the pattern or the shape or the configuration or the ornamentation thereof, or for any two or more of those purposes, and by whatever means it is applied, having features which appeal to and are judged solely by the eye, irrespective of the aesthetic quality thereof; and functional design means any design applied to any article, whether for the pattern or the shape or the configuration thereof, or for any two or more of those purposes, and by whatever means it is applied, having features which are necessitated by the function which the article to which the design is applied, is to perform, and includes an integrated circuit topography, a mask work and a series of mask works. The duration of the registration of an aesthetic design shall be fifteen years and that of a functional design ten years, calculated from the date of registration thereof or from the release date, whichever date is earlier, subject to payment of renewal fees on an annual basis as from the end of the third year from date of application or the release date, whichever date is earlier.

1.2.4 Trademarks

The registration and protection of trade marks are governed by the Trade Marks Act. A trademark is defined in section two of the Trade Marks Act as “any sign capable of being represented graphically, including a device, name, signature, word, letter, numeral, shape, configuration, pattern, ornamentation, colour or container for goods or any combination of the aforementioned.” If there is no successful opposition to the trademark application and if the registrar regards the trademark as registrable, then it is registered for a period of ten years, calculated from the date

when the application is filed. Trademark registrations can be renewed indefinitely for further consecutive periods of ten years, subject to the payment of the prescribed renewal fees.

So-called common-law trademarks, that is, marks which have become distinctive through use but which are not registered in terms of the Trade marks Act, may be protected by means of a common law action of passing-off (that is, unlawful competition). Copyright can also be protected under the common law action of passing-off.

There is also legislation which protects aspects of indigenous knowledge systems such as: National Heritage Resources Act 25 of 1999; World Heritage Convention Act 1999; the National environment Management: Biodiversity Act (no 10 of 2004); *Sui Generis* systems (that is, Plant Breeders' Rights and Database Protection). And finally, the recent policy framework headed The Protection of Indigenous Knowledge through the Intellectual Property System, which included the Patents Amendment Act, 2005, and the Intellectual Property Laws Amendment Bill, 2007. These legislations will be examined in detail in the chapter dealing with intellectual property laws in South Africa.

1.3. Aim of the study

The central problem under investigation relates to the challenges raised in dealing with indigenous property rights within a legal system globally infused with western cultural values, largely originating from the Greco Roman background. The question posed in this investigation is as follows: how can one possibly marry indigenous property rights and the western legal frameworks in a practical and ethical way? Thus, the aim of this study then is both to analyse critically the extent to which indigenous intellectual property can function within the current South African legal framework and to suggest a means to move out of the legal precedent mode with a new indigenous property rights system which will cater for the needs of the indigenous communities in South Africa. Though the South African constitution does not deal with intellectual property rights as such, the right to own property is protected in the Bill of Rights section 25 which states that: "no one may be deprived of property except in terms of law of general application; no law may permit arbitrary deprivation of property and property is not limited to land".

The research focuses on traditional foods and medicine with the specific objectives of the study being:

> To critically analyse the relationship between indigenous knowledge systems and intellectual property laws in South Africa;
>
> To examine the legal developments in terms of indigenous intellectual property protection in the United States - Native American Graves Protection Act (NAGPRA); and Australia – *Our Culture, Our Future* Report on Australian Indigenous Cultural and Intellectual Property Rights (Terri Janke);
>
> To chart a new direction for indigenous intellectual property law in South Africa.

The current South African intellectual property law does not adequately address the specific needs of indigenous intellectual property. Existing intellectual property law in South Africa only addresses intellectual property from a western perspective, while indigenous communities - who comprise 79.6% of the population - are not catered for (Statistics South Africa 2007). There is, therefore, an urgent need to examine the current intellectual property law in South Africa and to ascertain whether it adequately addresses the question of ownership of indigenous intellectual property. This undertaking should be able to influence both current policy and law-makers to reconsider the role and position of indigenous knowledge in the South African intellectual property system or legislation.

Indigenous communities claim that the existing intellectual property laws in South Africa do not adequately recognise and protect their cultural products and expressions (Ruiz 2003: 273; Wolson 2004: 146). In certain instances, intellectual property law is even considered to be a threat to indigenous community cultural maintenance and does not sufficiently protect indigenous intellectual property and in some instances, indigenous knowledge is misappropriated. For instance, in some cases, certain intellectual property laws have supported individuals or companies who misappropriated indigenous knowledge (that is, medicinal knowledge, food, religious artefacts,

symbols, utility objects and so forth) thereby disturbing the cultural fabric of certain communities as will be shown later in thesis (Davis 1997).

In recent years, patents have been granted for inventions derived from traditional knowledge. For instance, the *Hoodia* plant used by the Khoisan to curb hunger whilst hunting was, although later rectified, patented by the CSIR without the prior consent (Finger *et al* 2003: 19) of the Khoisan communities in South Africa. There is a need for better protection and compensation where there has been misappropriation. From an indigenous South African perspective, misappropriation includes a range of activities such as uses unauthorized by laws and protocols of the indigenous community of origin, using information to create a product outside the scope of the original agreement, so much that in certain cases, promises are broken or consent is exceeded (see Appendix; WIPO 2005b). There has also been some unauthorised misuse of works of art, designs and other intangible cultural expressions, for example songs (Allan Mzamo Silinga, composer of the classic song, *Ntyilo-Ntyilo*), language, oral traditions and dance (Bertha Egos' *Ipi Tombi*). In South Africa, as in Australia: "Pharmaceutical, agriculture, industrial and scientific research organisations are increasingly interested in bio-prospecting – the search for biological and genetic resources for potentially useful products and processes" (www.atsic.gov.au). An example is the African potato, which has been synthesised and commercialised in the absence of any consultation with indigenous communities. Furthermore, scientific institutions are sampling human genetic material as part of the worldwide project to map human genetic diversity. This is usually referred to as the Human Genome Diversity Project (Di Chiro 2007: 277).

Another issue that has surfaced in Australia is the issue of moral rights. This might have some implications in South Africa as well. Moral rights refer to instances when indigenous people have had their artworks reproduced in a way that is deeply offensive to the cultural integrity not only of the individual artist, but also to the community that own the image. However, it must be pointed out that this plays into the western paradigm, which privileges the individual since the owner of that right will be an individual person and not the community. In South Africa, a working model, which caters for the needs of the community as well, is critical (Janke 2003: 64).

The existing intellectual property laws are limited due to the fact that they emphasise economic rights over cultural rights, failure to afford protection to issues such as oral traditions, oral stories, song and dance which do not occur in a written form. And they only provide protection for defined periods of time. Furthermore, the current intellectual property law stipulates that whatever you want to protect must be in material form or graphically represented. Ideas cannot be protected (www.atsic.gov.au). The land and resource management and indigenous knowledge systems should also be brought into the mainstream of knowledge and not considered to be inferior.

In the light of the above examples and concerns, there is a dire need for better protection of all aspects of indigenous cultural and intellectual property rights and indigenous knowledge in South Africa:

The Western intellectual property laws create individual property rights which foster commercial and industrial growth (see chapter 2 *conceptual framework – economic philosophy*) which are often at odds with indigenous cultures that emphasise collective ownership of knowledge:

> There is a problem with the author-centred notion of copyright in intellectual property law.
>
> There is a problem related to the duration of protection as in communities, indigenous knowledge and ideas have existed for long periods of time.

Moreover, within indigenous communities, indigenous knowledge is usually expressed in oral form. Trademark law allows for collective ownership and groups, too, can own patents. However, the predicament is that patent and copyright laws prescribe that, for a patent and copyright to be valid, they must either be documented or recorded. This poses a crucial problem for indigenous communities in the sense that their transmission of knowledge has been through oral tradition and personal reminiscences. It was only after the colonization process that writing and recording was introduced among indigenous communities.

On the international front, the incorporation of TRIPS into the General Agreement on Tariffs and Trade in 1994 has provided some impetus for further commercialisation of the knowledge and

products of indigenous communities by predominantly affluent, industrialised countries. Industrialised countries acquire oral knowledge from indigenous communities and later claim that they are the originators of such knowledge or translate it into products for which they claim protection (Shiva 2006).

Due to an increasing number of declarations and statements made to the United Nations (UN), there is a growing body of agencies calling for attention to be paid to the unique features of indigenous communities' intellectual property. As a result, discussions within the WIPO and the United Nations Educational, Scientific and Cultural Organization (UNESCO) may provide some grounds for the expansion of existing intellectual property laws to include the intellectual property of indigenous communities. The development of new *sui generis* legislation systems provides for recognition of the full range of cultural products and expressions of indigenous peoples which will empower indigenous communities to control their own cultures. *Sui generis* refers to methods of protection other than the use of the traditional categories of intellectual property. The most common form of *sui generis* protection for new varieties involves some kind of 'plant breeders' rights'. This may be the only way to achieve a just solution to the problems faced by indigenous peoples in terms of the exploitation of their indigenous intellectual property rights. However, one should note that World treaties and agreements only set minimum standards and do not prevent countries from extending intellectual property law beyond such minimum standard. Nevertheless, the problem arises when there is a cross-border transaction. For laws enforced in South Africa might not be enforceable elsewhere, whilst World treaties are much more enforceable. For example, the patent law of South Africa is only enforceable in South Africa, whilst the TRIPS agreement is enforceable internationally.

In the light of the above discussion, I hope to elucidate on the shortfall of intellectual property laws and the pressing need to argue for a unique *sui generis* treatment of mainstream indigenous knowledge systems, so that the above-mentioned instances might be reconsidered while bearing in mind the rights of the indigenous communities themselves.

The literature which deals with indigenous knowledge and intellectual property in South Africa can be broadly divided into the following categories: Indigenous intellectual property and intellectual

property law. Most sources on indigenous intellectual property deal with indigenous communities outside South Africa. The same is applicable to the current South African intellectual property law: very little is mentioned with regard to indigenous intellectual property.

Numerous articles and books have been written on indigenous knowledge systems and intellectual property law nationally and internationally (Davis 1997; Mashelkar 1998; Mugabe, 1998; Serote 1998; Akaboju 2002; AEFJN 2002). Some books and articles deal with Intellectual property rights, trade and biodiversity. The drawback is that they look at these issues from an international perspective rather a South African perspective (Hoppers 2002; Dutfield 2004; Finger *et al.* 2004; Battiste *et al.* 2000). The authors are particularly critical of the current Western-oriented legal regime, pointing out how national and international agreements continue to appropriate the rights of indigenous people: their languages, art, plant knowledge, and the claiming of traditional resources. The basic argument is that the present intellectual property systems are at odds with indigenous cultures that emphasise collective creation and ownership of knowledge. There is a need for more literature to interact with this fact as Mashelkar expands: "The intellectual property rights systems violate indigenous precepts by encouraging the commodification of such knowledge. … it is in consonance with natural justice that local communities should have greater say in all matters regarding the study, extraction and commercialisation of biodiversity. [We] need to develop an understanding of the economics of community knowledge, including the types of intellectual property rights by individuals, families, lineages or communities" (Odora-Hoppers 2002: xii-xiiii). Other publications have looked at possible solutions to the dilemma (Janke 1998, 2008) with possible remedies to the protection of intellectual property rights amongst indigenous communities which have only remained theoretical in nature (Janke 2008).

It is against this background that this study seeks to situate intellectual property laws in cultural contexts so that hegemonic struggles are understood and highlighted. South African intellectual property is derived from a western colonial perspective and therefore the literature in intellectual property strongly reflects this legacy. It has not taken or assimilated the new cultural milieu and minimal allowance or input from indigenous knowledge systems and cultural contexts have been factored into current law (Woodmansee 1994; Burrell 1999; Dean 2001; Cornish 2004). Although numerous books and articles have been written on copyright, trade marks, design and patent laws

in South Africa (Jacob *et al.* 1993; Klopper *et al.* 2002), there is a need for scholars to interrogate the current South African intellectual property law, in order to provide useful input from indigenous knowledge systems. The thesis tries to fill in the gaps which exist in terms of dealing with intellectual property from an indigenous perspective in South Africa. I must point out that significant input has been solicited in countries outside of South Africa for several years (albeit largely ignored).

In order for us to understand the transaction between the colonizer and the colonized at a perceptive level, certain sociological, historical and legal theories are used to shed light on indigenous knowledge systems and intellectual property law. These theories help explain the processes of emergence, transaction and translation of indigenous knowledge systems, and how they relate to current law. In this thesis, the postcolonial theory as explained by Edward Said, Homi Bhabha and Gayati Spivak has been chosen. The aim of postcolonial theory is to deconstruct the process of western imperialism with regard to indigenous intellectual property. However, one has to also look at a bigger picture of situating intellectual property within specific cultural contexts/life. To achieve this, I use Rosemary Coombe's theory on contested cultures (1998).

Alongside this, there is a need to understand the legal development of intellectual property and its theoretical underpinnings such as the natural law theory (Mostert 1987) and the economic theory (Dean 2001) so as to understand the current status of intellectual property laws in South Africa.

1.3.1 Postcolonial theory

Postcolonial theory examines and develops propositions on the political and cultural impact of European conquest and subsequent colonisation (Aschroft *et al.* 2001: 15). In other words, post-colonial theory addresses the legacy of colonialism imposed by the west in its attempts to dominate the world over the past centuries. Postcolonial theory: is concerned with the responses of the colonised: the struggle to control self-representation, through the appropriation of dominant languages, discourses and forms of narrative; the struggle over representation of place, history, race and ethnicity; and the struggle to present a local reality to a global audience (Aschroft *et al.* 2001: 5).

Postcolonial theory helps us to go beyond the mere description of events as it suggests that the colonisation process was more complex than just a simple encounter. It was not a one-way stream. For instance, Homi Bhabha has asserted that both the "coloniser" and the "colonised" were affected by the colonial process. The influence was twofold and the results of this influence varied in forms of new identities rather than a simple mixing of what existed before. As Moore-Gilbert states:

> Whereas early (Edward) Said concentrates almost entirely on the colonizer, and later Fanon almost entirely on the colonized, Bhabha seeks to emphasize the mutualities and negotiations across the colonial divide. For Bhabha the relationship between colonizer and colonized is more complex and nuanced -- and politically fraught -- than Fanon and Said imply, principally because the circulation of contradictory patterns of psychic affect in colonial relations (desire for, as well as fear of the other, for example) undermines their assumption that the identities and positionings of colonizer and colonized exist in stable and unitary terms which are also absolutely distinct from, and necessarily in conflict with, each other (Moore-Gilbert 1997: 116).

Edward Said, Gayatri Spivak and Homi Bhabha "have enabled a radical reconceptualization of the relationship between nation, culture and ethnicity which has major cultural/political significance" (Moore-Gilbert 1997: 70). Spivak goes further by rejecting "the idea that there is an uncontaminated space outside the modes and objects of analysis, to which the postcolonial critic has access by virtue of 'lived experience' or 'cultural origin'. In her works Spivak's recurrent motif is "negotiation with, rather than simple rejection of, Western cultural institutions, texts, values and theoretical practices" (Moore-Gilbert 1997: 78). If we use Spivak's notion of negotiation with western legal imperative the indigenous cultural protection comes to the fore. The lived experience or the cultural origin plays a vital role in informing the negotiation process between the coloniser and the colonised, in our case between the western legal precepts and the indigenous communities. The whole process of colonisation, even of intellectual property, affected both the colonisers and the indigenous communities in the same way. The coloniser did not only affect the colonised, it was also the other way. Both colonisers and colonised were affected by the process of colonisation and that their encounters with each other meant that neither experience can be

ignored in shaping intellectual property law as it applies to indigenous peoples today. Bearing this in mind, we can argue that since Said, Spivak and Bhaba have emphasised the mutualities and negotiations across the colonial divide, this process becomes an asset to argue for change in intellectual property laws. Indigenous communities are now seeking a platform to contribute to this process in a positive way taking into account their lived experience and cultural origin, which have been eliminated in the past discourses dealing with intellectual property laws. Past conversations have been a one sided track, totally eliminating the other, the colonised, or the less powerful populations. With the aid of the post-colonial theory, indigenous knowledge will highlight the responses of the colonised (indigenous communities): their struggle to control self-representation (to be part the main stream of legal framework with regards to intellectual property rights), through the appropriation of dominant languages, discourses and forms of narrative; the struggle over representation of place, history, race and ethnicity; and the struggle to present a local reality to a global audience (Aschroft *et al.* 2001: 5. The importance of protecting indigenous knowledge is illustrated in this study in the case of a medicinal plant, the African potato, and a dietary food with appetite-suppressant agents, the *Hoodia*. Post colonial theory helps us to re-position the reality of indigenous knowledge systems.

Furthermore, Post-colonial theory assists in trying to negotiate a new meaning of indigenous intellectual property ownership and current South African intellectual property laws which will take into account the lived experience and cultural origin. Even though the post-colonial theory will assist in looking at the colonisation process at a deeper level, the role culture plays in determining ownership of indigenous intellectual property rights should not be underestimated. Therefore, I shall now look at Coombe's concept of 'contested cultures' in the light of the research question - how does one possibly marry indigenous intellectual property ownership and the western concepts of law?

1.3.2 Contested cultures

Coombe, when considering intellectual property, states that there has been very little consideration of the cultural nature and the actual forms which intellectual property laws protect. There is a critical need to assert how law and culture interact in our societies today. They are not

independent of each other – they reinforce the hegemonic processes within communities. In this investigation, there is a direct link between the law and indigenous cultural communities in the sense that cultural values have not been factored into the current South African legal systems.

Where the focus of culture is less exclusively on formal institutions, law and society, one finds that research and scholarship have begun to look more closely at how law functions in everyday life and quotidian practices of struggle, and in consciousness itself. Echoing similar sentiments Austin Sarat and Tomas Kearns suggest that "a focus on law in everyday life can help to bridge the gap between so called 'constitutive' and 'instrumentalist' views of the law, providing a powerful means by which the everyday is understood and experienced, but also a tool that enables people to imagine and effect social change" (Coombe 1998: 24). If this process is developed and articulated progressively, it can shed light on the current dilemma of the indigenous knowledge systems and intellectual property law in South Africa.

The two theories, postcolonial and contested culture, both point to the significance of culture and its contribution to the lived experience of indigenous communities. The lived experience is the fundamental argument we shall pose in this thesis by stating that this experience, this local reality, this culture, has been excluded from the intellectual property laws of South Africa. The majority of the population in South Africa is denied any form of intellectual property ownership due to the fact that the way ownerships are construed is totally alien and far removed from the cultural milieu of many indigenous communities. Postcolonial theory emphasises the two-way nature of the encounter between the colonisers and the colonised, and both had fundamental inputs feeding on each other. However, the input from the colonised in terms of intellectual property has been minimal and totally meaningless. As argued later in the thesis, this needs to be re-negotiated using the cultural experiences of indigenous communities. Cultural experiences and law interact at a deeper level and they reinforce each other. In this case, we want culture to reinforce the needs of indigenous communities in terms of allowing communities to have access to their indigenous property and knowledge without fear of it being misappropriated.

However, an in depth examination of the legal precedent is still required. The next section will, therefore, deal with precedent, our colonial heritage of the legal system. Two aspects will be

highlighted: the natural law theory and the economic philosophy backing the current intellectual property rights in South Africa.

1.3.3 Natural-law theory

One of the most important theories that underlines the recognition of intellectual property rights under current South African law is the natural-law theory which: "is based on the fundamental principle that what an individual creates by his own effort and labour, belongs to him. This principle rests on the conviction that a person is entitled to the fruits of his own intellectual effort and that equity demands that he is entitled to reap where he has sown" (Mostert 1987: 480).

1.3.4 Economic theory

The economic philosophy that underpins intellectual property law, including copyright law, lays great emphasis on the general public interest and social welfare. This theory is articulated in the reward and incentive theories, as Dean explains:

> Copyright law… seeks to create a system whereby the creator of an original work is afforded a qualified monopoly in the use of exploitation of his work in order, firstly to compensate and reward him for the effort, creativity and talent expended and utilized in the creation of his work, and secondly to act as an incentive for him to use his talents and efforts to create more and better works or intellectual products in the future. The reward of incentive is constituted by affording him the opportunity to gather all the commercial fruits of his work for a limited period (Dean 2001: 1-1).

In terms of economic theory, copyright is not regarded as a form of property arising out of the process of *creation,* but rather as a monopoly created for the public interest. "The qualified monopoly is limited in duration and after expiry of the term the work falls into public domain and can be freely used and reproduced by others" (Dean 2001: 1-1). There is a balance between the interests of the individual and that of the public.

I will examine these theoretical perspectives in greater detail in the next chapter. I shall now look at the methods used in this investigation.

Ethnography is the art and science of describing a group or culture. The description may include a tribal community, or even a classroom in a township. This study focuses on the Khoisan community in the Northern Cape and on a group of herbalists in Pietermaritzburg, KwaZulu-Natal and Springs, Gauteng. The Khoisan study relates to issues dealing with indigenous foods, that is, the *Hoodia* plant and the latter study examines issues relating to indigenous medicines such as the African potato and its subsequent commercialisation.

Ethnography relies heavily on up-close, personal experience and possible participation, not just observation, by researchers. “The ethnographic focal point may include intensive language and culture learning, intensive study of a single field or domain, and a blend of historical, observational, and interview methods” (Genzuk 1999: 1). Typical ethnographic research employs three kinds of data collection: interviews, observation, and documents. This in turn produces three kinds of data: quotations, descriptions, and excerpts of documents, resulting in one product: narrative description. This narrative often includes charts, diagrams and additional artefacts that help to tell the story (Hammersley 1990). Ethnographic methods can give shape to new constructs or paradigms, and new variables, for further empirical testing in the field or through traditional, quantitative social science methods. Through such findings ethnographers may inform others of their findings with an attempt to derive, for example, policy decisions or instructional innovations from such an analysis (Genzuk 1999: 2).

The study concentrated on communities who have attempted to acquire ownership of their indigenous knowledge. I did not participate in the community’s activities but observed key aspects pertinent to the research question. Hence, only aspects of ethnography were used in this study for data collections: interviews, observation and written documents.

The methodology was largely theoretical perspectives that, among other things, highlight the fact that one of the consequences of colonialism and apartheid for indigenous knowledge systems was

the fundamental erasure of indigenous cultures effected across the rich knowledge heritages of non-Western people. Colonialism and colonialists began by declaring non-Western lands as empty or *terra nullius,* that is devoid of people or ideas, and the diverse sciences and innovations that steered and maintained those societies as 'non-science'. In this strategy of 'conquest by naturalisation,' the cultural and intellectual contributions of non-Western knowledge systems were systematically erased (Shiva 1998). They were not taught in schools, they were omitted from history textbooks, and they were not included into the public domain, which was at that time reserved exclusively for the knowledge, heritage, cultures, institutions, norms and idiosyncrasies of Western society (Sauko 2003: 56). Most public institutions, including universities in South Africa, are still structured in this way.

1.4 Chapter outlines

The thesis is structured in the following way: chapter one provides a general overview of what indigenous knowledge systems and intellectual property law are concerned with. It also looks at the aim, objectives, hypothesis and methodology to be used in the study.

Key conceptual frameworks are examined in chapter two: Postcolonial theory; contested culture, natural-law theory and the economic model and other theories of intellectual property law such as the immaterial property view and the theory of personality rights. Also, a critical analysis is carried out to examine the shortfalls of these theories and to see how they aid our understanding of indigenous knowledge systems and intellectual property laws.

The third chapter examines in detail the nature of indigenous knowledge, indigenous knowledge systems and indigenous technology. It also looks at the role of indigenous knowledge in South Africa in terms of traditional medicine (the African potato) and indigenous food (the *Hoodia* plant).

The fourth chapter examines the divergent approaches to indigenous communities. The legal regimes of the United States and Australia are examined critically and the following aspects are looked at: recognition of the Legal Status of the Indigenous Community in the United States

(NAGPRA) and the recognition of the Legal Status of the Indigenous Community in Australia (Janke 1998, 2008).

The fifth chapter looks at intellectual property laws in South Africa, and critically examines the following Acts: the Patents Act 57 of 1957 as amended; the Copyright Act 98 of 1978 as amended; the Trade Mark Act 194 of 1993 and the Design Act 195 of 1993. It also looks at s*ui generis* systems such as the Plant Breeders' Rights and Database Protection. Finally, other legislation dealing with indigenous knowledge systems in South Africa, such as the National Heritage Resources Act 25 of 1999, the World Heritage Convention Act 1999 and the National Environment Management: Biodiversity Act (no 10) of 2004 are also examined.

Chapter six comments on the Department of Trade and Industry's proposed indigenous knowledge system policy framework and the Intellectual Property Amendment Bill of 2007. The proposed amendments are examined in the light of the concerns raised in the thesis.

Chapter seven examines new directions for indigenous intellectual property law in South Africa. The chapter looks at the implications that intellectual property law has for indigenous knowledge systems and looks at new leads to be drawn from this study. Furthermore, recommendations to protect indigenous knowledge in South Africa are addressed in this chapter.

1.5 Conclusions

In this chapter, I have introduced indigenous knowledge systems and intellectual property laws in South Africa. As I stated: indigenous knowledge systems are a collection of societal systems represented by the totality of products; that is, a totality of a community's reality which has been preserved over generations (Odora Hopper 2002). These realities are currently not adequately protected by the intellectual property laws of South Africa. There is a dire need to re-examine the current status of intellectual protection of indigenous knowledge systems. Using the post-colonial theory and contest culture the thesis would like to re-position indigenous knowledge systems as being vitally important to the lived experience of the indigenous communities in South Africa. The

literature which exists on the topic does give practical solutions to the South African context. The thesis hopes to draw some conclusion which will be aptly applicable to the South Africa situation. It is evident that the historical background and unique cultural context of indigenous communities require and justify special protection. The question to pose is: can intellectual property law help rectify this problem? The following chapters will try to address possible solutions. In the chapter that follows, I shall look at the conceptual frameworks in greater detail and outline their impact on this study.

CHAPTER TWO

CONCEPTUAL FRAMEWORK

2.1. Conceptual framework

Certain sociological, historical and legal theories will be used to shed light on indigenous knowledge systems and intellectual property law. These theories will help explain the processes of emergence, transaction and translation of indigenous knowledge systems, and how they relate to current law. In this thesis, the postcolonial theory as explained by Edward Said, Homi Bhabha and Gayatri Spivak was chosen. The aim of this theory is to deconstruct the process of western imperialism with regard to indigenous intellectual property. However, one has also to look at a bigger picture of situating intellectual property within specific cultural contexts/life. To achieve this, I shall use Coombe's (1998) theory on contested cultures.

There is also a need to understand the legal development of 'intellectual property' and its theoretical underpinnings. The natural law theory as explained by Mostert (1987) and Dean (2001) is also used to explore the reward and incentive theories.

2.2. Orientalism as a way of describing postcolonialism

The debate about postcoloniality was for the majority of Western white academics initiated by Said (1978). A large debt is also acknowledged by Homi Bhabha and Gayatri Spivak. For instance, Bhabha's chapter on 'Postcolonial Criticism' (1992), reaffirms the fact that orientalism inaugurated the postcolonial field and Spivak (2005: xxi) describes it in similar terms as 'the source book in our discipline'. As such praise might suggest, Said's work has provided a spring-board for many of those coming after him. For example, the critique of Western historiography in *White Mythologies* by Robert Young is rooted in what Said describes as "his desire to redress the West's homogenizing and incorporating world historical scheme that assimilated non-synchronous developments, histories, cultures, and peoples to it" (2004: 42).

As stated in chapter one, Said, Bhabha and Spivak emphasize different aspects of orientalism: Said deals mostly on the colonizer; Bhabha concentrates on the negotiations across the colonial divide and Spivak also looks at negotiations as a way of examining Western cultural imperialism (Moore-Gilbert 1997: 78, 115).

Said described the encounter between the European and the non-European, especially in the 19th and 20th Centuries, as orientalism (2003: 1-4). Orientalism emerged strongly in the 14th Century, matured in the 18th Century and developed in the 19th Century. Said perceived of orientalism as a relationship of power dominance, which originated in Britain and France and later America over what he called the orient (2003: 41, 46, 84, 92). Although it was initially and primarily applied to the relationship of the peoples of the Western countries to the people of the eastern countries (Arab/ Indians and Egyptians) who were defined as the 'other', nonetheless, the term also embraced the 'other' of the 'other', that is, Africans or peoples of the so-called *third World*.

Thus, in comparison to Europeans, the orient (Semitic) were seen as occupying a lower social scale, while the Africans, who were viewed as situated on the margins of the latter fared even worse. In this perspective, orientalism was more pessimistic with regard to Africans than to the Semitic orient. Africans were seen as an extension of the orient, the 'other' of the 'other'. It is in this regard that this theory is relevant to the present study, in the sense that indigenous knowledge systems were considered to be an extension of the orient, that is, the 'other' of the 'other', which might imply that very little consideration if any was given to such systems. Worse still, such kind of knowledge which was situated on the margins could not be used by the colonisers to enhance their understanding of indigenous knowledge systems. Even to consider using aspects of indigenous knowledge systems into the legal frameworks, which were being drafted during the process of colonialisation, was virtually impossible mainly because the status of indigenous knowledge systems would have been elevated to a higher level than the orient, that is the 'other'. As stated earlier, the perception of orientalism towards Africans situated them on the margins.

For Said, the proximity in location of the ancient lands to the West obliged the latter to enter into a special relationship with the former (2003). Orientalism, so Said contends, started as a way in which the Europeans sought to relate to the 'other'; it was a way in which the Europeans sought

the affirmation of their own identity (2003). For Said argued that by using the non-Westerner as a contrasting stereotype of the Westerner, the Westerner helped to define his own identity. In this way, the basis of orientalism lay in the perception that just as the East was fundamentally different from the West (Said 2003: 327), so too was orient from the Westerner (Said 2003: 1-2). There was a conscious effort to prove that the West was good and that 'others' were not so good (Said 2003: 1-2). To a great extent, this manifested itself in the way Westerners perceived most indigenous communities in Africa who were usually described as savage, fetish and barbaric, just to name a few descriptions or epithets.

Yet, Said maintains, it is not that the Europeans were interested in 'others' but rather in themselves. Consequently, orientalism not only affected the orient (the non-Westerner) but also effectively transformed the image of the Westerner, the occident. In other words, it could be perceived as another way in which the Europeans sought to promote their interests at the expense of the non-Europeans.

However, Said also argued that orientalism was not merely an academic exercise divorced from reality. Rather it was associated with the European *a priori* interests to control, and manage the 'other'. It existed as the very vehicle through which it finally justified the colonisation of the orient by the West in the 19th and 20th Centuries. As Said continues: "Orientalism [is] a Western style for dominating, restructuring and having authority over the orient" (2003: 3), it is therefore about creating tightly organised discourses in which the colonized were 'managed' or 'controlled' by the colonisers and only the interest of the colonisers are seen to be important (Attwell 1993) Orientalism deals with how Europeans had power over the 'other' and 'managed' and 'controlled' the 'other' for an extended period of time. I submit that current intellectual property laws have an ability to hold, 'control' and 'manage' the power of indigenous property systems in the sense that, much like their creator, they function within an alien framework which does not consider their milieu. The current imposition of intellectual property laws on indigenous knowledge systems is suffocating the dynamism of this knowledge and at the same time enforces exploitation due to the European concept of 'power' and 'management', as outlined by Said.

2.2.1 Power as defined by Foucault and Gramsci

In advancing these arguments, Said draws on key principal methodological sources, Foucault and Gramsci. In his early work, he is probably more highly influenced by Foucault. Orientalism follows Foucault in his conception of what power is and how it operates. In his writings, Foucault rejects the conception of power as a force which is based upon simple repression. In place of what *The History of Sexuality* (1978) describes as the 'repressive hypothesis', Foucault sees power as an 'impersonal' force operating through a multiplicity of channels and sites, constructing what he refers to as a 'pastoral' regime, through which its subjects are controlled, 're-forming' them, and by doing so, making them conform to their place in the social system and the society as objects of power (Moore-Gilbert 1997: 36).

Foucault developed a powerful argument linking all forms of 'the will to knowledge' from his case studies and all modes of cultural representation of 'the other', or marginal constituencies, more or less explicitly, to the exercise of power (Moore-Gilbert 1997: 34). Said adapts from Foucault the argument that "'discourse'… the medium which constitutes power and through which it is exercised… 'constructs' the objects of its knowledge"(Moore-Gilbert 1997: 34). As Foucault (1978: 194) states: "We must cease once and for all to describe the effects of power in negative terms; it 'excludes', it 'represses', it 'censors', it 'abstracts', it 'masks', it 'conceals'. In fact power produces; it produces reality; it produces domains of knowledge and rituals of truth". In Said's work, the regime of disciplinary power as inscribed in orientalism transforms the 'real' East into a discursive 'orient', or rather substitutes the one for the other. Like Foucault, Gramsci is not merely concerned with the repressive apparatuses of geopolitical powers (or governments) but rather with the way that the consent of the subordinate or 'subaltern' sectors of society is 'solicited' in the domain of 'civil society' through such channels as education and cultural practices (Moore-Gilbert 1997: 37).

2.2.2 Central thrust of Orientalism

More particularly, the urgent aim and message of orientalism is to expose the degree and extent to which Western systems of knowledge and representation "have been involved in the long history of the West's material and political subordination of the non-Western world" (Moore-Gilbert 1997: 38).

For Said, all Western discourse about the East, that is, the 'other', is determined in the last instance by the will and desire to dominate over peoples and oriental territories. The pursuit of knowledge in the colonial domain cannot be and is not 'disinterested', firstly because the relationship between the cultures on which it depends is an unequal one, and secondly because such knowledge, whether of the language, customs or religions of the colonized, is consistently put at the service of the colonial administration (Said 2003).

The core of orientalism is the capacity of the occident to claim to possess knowledge through which the orient is represented. In other words, since the nexus of knowledge is power, orientalism is about management and control of the orient by means of power (2003: 39). The creation of the current legal framework has created a fissure between the West and indigenous communities and can thus be interpreted as a conscious plan to deny power to indigenous communities through colonialism and apartheid.

Said further contends that the orient and his world were seen as not existing in their own right, having life of their own, but rather as the extension of the European. It therefore would seem that orientalism was about diffusion of power from the centre, the West, towards the margins, the East, or in this case, Africa. Critical in this transaction were the West's presumptions to claim knowledge of the orient by which they represented the orient. The orient is portrayed a 'thing', an 'object', and a 'specimen'. Accordingly, he is someone who can be judged (as in a court of law), a subject matter to be studied (as in a curriculum) or examined, something to be disciplined (as in a school or prison), something one illustrates (as in a zoological manual).

Furthermore, orientalism was strengthened by the knowledge that Europe or the West controlled the immense part of the earth surface (Said 2003). Subjugation of the orient did not merely entail land. It was intellectual and embraced within various discourses: Christian religion, sociology, ethnology, anthropology, politics and law. These explained the behaviour of orientals; they attributed to orientals a mentality, a genealogy, and an atmosphere; most importantly, they allowed Europeans to deal with and even see orientals as a phenomenon possessing regular characteristics. Nonetheless, the durability of orientalist notions was such that it influenced both the orientals as well as the European occident. This is the character of orientalism (2003: 2).

Rather than simply being a positive doctrine, at best it is understood as a set of constraints upon, and limitations to, not of thought. Orientalism presupposes and maintains that non-Europeans are irrevocably different from Europeans. More particularly the supposed inferior intellectual and physical abilities attributed to non-Europeans, so it was maintained, would make it impossible for them to attain cultural achievements similar to those achieved by their European counterparts. This notion was elaborated in various ways: for instance, technologically, it was assumed that it manifested in their inability to control nature; environmentally, it was held that their bodily constitution was compromised by the tropical climate.

Postcolonial theory assists in trying to negotiate a new meaning of indigenous intellectual property ownership and current South African intellectual property laws by looking at how the subaltern or the indigenous communities consent to the domain of civil society through such channels as education, cultural practices and even intellectual property laws. This is non-liberative as the subaltern forgo their right to indigenous and communal ownership, as seen in the way the West has continuously plundered non-western materials and continued its political subjugation. The indigenous communities, according to orientalism, are consistently put at the service of colonial administration. In our case, indigenous knowledge is persistently put at the service of western knowledge systems and down played by western legal systems. The core of orientalism is the capacity by the West to claim possession of knowledge possessed by the orient. Therefore, orientalism will help us deconstruct and explain the transaction between indigenous knowledge systems and intellectual property laws as orientalism deals with how Europeans had power to manage and the orient or the indigenous communities over a significant period. Power to control did not only entail land. As stated earlier it was intellectual and it encompassed all aspects of life including law. The control by the West of intellectual property rights still exists since very little input from the indigenous communities has been solicited in the present intellectual property laws. If they have been solicited the over riding paradigm is still Western and basically foreign in its approach.

But even though the postcolonial theory helps us to look at the complex colonisation process, embedded in the postcolonial theory are cultural underpinnings which I shall look at in the next section.

2.3 Contested Cultures

There is a critical need to assert how law and culture interact in our societies today. They are not independent of each other – they reinforce the hegemonic processes within communities. This investigation takes cognisance of a direct link between the law and indigenous cultural communities in the sense that even though cultural values might have not been factored into the current South African legal systems, the intellectual property law is alien in trying to address the needs of indigenous communities. Coombe (1998) notes legal forums are perceptibly significant locations for practices in which hegemony is constructed and then contested, providing institutional venues for struggles to establish and legitimate authoritative meanings. Law generates, then promotes, aspects of positivities, and at the same time it promotes prohibitions, legitimations, and oppositions to the subjects and objects, which it recognises. The resurgence of legal anthropology has contributed to the theoretical understandings of power, hegemony, and resistance (Comaroff 1995). With the rise of legal anthropology, prominence is then accorded to cultural milieu and: "Legal discourses are spaces of resistance as well as regulation, possibility as well as prohibition, subversion as well as sanction" (Coombe 1998: 25). There has been a rise of legal anthropology, which uplifts cultural aspects of communities; with rise in importance, the legal discourses become arenas on which new forms of legal systems may emerge. This process becomes vital in our study as it gives an opportunity for new forms of intellectual property protection to emerge based on the resurgence of legal and cultural anthropologies.

Law is central to hegemonic process as stated earlier, but it is also a useful reservoir for counter-hegemonic struggles. This is especially seen when the eminent realities are seized by those who in other instances might have versions of social relations formally consented to and other cultural meanings recognised. If indigenous communities can manage to change the current intellectual property laws, that is, deal with protection from their own cultural perspective, it is possible that overturning the understanding of intellectual property rights can bear some hegemonic consequences on the current social, political and economic relations and in turn new forms of ownership might be recognized. This then means that indigenous communities can be accorded an opportunity to contribute to the cultural, ideological and power struggles of the South African community.

Coombe continues to point out that law, then, is culturally explored "as discourse, process, practice, and system of domination and resistance" (1998: 26) to be connected to larger historical movements while remaining sensitive to the nuances of "the ontological and epistemological categories of meaning on which the discourse of law is based" (1998: 26). Historically structured and locally interpreted, law provides means and forums both for legitimating and contesting dominant meanings and the social hierarchies they support. Hegemony is an ongoing articulatory practice that is performatively enacted in juridical spaces where, as Susan Hirsch and Mindie Lazarus-Black put it, "webs of dominant signification enmesh at one level even those who would resist at another," (1998: 26) and "hegemonic and oppositional strategies both constitute and reconfigure each other" (Comaroff 1995: 9).

Legal situations usually shape the social meanings, which are assumed by signifying properties in public spheres. These social meanings are socially produced in fields which are typically seen by inequalities of digressing from subject to subject and material resources, symbolic capital, and access to channels of communication as Coombe expands: "if culture is our nature, whatever threatens to shut down, repress, or distort representation through the assertion of some absolute 'presence' threatens also to put an end to both culture and history" (1998: 26). Intellectual property rights currently formulated in our current context pose a threat to contemporary societal practices, invariably freezing forms, deeming denotation, and containing connotation. With the process of commodification of different cultural forms, there is a creation of new relations of power in contemporary cultural politics. With indigenous knowledge system it is hoped that it can play an important part in the creation of new power relations in South Africa. Its input will be a force to reckon and bargain with as many South Africans operate within its framework.

For Coombe, laws legitimise and reinvigorate sources of "cultural authority by giving the owners of intellectual property priority in struggles to fix social meaning" (1998: 26). If one draws examples principally from the field of trademark law of the cultural politics that engage commodified cultural signs in the condition of postmodernity, Coombe suggests that "the commodity/sign is always simultaneously participating in a poetics and a politics driven by social groups with differential abilities to influence the complexes of signifying forms within which they have agency" (1998: 26; 15 & 285). Cultural meanings are constantly contested. It is through this contest that indigenous knowledge can seek to have an upper hand and influence the discourse so that cultural

considerations from the indigenous communities can play a vital role in balancing the power relations which control the South African society. Coombe concludes by saying that increasingly, the holders of intellectual property rights are socially and juridically endowed with monopolies over the public meaning and the ability to be able to "control the cultural connotations of their corporate insignias (trademarks being the most visible signs of their presence in consumer culture). Intellectual property, then, is an arena for connotative struggle – 'contested culture'" (1998: 26).

It is against this background that I would like to examine intellectual property and its hegemonic role in cultural contestations. The existence of such laws intrinsically implies that certain communities by nature of their development have more latent power than other communities especially indigenous communities. There is a constant tension over this struggle, as indigenous communities would like to assert their control on the hegemonic process by claiming the importance of their indigenous intellectual property. On the one hand, it has been ignored and on the other hand, it has been exploited from the time of conquest till today.

Both postcolonial theory and the theory of contested cultures tries to value the cultural input of indigenous knowledge systems into the current intellectual property laws. The cultural input will assist in reviewing a new direction for indigenous intellectual property law in South Africa and, as importantly, we must be perceptive and critical of the current status quo and its agendas so that intellectual property rights adequately addresses the needs of indigenous communities. It is this theoretical foundation that will assist in creating a new direction and enable greater critical reflection on the research question.

2.4. The natural law theory

Generally speaking, the natural law theory is one of the most important theories in terms of underlining the recognition of intellectual property rights under current South African law. The aim of this section is to examine the underlying rationale of this theory.

The natural law theory is primarily based on the principle that a person owns what he creates and has a right to enjoy the fruits of his labour. The principle underlying the natural-law theory of

awarding property to the producer of the intellectual effort has its roots in Roman law. This principle was further developed in the 17th and 18th centuries during the *ius commune* in Europe.

Roman jurists treated the "natural modes of acquisition of ownership (as): *specificatio, scriptura, pictura* and *occupatio*." (Mostert 1987: 481) *Specificatio* dealt with the "acquisition of ownership where one created a new thing with materials belonging to another" (Mostert 1987: 481). The idea "of *scriptura* was used to determine ownership where someone had written something on a piece of paper or parchment belonging to another" (Mostert 1987: 483). In *pictura*, "we thus find that some tentative and implicit recognition is given to the principle underlying the natural law theory" (Mostert 1987: 484). Two Roman law jurists, Justinian and Gaius, agreed that: "a product of mental effort and artistic skill should be accorded to the artist as his property" (Mostert 1987: 484). Mostert further states: To a great extent this is in adherence with the natural-law principle, although Justinian and Gaius did not link between the artist and his property. *Occupatio* was another mode of acquisition in Roman law: "A further important mode of acquisition of ownership on Roman law was *occupatio*. *Occupatio* was a method of acquiring ownership by taking possession of a thing (*res nullius*) which belonged to no one. The most common example given is the taking in possession of a wild animal" (1987: 485).

There was "no express adherence to the natural-law principle to be found in the discussion of these modes of acquisition of ownership. A tentative and implied adoption of the natural-law principle is, nevertheless encountered in the Roman-law jurists treatment of *pictura* and, to some extent, *specificatio*," (Mostert 1987: 486), in that they proposed that what a person made or created with his own labour and effort belonged to him. These modes of acquisition were revived in the 17th and 19th century European law (Mostert 1987: 486).

From the 17th to 19th centuries, the theory of natural law gained a secure position and became almost the determining factor for *specificatio, scriptura, pictura* and *occupatio* with widespread power of the natural law theory closely associated with the philosophical capacity of the time. The strong emphasis was placed on the individual and his/her natural rights: the individual was entitled to the fruits of his/her labour as Mostert (1987: 493) expands:

> The legal concepts of *specificatio, scriptura, pictura* and *occupatio* were, moreover, particularly well suited as means to reflect in the law the natural law principle that an individual should be entitled to reap where he has sown. These legal concepts thus played a major role in so far as they constituted the basis on which the natural law principle could be formulated and recognised in law.

This recognition of the natural-law theory, together with the philosophical underpinning of the 18th century, laid further solid underlying foundations from which the concept of property and intellectual property came to be proved to be reasonable and justifiable (Mostert 1987).

The underlying rationale of the concept of property - that what an individual has created by his labour and effort should belong to him - also laid the foundations for the recognition of intellectual property. In this section, I shall examine now Josef Kohler, who is considered by Mostert to be the father of intellectual property law, Josef Kohler declared that: “The philosophical foundation of property and intellectual property is based on labour; or to be more precise on the creation of an object; he, who creates something new, has a natural right to it” (Mostert 1987: 495). Kohler based his arguments on the theory of natural law. He stated that when an individual creates an object from the natural realm he has a closer relationship with that object. For he states:

> In the acquisition of ownership, the principle follows of itself, that if a man has put his work into a natural product, by transferring it from the world of nature to the world of universal human control, or by otherwise increasing its usefulness, and intensifying its character as wealth, he can demand that his relation to it should be nearer than that of others, because he has put a part of his personality into it, and thus given it something of himself (Kohler 1969: 128).

In developing his theory of intellectual property, Kohler’s argument stems from the fact that intellectual productions both “esthetic (sic) and technical also may be subject to private ownership”. For Kohler, *aesthetic* goods might be writings, music, or paintings: “technical productions are inventions, or useful models which accomplish certain ends, and thus are able to fulfil certain

purposes. But all these goods are not entirely individualistic; there is a certain universal human element in them…" (1969: 128).

At this point, it is important to note that, when we deal with the nature of intellectual property rights, two intertwining aspects need to be emphasised and explained: The immaterial property right and the theory of personality rights. The first aspect deals with a salient aspect of intellectual property: that the right is immaterial and intangible. It is important to realise the importance of this when dealing with intellectual property rights. The right is not directly associated with a tangible object, but an intangible one. The second aspect is rather more intriguing in that it considers intellectual property right as an extension of the individual creator. In other words, the right becomes part of the person who has created or invented that particular right (Hughes 1998). I shall now briefly examine what 'personality right' or 'personhood' entails. After this brief digression, however, I shall continue with the examination of Kohler's views on natural law.

2.4.1 The theory of personality rights

Hughes (1998) submits that all property rights are justified in accordance with the:

> benefits they bring to individuals in society. The dominant understanding of this justification for all types of property has been an economic formula: property rights are the most efficient means to produce social wealth. Judges and commentators considering intellectual property have historically remained true to this formula; copyrights and patents are viewed as an ex ante incentive structure to produce the most social wealth at the least cost.

The justification which includes:

> benefits brought to individuals in society - has given rise to discussions of the non-economic benefits of intellectual property. Property rights, it was observed, are a means to protect the personality interest or 'personhood' of individuals; this seemed especially true with intellectual property rights that are draped over creations of the human mind. Along these lines, personhood proponents could understandably be found in the vanguard of

> ‘moral rights’ for authors, ‘reverse shop rights’ for inventors, and ‘rights of publicity’ for everyone (Hughes 1998).

The interesting discussion with regard to personhood / personality holds deep problems which are that we do not have better understanding of:

> what constitute ‘personality’ and ‘personhood’ interests which maybe present in a piece of intellectual property. We know that we can think about the ‘personhood interest’ being held by one person, by a few people (as in joint works), or, in the de-constructionist analysis, by the multitude that are users, consumers, the audience and the public. We know that the personality interest may lead us into a highly subjective world, in which some proclaimed personality interests may strike us as illegitimate or unhealthy (Hughes 1998).

There are various ways of looking at what constitutes elements of personhood interest. In this thesis, we simply highlight the fact that this legal debate is present and can present a dilemma when we deal with intellectual property rights amongst indigenous communities because of the subjective nature of personality rights.

Furthermore, it is important to consider a person’s identification with his/her physical and mental capacities that could give rise to some form of personal identification with the intellectual products of the capacities with no regard to ‘creativity’:

> Actually, we should imagine an intermediary step. If a person identifies with his or her own mental capacities, this may cause that person to identify, first, with the process of using those capacities and, second, with the products of those processes. It is conceivable that someone would identify with the process without identifying (as strongly) with the product. If an individual has a ‘sense of self’ which emanates from his capacities, he should explore if and when the use of those capacities for intellectual production could lead to protectable personhood interests (Hughes 1998).

2.4.2 Individualism versus Communalism

I shall now continue with the examination of Josef Kohler's (1969) understanding of the natural law theory: it is vitally important to understand what might have influenced the rationale behind the natural law theory. An interesting aspect that needs to be highlighted in the way the natural law theory is portrayed by Josef Kohler is the whole issue of individualism versus communalism. For understanding this concept will bring us face-to-face with the predicament currently faced by indigenous knowledge systems in terms of the current *status quo* in South Africa.

Kohler's comparison of individual and collective ownership is of great significance to this inquiry and has direct implications for the central argument in our investigation, which states that current South African intellectual property law is highly influenced by the Western individualistic notion of ownership. The idea of individual ownership is contrasted with the notion of collective ownership in some indigenous South African communities.

For Kohler the individual ownership is synonymous with development and cultural growth as he states: "Culture mingled with individualization and combined with a well executed combination ownership of goods, is a constant source of new critical advantages and new modes productions of life" (1969: 125).

For Kohler, an important aspect of promoting human culture is through the growth of individual ownership as well as through individualisation of persons; the individualisation process then, enormously increases and accelerates human powers: "By means of greater variety, a wealth of relations has been created and at the same time man's command of the goods of the earth has been tremendously strengthened" (1969: 125).

Unfortunately, Kohler does not fully examine situations where collective effort (the effort of communities) has accelerated the powers of particular individuals. In fact, he dismisses the importance of the community when he says: "For what a man owns for himself and to his own advantage, he possesses with a double affection, and he will make far greater efforts to obtain it, than if others besides himself, or the whole community were to profit" (Kohler 1969: 125).

This, in essence, offers us the fundamental difference between the indigenous paradigm and the intellectual property law paradigm: in the former, there is an emphasis on communal aspects, relationships and ties, whilst, with the latter, the emphasis is on individual satisfaction. Furthermore, Wheeler asserts that natural law also exists in people individually and collectively, it cannot be repealed but can be ignored (1961). For the purposes of this study, I can point out that Kohler decided to ignore the collective aspect of natural law and, instead, to concentrate on the individual aspect. The aim of this thesis is to develop proper cognisance of the collective aspect of natural law, so that it might contribute to the discourse on indigenous property. I must also point out that some intellectual property laws, like patents and trade marks, do address aspect of communal ownership as well. It must be pointed out that with regards to intangible communal ownership amongst indigenous communities, there are diverse forms of ownership and not all forms of property are communally owned and communal ownership may take different forms, for example family, religious society, tribe or even individual such as traditional healers.

I shall now continue to discuss the historical development of the theory of natural law up to the present period:

> The whole notion that someone was entitled to his intellectual creation was taken up in the doctrine of '*geistiges Eigentum*" or 'intellectual property'. The doctrine of 'intellectual property' was, in addition, favoured by the emphasis on individualism in the Renaissance and the '*Aufklärung*', the great intellectual movement of the eighteenth century that regarded intellect as the real being of man. The doctrine of 'intellectual property' is predicated on the principle that the creator of a work of intellect has an absolute and exclusive right to it, just as a tangible thing would grant unfettered dominion to the owner of it (Mostert 1987: 495).

The development of the doctrine of: "'intellectual property' contributed to a great degree to the process of recognition of patents and copyrights. The doctrine of 'intellectual property' was a key factor in helping to ensure that the creator of an intellectual work was protected against piracy" (Mostert 1987: 496), and also led to the "statutory recognition of *propriété littéraire et artistique"* during the French Revolution (Mostert 1987: 496). This doctrine of 'intellectual property' enjoys a

great influence and force in our modern-day notion of intellectual property rights. On a similar note, Mostert quotes Harold Fox, who stresses the importance of enjoying the fruits of ones labour in our current context when he states:

> Patents and copyrights rest on the theory that the results of the original labour of the author or inventor are, both on the grounds of justice and public policy, to be protected against piracy. 'Every man is entitled to the fruits of his own labour' is a sentiment that has long been approved. Similarly, the law of trademarks is based on man's right to have guaranteed to him the profit derivable from his own property (Mostert 1987: 497).

Further justification of the right of ownership in one's intellectual property on the basis of the natural law principle, is the fact that it is fully adherent to article 27.2 (p) of the Universal declaration of Human Rights by the United Nations: "Everyone has the right to the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author." It is thus evident that in modern-day intellectual property law, the natural law principle, strongly underpins the concepts of copyright, designs and patents. It is vitally important to note that, although the natural law theory is often used to explain intellectual property, it is not the only theory which can justify intellectual property rights. Others are the reward and incentive theories. But "the reward and incentive theories were formulated under the impact of modern philosophical influences which place a more profound emphasis on the interest of society in general" (Mostert 1987: 500).

It is important to note that when Mostert concludes his article, he says: "The principle of natural law has played a significant role throughout history in the protection and recognition of an individual's intellectual creation." (1987: 501). Two issues here are worth noting: Mostert uses the term 'throughout history', and a question we need to pose is: Whose history? As explained by Said earlier, indigenous populations from Africa, Asia and South America are not factored into this history. In addition, the intellectual property rights dealt with by Mostert are mainly rights for individuals; this point was also strongly emphasised by Kohler. Neither Mostert nor Kohler allow for forms of intellectual property created within a community. In the light of the two theories discussed, the issues of historicity and individualism will be critically discussed to highlight the fact that

indigenous communities have largely been ignored in the formation of current intellectual property laws.

I shall now examine the economic justification for the intellectual property laws.

2.5. The Economic Philosophy

The economic philosophy underpins all intellectual property laws and places great emphasis on general public interest and social welfare. This theory is articulated in the reward and incentive theories. Dean explains:

> Copyright law tries to create a system where the person producing the work is given a qualified monopoly so that the person is compensated and rewarded for the creativity. The reward process acts as form of the form of incentive for the person to their talents and efforts to create better works or intellectual products in the future: "The reward of incentive is constituted by affording him the opportunity to gather all the commercial fruits of his work for a limited period" (Dean 2001: 1-1).

The economic philosophy regards intellectual property rights not as a form of property arising out of the creation, but as a monopoly created for the public interest. The monopoly is limited in terms of its time period to the expiry of the term, whereafter the work falls into the public domain and can be used freely and reproduced by others who are interested in the product (Dean 2001: 1-1). In terms of this philosophy, there is a balance between the interests of the individual and that of the public, in that the interests of the creator are protected for a specific period of time and, after the period has expired, the public can have access to the knowledge and freely reproduce it. The balance is that after a certain period, the knowledge falls back in the public domain and does not remain the property of the creator indefinitely.

This theory based on incentive is succinctly adopted in section 45 of the Patents Act, 1967, whereby certain exclusive rights are given to the "patentee in respect to his invention 'so that he shall have and enjoy the whole profit and advantage accruing by reason of the invention' (work)" (Dean 2001: 1-1).

However, in looking at this principle, the court in South Africa has expressed doubts as to whether this principle is the underlying principle of intellectual property law and in the specific case, copyright law (Dean 2001: 1-1,1-2). The view expressed in an *obiter dictum* [Biotech Laboratories (Pty) v Beecham Group PLC & another 2002 (4) SA 249 (SCA)] was that, since the earliest type of copyright was in the form of monopolies granted to printing companies to protect published materials, it is true to say that commercial and entrepreneurial interests underpin copyright law. The ownership concerns of the authors in this case, however, were not really adequately addressed and played a minimal role in the whole process, and this argument is further supported by the fact that the early types of intellectual rights in works largely favoured publishers, at the expense of authors (Dean 2001: 1-2). Furthermore, Dean expands that - while it is true that monopolies which were granted to printers enabled them to control the reproduction of their books, these rights came in the form of arbitrary privileges granted by the State and were very closely allied to the power of the state to impose a form of censorship. Thus the first real Copyright Act, adopted in England in 1710, namely the Statute of Anne, was the first to recognise the author as the cornerstone of the system for protecting literary works (Dean 2001: 1-2).

However, these early rights dealt mainly with reproduction. Only later was the scope of copyright broadened to include acts such as public performance and broadcasting of works, when the central focus of the author's entitlement came to be a main focus. As Dean notes, modern copyright law might have had a pragmatic beginning but, as it grew and developed and took proper shape, mostly during the 19th and 20th centuries, it gave effect to the principle of enabling the author, strictly, as well as those who derived title from him, to reap the economic benefit or fruits of their talents and/or labours. The fact that others, such as publishers, also reap the fruits *in lieu* of the author does not reduce the benefits from the situation, because such persons or companies generally benefit *in loco parentis* of the author and not in their own right (Dean 2001: 1-2).

The rationale underpinning the economic philosophy is profit incentive for creators of intellectual property, which in turn depends on the degree to which the creator of the intellectual property is able to maintain and enforce his work. The qualified monopoly granted to the creator is, however, limited in duration and after the expiry of the term, the work falls back into the public domain and

can be used freely and reproduced by others without legal implications. In this case, both author and public are protected (Dean 2001: 1-2).

The law must be effective to enable the creator of the intellectual property to maintain and enforce his or her monopoly. If the law is not effective, then the efficiency of the operation of profit will be impaired. Hence, a significant factor in the promotion of the creation of intellectual products lies ultimately in the soundness and effectiveness of the law in the protection if affords the creator of intellectual property, as this will enrich our culture and promote knowledge and well-being in our society (Dean 2001: 1-2).

The economic model does, in fact, take into account the natural law concerns of equity and justice. There is a conscious interplay between the economic model and the natural law theory insofar as copyright is concerned. “Copyright not only serves to promote social welfare (as advocated for by the economic theory) but also ensures protection of the individual’s interest in his creation as a fundamental right (as advocated for by the refined natural law theory)” (Bhana 2003).

2.6. The use of the theories

The above four theories form the basis of our theoretical underpinnings in this study. These theories will shed light on the current relationship between indigenous intellectual property and South African property law. Using the conceptual tools, I will go beyond the ordinary description of the relationship to formulate some perceptive conclusions.

For instance, if we consider the postcolonial theory as advanced by Edward Said, it sheds light on the fact that indigenous intellectual property has been looked down upon and often treated as an imitation of the West. Said uses the concept of ‘the other’ in referring to Africa which is a pessimistic identification of peoples of Africa. Postcolonial theory helps look at the way the West managed and controlled ‘the other’ without consulting or factoring the cultural and lived experience of the indigenous communities.

The theory of natural law illustrates the fact that the current South African intellectual property law stems from a Western-individualistic perspective. Josef Kohler strongly promoted individualism as

a significant aspect of cultural advancement. The theory of natural law, however, also promotes the collective aspect of a community and as Harvey Wheeler pointed out: our aim is to foster the development of communal ownership in intellectual property rights. An interesting perspective emerges if we seriously consider natural law from a collective perspective.

The economic philosophies inform the study of the importance of reward to inventors and initiators of ideas. However, it should be noted that the theory of natural law and the incentive and reward theories complement each other and are not mutually exclusive. An interesting aspect of the reward and incentive theory is the fact that the interests of the public are protected after a certain period of time so a balance is retained between the creators and society. With regards to the economic theory, it must be pointed that in certain instances protection is equated to economic benefits in intellectual property law. So both protection from economic exploitation (for instance, protecting from appropriation and access through the concept of public domain) and participation in economic benefit is important for the cultural continuity and well-being of indigenous peoples in South Africa. Thus, the economic theory can shed light on how protection and indigenous rights to profits of exploitation can exist as complimentary and competing rationale informing reforms sought by indigenous people.

It is also important to note that there are other theories which explain the nature and justification of intellectual property law. However, in this thesis I shall only deal with the ones mentioned as they will offer better insights and plausible scenarios with regard to indigenous intellectual ownerships.

2.7. Conclusions

In this chapter, I have looked at some sociological, historical and legal theories to shed light on indigenous knowledge systems and intellectual property law in South Africa. These theories will help us to look more closely at the relationship between the indigenous knowledge system and intellectual property laws. The postcolonial theory deconstructs the western imperialism process and accords more value to indigenous knowledge systems. It does this by explaining the current situation through historical development of the encounter between the European and the East. The latter is referred to as the ‘other’, which is seen to occupy a lower social scale. We can rightly

compare indigenous knowledge systems to the current intellectual laws and say that this knowledge system occupies a lower scale and was not be included into the European legal systems. This might explain why, after over 300 years, little consideration of the local knowledge has ever been factored into the current intellectual property laws. The new amendment of the current intellectual property laws (2007), still continues to perpetuate the same paradigm. Indigenous knowledge systems are being throttled to fit the western paradigm and in essence suffocated. We need a system which is free from the power, control and management of European *modus operandi*. In this way, the tightly organized discourses in orientalism will be deconstructed and the colonial interests will not be fore-grounded any more.

Though the historical development is important, we still need to look at the bigger picture of situating intellectual property within specific cultural contexts of lived experiences of the majority of South Africans. Intellectual property rights in their present form are totally alien to indigenous communities. With the resurgence of legal anthropologies which form arenas for constant struggle and re-negotiation of identities, social reality and power, indigenous knowledge systems can gain momentum and inform the new paradigm of ownership which considers the cultural contexts as the basis for hegemony and power negotiations. As Coombe notes, legal platforms are locations in which new ideologies and powers are formulated. So indigenous knowledge systems cultural underpinnings should be brought to the fore and inform and contest the current status quo. Finally, the natural law theory highlights the fact that development of Western principles of ownership gives a great deal of credit to the individual, reap what you have sown. With indigenous communities, there is an emphasis of the role the whole community played in producing a property right. This is evidently so due to the nature of the emergence of these properties, in that the whole community might have been involved at certain periods in history. The economic theory goes further and balances the interest of the public and the creator of an intellectual property. The right to ownership is then limited for a certain period depending on the right and thereafter, it falls into public domain so that the public can have access to the knowledge. This only happens after the creator has benefited for a specified period.

In the next chapter, I shall look at the role of indigenous knowledge in South Africa, specifically looking at the *Hoodia* plant and the African potato.

CHAPTER THREE

THE ROLE OF INDIGENOUS KNOWLEDGE IN SOUTH AFRICA: The *Hoodia* plant *(Hoodia gordonii*) and the African Potato *(Hypoxis rooperii)*

3.1. Introduction: a need for protection

Indigenous communities claim that the existing intellectual property laws in South Africa do not adequately recognise and protect their cultural products and expressions. In certain instances, intellectual property law is considered to be a threat to indigenous communities' cultural maintenance (Davis 1997), in the sense that intellectual property law does not sufficiently protect indigenous intellectual property, and that accordingly this knowledge is sometimes misappropriated (Wolson 2004).

For example in recent years, patents have been granted to the Council for Scientific and Industrial Research (CSIR) in South Africa for inventions derived from traditional knowledge, such as the *Hoodia* plant used by the Khoisan to curb hunger, without the prior consent of the Khoisan community (Finger *et al.* 2003: 19). RW Liebenberg the founder of a pharmaceutical company that now holds the patent rights to a product sold under the name 'Moducare Sterinols' (Smit *et al.* 1995: 856-870; Bouic *et al.* 1996, 1999, 2001), patented properties of the African potato in South Africa. The healing properties of the plant led Professor Patrick Bouic of the University of Stellenbosch's medical school to extract what are thought to be its active ingredients - plant 'fats' known as 'sterinols'.

There is a need for better protection and compensation where there has been misappropriation. WIPO defines misappropriation in Article 1 (2) as:

> Any acquisition, appropriation or utilization of traditional knowledge by unfair or illicit means constitutes an act of misappropriation. Misappropriation may also include deriving commercial benefit from the acquisition, appropriation or utilization of traditional knowledge when the person using that knowledge knows, or is negligent in failing to know, that it was acquired or appropriated by unfair means; and other commercial activities contrary to honest practices that gain inequitable benefit from traditional knowledge WIPO/GRTKF/IC/8/5 2005b: 18)

.

In this respect, Australia is similar to South Africa: "Pharmaceutical, agriculture, industrial and scientific research organisations are increasingly interested in bio-prospecting – the search for biological and genetic resources for potentially useful products and processes" (www.atsic.gov.au).

In trying to understand this dilemma, we must bear in mind that the current situation might be explained in terms of the 'other' as explained by Edward Said. When expanding on orientalism, Said compared African and Europeans - the Africans were viewed as situated on the margins of the orient. Furthermore, orientalism was more pessimistic with regard to the Africans than with the Semitic orient. It was seen as an extension of the orient, the 'other' of the 'other'.

It is in this regard that the theory of orientalism might be relevant to the present study in the sense that Africans, together with their knowledge systems, that is, indigenous knowledge systems, were considered by Europeans / colonisers/ Westerners to be an extension of the orient, the 'other' of the 'other', which might imply that very little consideration, if any, was given to such knowledge systems. To even consider introducing aspects of indigenous knowledge systems into the legal frameworks which were being drafted during the period of postcolonialisation and post-apartheid was virtually impossible. As implied earlier, though the nations of contemporary Africa are politically free in many ways they remain "as dominated and dependent as they were when ruled directly by Europeans" (Said 1994: 20). Largely, this manifested itself in the way the Westerners perceived most aspects coming from indigenous communities in Africa.

This chapter is divided into three sections: The first section looks at the case of the *Hoodia*, which received and is still receiving wide media coverage. Due to the fact that lawyers, Non-Governmental Organisations (NGOs), government and relevant science councils, have covered all

possible angles with regards to the *Hoodia,* I relied on secondary materials from books, annual reports, newspaper stories and commentaries. In addition, a field trip was carried out to Namibia to The Working Group of Indigenous Minorities in Southern Africa (WIMSA) headquarters in Windhoek in December 2006. The aim of the trip was to ascertain the latest developments in as far as the benefit sharing model was concerned.

The second section of the chapter deals with the Africa potato also known as the *Hypoxis rooperi* and *inkomfe* or commonly *ilabatheka* in Zulu. The section outlines the history of the usage of the African potato in South Africa from secondary sources and primary sources (questionnaires – see Table 1). The issue of a patent arising out of the plant's property is critically examined.

Finally, the outcomes of a questionnaire, which was conducted in KwaZulu-Natal and Gauteng, are discussed (Table 3-11). Key conclusions regarding both *Hoodia gordonii* and the African potato are drawn.

3.2. The *Hoodia gordonii*

The *Hoodia* is a succulent plant commonly found in the southern Africa region as Van Wyk and colleagues (2000: 70) notes:

> *Hoodia* plants are leafless succulents with thick fleshy finger-like stems which branch near the ground. Rows of small thorns are usually present along the stems, which bear remarkable flesh-coloured flowers resembling small radar antennas. The flowers smell strongly of decaying meat, so that they attract flies and blowflies. By laying their eggs inside the flowers, they pollinate them. There is a remarkable diversity of these fly-pollinated succulents, so-called carrion-flowers or *stapeliads*, in southern Africa.

3.2.1 Species

The different types of the *Hoodia* plant are eaten fresh as raw food. The shepherds use them as appetite and thirst-suppressants. "*Hoodia* species form a convenient emergency food and moisture source in harsh arid environments" (Van Wyk *et al*. 2000: 70). When *Hoodia* is eaten as food the

spines have to be removed with a stone leaving the succulent stems. The stem is then eaten like a cucumber. As Van Wyk and colleagues point out: “The taste is bitter and the texture somewhat mucilaginous. Stems are preferred after recent rains when they have swelled and are more moist. They are also sometimes taken home to be soaked in water before being eaten. An interesting liquorice-like aftertaste results which apparently gives tobacco smoke a particularly pleasant taste” (2000: 70).

Furthermore, Van Wyk and colleagues distinguish the different types of *Hoodia* as follows:

> *Hoodia currorli* is eaten as a food. It is also used as an appetite-suppressant (Andries Kotze, pers. comm.), and to treat indigestion, hypertension, diabetes, and stomach ache. *Hoodia gordonii* (bitterghaap) is eaten fresh as a food, and is used as an appetite-suppressant by shepherds; paradoxically it can also be used as an appetite-stimulant, and it is eaten for abdominal pain suggestive of peptic ulceration (Gert Dirks, John Cloete, pers. comm.). *Hoodia flava* (yellow-flowered ghaap) is eaten fresh as a food, and it is also used as an appetite and thirst-suppressant (Stephanus Cloete, Sophie Basson, pers. comm.) and *Hoodia officinalis* has been used to treat pulmonary tuberculosis, and was once imported to the United States as a remedy for haemorrhoids (2000: 70).

3.2.2 Intellectual Property Rights

Since 1998, intellectual property rights have received priority on the San development agenda. For instance, in the annual report for 2004/2005, San attending WIMSA board meetings, the Annual General Meeting (AGM) and/or meetings of the Regional San Heritage and Culture Committee (RSH&CC) discussed issues relating to intellectual property rights, the most important being developments regarding the *Hoodia gordonii* succulent and the combined WIMSA media and research contract (WIMSA 2004/2005: 51-59). WIMSA was established in 1996 at the request of the San in South Africa, Botswana, Namibia, Zambia and Zimbabwe, to provide a platform for their communities to express their problems, needs and concerns, to advocate and lobby for San rights, to establish a network for information exchange among San communities and other concerned

parties, and to provide training and advice to San communities on tourism, integrated development projects and land tenure (WIMSA).

3.2.2.1 San rights regarding *Hoodia Gordonii*

In May 2001, an organisation called Survival International (one of WIMSA's international support organisations) informed WIMSA about an article which referred to the CSIR based in Pretoria, having acquired a licence to conduct some further tests on the *Hoodia's* appetite-suppressing qualities.

The CSIR was established in 1945 by an Act of Parliament and is the leading scientific and technology, research and development, and implementation organisation in Africa:

> The purpose of CSIR is to engage in directed and multidisciplinary research and technological innovation, as well as industrial and scientific development to improve the quality of life of African people. But perhaps the primary goal of the organisation is to improve the national competitiveness of South Africa in the global economy. Approximately 40% of the CSIR's annual income is provided by a grant from Parliament, with additional income being provided by royalties, licences and dividends from an intellectual property portfolio and commercial companies created by the CSIR (Moyer-Henry 2008: 7).

The CSIR had patented the active ingredient of the *Hoodia gordonii* succulent as 'P57', an appetite suppressant, and the rights to further utilise and commercially exploit the patent had been down-licensed to the pharmaceutical company Pfizer Inc. in the United States of America through Phytopharm in the United Kingdom (WIMSA 2003/2004: 54). Some San members had given CSIR researchers the information on the appetite suppressing properties of *Hoodia*. This transaction was totally ignored in the patenting of P57 (WIMSA 2003/2004: 54). As Kari Moyer-Henry (2008: 7) notes: The poor public relations on the side of the CSIR scientists contributed to the commencement of the San's opposition to the *Hoodia* patent: "When asked how the traditional knowledge of the San aided their research of *Hoodia*, the scientists incorrectly stated that the San people were extinct. This errant statement, combined with the previous poor treatment of the San

by CSIR, caused the South African San Council to file suit against the CSIR and its licensees" (2008: 7). Since then, the *Hoodia's* case has become a benchmark for WIMSA and the indigenous world demonstrating what can be achieved when the San stood up and fought for their Intellectual Property Rights (WIMSA 2003/2004: 54).

The San first learned of the grant of the patent through a Phytopharm press release. The San felt exploited by the CSIR since the San had provided the CSIR with the knowledge regarding the *Hoodia*, when they conducted research among their community. The San people expected the CSIR to act as advocates for them in furthering and extending their rights and benefits in return for the information they provided to the CSIR laboratory that ultimately advanced the research (Moyer-Henry 2008: 7).

In the RSH&CC meeting held in June 2001 it was established that for many generations the *Hoodia* was collected and used by community members and San healers in Angola, South Africa, Namibia and Botswana. An interesting though rarely stated aspect of this debate is that some Northern Sotho and Tswana and Venda-speaking groups also used *Hoodia*, but this was conveniently overlooked by the WIMSA claimants (Van Wyk *et al.* 2000: 70).The San communities in southern Africa used *Hoodia* stems to subjugate their thirst and hunger on long journeys in the desert. There is a variety of uses derived from *Hoodia* products and properties. With regard to CSIR patenting and passing the *Hoodia* properties to pharmaceutical companies, WIMSA commissioned their legal advisor, Mr Roger Chennells, to discuss the matter with the CSIR. The latter apologised for not consulting with the San on the properties of the plants "and for not having obtained the 'prior informed consent' required in terms of the Convention of Biological Diversity [and] negotiations took place between the CSIR and the South African San Council" (WIMSA 2003/2004: 54).

After the first meeting with the CSIR Chennells recalled the following in a letter sent to the CSIR Executive President dated 5 July 2001:

> Your representatives acknowledged that the San had provided the original source of the information on the *Hoodia* leading eventually to the patents in 1997 and 1999

> respectively…. In turn the writer provided the assurance not only that WIMSA is the established and democratic representative of the San peoples in Southern Africa, but in addition that the San regarded their traditional knowledge regarding the *Hoodia*, as well as regarding all other plant uses, as being 'collective' San intellectual property rights, that should not morally be able to be 'owned' by any individual or entity. Nevertheless, a legal challenge of any nature does not form part of our clients' plans (WIMSA 2001/2002: 26).

In the first round of negotiations, a visit by all South African San Council members to a CSIR *Hoodia* experimental growing site and laboratory was included and resulted in a memorandum of understanding between the CSIR and the South African San Council (as the South African chapter of WIMSA) being signed in March 2002. In the memorandum, "the CSIR acknowledges the San's prior intellectual property rights to the *Hoodia* and undertakes to negotiate a benefit-sharing agreement which will take effect if the plant reaps success in the marketplace" (WIMSA 2001/2002: 26). The agreement was a significant step since the CSIR recognised the San's collective rights to the *Hoodia* as an appetite suppressant.

From then delegates at all WIMSA board, general assembly and RSH&CC meetings kept abreast of developments in the negotiation process. The WIMSA AGM in 2002 confirmed the South African San Council as official negotiator and the RSH&CC ensured WIMSA's involvement in the entire process. It was agreed in the AGM that the San in all countries in which they live would share future benefits deriving from the *Hoodia* equally.

The *Hoodia* issue received considerable attention worldwide. For instance:

> The Switzerland-based NGO Berne Declaration invited WIMSA to participate in a 'Trial on TRIPS1' in Geneva, Switzerland, in September 2001, an event intended to make the delegates to the World Trade Organisation (WTO) TRIPS Council aware of the impact of their work…. The event incorporated lobbying talks with WTO delegates, a public debate, a press conference and in-depth interviews with individual journalists. (WIMSA 2001/2002: 26).

International, regional and local media reported on the *Hoodia* topic throughout 2001. In 2002, several interviews and articles fixed their attention on the memorandum of understanding between the South African San Council and CSIR – this was presented as a key San victory. The San and their legal advisor, Mr Roger Chennells, cautioned the media workers: "congratulations might be premature as the memorandum merely serves as a basis for further negotiations between the San and CSIR towards a benefit-sharing agreement" (WIMSA 2001/2002: 26).

In 2003, there were further negotiations and workshops, which led to a final version of a benefit sharing agreement in March. The terms of agreement were: "The CSIR will pay the San 8% of all 'milestone' payments it received from its licensee, UK-based Phytopharm plc.. [and] the CSIR will pay the San 6% of all royalties that the CSIR itself receives once the drug is commercially available" (WIMSA 2003/2004: 54).

As Moyer-Henry observed, the CSIR and Phytopharm were accused of biopiracy. They did the only thing they could do to protect their investments. They offered a settlement to the San for use of their knowledge: "Beginning in March 2003, San in four countries—South Africa, Botswana, Namibia and Angola—were guaranteed at least four payments of $30,000 during clinical testing of *Hoodia*. In addition, Pfizer agreed to profit sharing with the San at a rate of 6% of the royalties received on the market" (2008: 8).

The agreement also stated that the income owed to the San was to be paid to the San *Hoodia* Benefit Sharing Trust established in cooperation with the CSIR and the South African San Council. The latter was mandated by WIMSA to stand for all San Communities in the area. The Board of Trustees consisted of: three South African Council representatives; three representatives of other San stakeholders in the region; a WIMSA representative; a professional from South Africa appointed by WIMSA; a CSIR representative; and a non-voting observer appointed by the South African government. The aim of the Trust was: "to use income from the CSIR for the general upliftment, development, education, and training of the San community as approved by the Board of Trustees" (WIMSA 2003/2004: 54).

In October 2003 WIMSA held a milestone *Hoodia* consultative workshop in Upington, South Africa. The main purpose of this workshop was to ensure that the agreement reached regarding the *Hoodia* was fully understood and endorsed by all the delegates from the other countries. During the workshop delegates were updated on the *Hoodia* issue. An important point under discussion was the distribution to the San of the proceeds from sales of a new drug incorporating 'P57'. The workshop proposed a formula: "75% to be equally divided between San of Namibia, Botswana, South Africa and Angola as guided by WIMSA programme priorities; 10% to go to the *Hoodia* Benefit Sharing Trust; 10% to be kept by WIMSA as an emergency reserve [and] 5% to go to WIMSA for administrative purposes" (WIMSA 2003/2004: 55).

The workshop also suggested that each country must have a properly constituted and fully operational San Council to manage and divide the funds even-handedly. Where a council does not exist, the country's allocation will be kept by the Trust until a council is in operation. Further, on the distribution of funds to each country, the workshop felt that: 30% of each country's money should cover the administration of the San Council and 70% should go to development projects not belonging directly to the Council. These proposals were ratified by the WIMSA General Assembly in November 2003 and unanimously accepted. The Assembly also saw to the nomination and election of the founding Trustees (WIMSA 2003/2004: 55).

3.2.2.2 WIMSA media and research contract

Mr Roger Chennells played a key role in ensuring that the San community were aware of their cultural heritage rights. He also provided expert legal advice when the San asked that the WIMSA research and media contracts be simplified and shortened. The parties agreed to combine the two contracts dealing with research and media. At its AGM in November 2001, WIMSA General Assembly discussed and approved the draft-combined contract, titled "Media and Research Contract (general purpose) of the San of Southern Africa" (2001/2002: 26).

The positive outcome has been that when WIMSA has requested that a contract relating to the use of materials emanating from the San's way of life, culture be signed and all the film and television producers, photographers, journalists, authors, researchers and musicians who worked with San

for the first time have had no objection to signing it. The purpose of these contracts was to: "to ensure that all San intellectual property (including images, traditional knowledge, music and other heritage components as recorded in any medium) is controlled and protected" (WIMSA 2001/2002: 26). For example, South Africa's Peermusic went out of its way to draw up a specific contract providing for the most imperative aspects of WIMSA's general contract. Peermusic added significant clauses to regulate the recording of San music. The parties signed the Peermusic contract in March 2002.

In 2003 in close co-operation with Roger Chennells, WIMSA and other stakeholders published a practical handbook on heritage and intellectual property entitled *The San of Southern Africa Heritage and intellectual propert*y reflecting the San's experiences with intellectual property rights and assisting them further in protecting these rights.

3.2.2.3 Recent developments regarding the *Hoodia gordonii*

After 2000, there was an incredible expansion in the market of *Hoodia* as Chennells states:

> Between 2001 and 2005 the international market for *Hoodia* exploded, with literally hundreds of dietary products being advertised on the internet and appearing on pharmacy shelves. Most products were of dubious authenticity, containing unsubstantiated quantities of dried *Hoodia*, making unfounded claims, and in many cases implying association with the San peoples. Poaching and illegal harvesting of wild *Hoodia* was widespread, and farmers planted hundreds of hectares in the expectation of the boom that was to follow. Legislation in South Africa was one step behind, and the registration of *Hoodia* as an Appendix II CITES listed plant in order to control the unbridled commercial trade was only effected in October 2004, too late to save many wild *Hoodia* populations (2007: 10-11).

Several "*Hoodia* growers who were cognisant of their obligations to share benefits with the San under the as yet unpromulgated Biodiversity Act Regulations" (Chennells 2007: 11), approached the San community. As Chennells expands:

> Negotiations were then entered into between the South African San Council and the *Hoodia* Growers, who had constituted themselves as the South African *Hoodia* Growers (Pty) Ltd (SAHG). In March 2006, and after many meetings aimed at establishing a fair percentage for the San in the light of a volatile new market, an agreement was concluded with the SAHG providing the San an effective 6% of the value of *Hoodia* sold by growers (2007: 11).

More negotiations were carried on from 2006 onwards and:

> After a year of negotiations, a comprehensive benefit sharing agreement was concluded between the San and the newly formed Southern African Hoodia Growers Association on 15 March 2007. This agreement, which initially provides the San with a modest R24 per dried kilogram of *Hoodia* exported, has the aim of securing a transparently managed *Hoodia* market, with all role players committed to best practices as set out in the agreement. The San peoples are to provide two directors out of the seven directors that will run the organisation (Chennells 2007: 12).

Whilst the agreement was negotiated in South Africa, it was drafted in such a way as to include and welcome the participation of *Hoodia* growers from neighbouring countries such as Namibia and Botswana (Chennells 2007: 11). So other states are also involved and share the *Hoodia* genetic resource as Chennells expand:

> The governments of South Africa, Namibia and Botswana are the three SADC range states that share the *Hoodia* genetic resource, and that are therefore mutually linked in the manner in which they interpret and implement their rights and obligations under Article 15 of the CBD. Currently these three countries differ significantly in the manner and degree to which they have implemented their duties to require prior informed consent relating to access to genetic resources from 'indigenous and local communities', the obtaining of 'mutually agreed terms', and benefit sharing with such communities. These SADC countries are bound by the decision taken by the World Summit for Sustainable

> Development to negotiate an international ABS regime. This was confirmed at the Seventh Conference of the Parties to the CBD.... (2007: 11-12).

The CBD's objectives are to develop national strategies for the conservation and sustainable use of biological diversity:

> Article 15 of the CBD provides a framework for regulating access to, and fair benefit-sharing arising from, the use of 'genetic resources'. Specifically it recognises that: Authority to allow access to genetic resources lies with national governments and should be subject to national laws; Access to genetic resources should be subject to the prior informed consent of the Contracting Party providing the resources (eg, national government); National Governments may put in place mechanisms to ensure the fair and equitable sharing of the benefits arising from any R&D involving genetic resources; Access and benefit-sharing should be on mutually agreed terms and contracting Parties should seek to facilitate access and not impose restrictions which run counter to CBD objectives (GlaxoSmithKline, 2005: 3).

The principles of the CBD are not easy to implement as they need broader participation of member states as Chennells explains: "It will be impossible to implement the principles of the CBD and the *Bonn Guidelines* without the participation and cooperation of other state parties" (2007:12).

The Bonn Guidelines are meant for state parties to the CBD:

> Bonn Guidelines on genetic resources (http://www.biodiv.org/programmes/socio-eco/benefit/bonn.asp) build on the principles captured in Article 15 of the Convention. They advise governments on how to set fair and practical conditions for users of genetic resources and associated traditional knowledge, along with advice on the roles and responsibilities of the various stakeholders. In return, the Guidelines stipulate that users of genetic resources should offer benefits such as profits, royalties, scientific collaboration, or training. The Guidelines are voluntary and many countries have yet to adopt laws

> governing access to and use of their genetic resources….Once countries have adopted such local laws, they will receive the protection and compensation envisaged under the CBD (GlaxoSmithKline, 2005: 4)

Hence, that is why Chennells states that:

> The San have called on the South African Government to meet with the Governments of Switzerland and Germany, in order to discuss the fact that numerous *Hoodia* products appear illegally on the pharmacy shelves in those countries, without a benefit sharing agreement with the San. It is anticipated that progress will be made in the years ahead, as part of an ABS regime, to force countries to close down any *Hoodia* products which are not legally sourced, and which do not share benefits with the San in accordance with the requirements of the CBD (2007:12)

The knowledge that existed concerning the Hoodia could be characterised as the 'other' in Said's terms. This evidently led the scientists to downplay the importance and contribution of the San community. According to Said (2003: 2), this relation of power entailed cultural and ideological assertion in which the orient was propped by the institutions, vocabulary, scholarship, imagery, doctrines, and colonial styles of the West. In this sense, orientalism was intellectual in its character, it was an academic discipline, (be it sociology, anthropology and others) in which the West related to the 'other'. In most cases, there was a conscious effort to dominate the 'other' or rather making known that knowledge can only come from those in power. In our case, the scientists at the CSIR.

3.3. The Africa Potato *(Hypoxis rooperii)*

The Latin family name of the African potato is *Hypoxidaceae.* The common names referring to it are yellow stars, star lily, African potato (English.); sterretjie, *Afrika-patato* (Afrikaans.); *inkomfe* and *ilabatheka* (isiZulu) (Singh 2004). *Hypoxis*, a well-known species of the family *Hypoxidaceae*, is easily decipherable by its bright yellow star-shaped flowers and strap-like leaves (Mills *et al*. 2005: 19).

Van Wyk and colleagues *(*2000: 146) expand:

> Hypoxis species are tuberous perennials with strap-like leaves and yellow star-shaped flowers. The medicinal part is the tuberous rootstock (corm), which is brownish—black on the outside and yellow when freshly cut. It has a long history of medicinal use on the African continent. The name *Hypoxis* comes from the Greek words *hypo* denoting below and *oxy*, which refers to the pointed foundation of the fruit or ovary.

It is estimated that there are over ninety species of *Hypoxis* worldwide. The distribution is international, occurring in Africa, North and South America, southeastern Asia and Australia. In Africa, the genus is widespread south of the Sahara, with a concentration of more or less forty-one species found in southern Africa. *Hypoxis* is principally a summer rainfall type with a large number of genuses in the eastern region of South Africa (Singh 2004).

3.3.1 Species

The species listed below give us an idea of the morphological diversity in *Hypoxis*, and illustrate the medicinally important species and those with potential for horticulture. The first four species are common in grasslands in the summer rainfall region (Singh 2004).

Hypoxis hemerocallidea (previous name *Hypoxis rooperi*) is the best-known member of the species.

Hypoxis obtuse: The plant is very similar to *Hypoxis hemerocallidea* in appearance but the leaves are different in that they are stiff, twist with age, and have margins, which are white due to the overlapping hairs. It is very widespread in southern Africa. It is used in the making of a floor polish for huts by local tribes in the Escourt area of KwaZulu-Natal (Singh 2004; Tables 8-9).

Hypoxis colchicifolia: This is the second most popular species in the medicinal trade in South Africa. It has long wide leaves and the bases of the leaves wrap over to form a false stem, giving the plant a tall, erect appearance. Leaves are almost hairless and tough. The type is widespread from the coast to the interior of southern Africa (Singh 2004).

Hypoxis rigidula: This type is similar to *Hypoxis colchicifolia* in habit, but it differs in its long but narrow leaves that are soft and bend backwards. Leaves are very hairy all over and have strong fibres which are used to make rope and hut trimmings. Two varieties are recognised by the density of hairs on leaves (Singh 2004).

Hypoxis angustifolia: "This is used in the nursery trade because it is suitable for cultivation due to its spreading rootstock"(Singh 2004). There are two varieties that are distinguished mainly by the width of their leaves. They are commonly found along shaded cliff faces in the Eastern Cape, where they grow alongside and occasionally hybridise with *Hypoxis membranacea* (Singh 2004).

Hypoxis membranacea: This is a white-flowered, fragile species, widespread from coast to the interior of South Africa. It is clump-forming and easily spreading like *Hypoxi angustifolia* (Singh 2004).

Hypoxis parvula: This is a mountain prevalent found in South Africa, Swaziland and Lesotho. It flourishes in moist, semi-shaded habitats among boulders. Plants are small, similar in habit to *Hypoxis membranacea*. It consists of a flowering stalk with a single flower. Two varieties are recognized by flower colour, either yellow (*parvula*) or white (*albiflora*) (Singh 2004).
In the garden *Hypoxis,* species are attractive for development as garden ornamentals. Species suited to garden beds are those with small corms and soft leaves like *Hypoxisa angustifolia* and *Hypoxis membranacea* which spread quickly through multiplication of the rootstock to form a mass of plants. Hardy species with large corms and strong leaves like *Hypoxis hemerocallidea, Hypoxis colchicifolia, Hypoxis obtusa* and *Hypoxis acuminata* are fairly easy to maintain once established in a garden (Singh 2004).

3.3.2 Economic and cultural value

In the genus, two species, The *Hypoxis hemerocallidea* and *Hypoxis colchicifolia* are the species most sought after for their use in African traditional healing remedies and also in the preparation of herbal teas and tinctures (Tables 8-11). As Van Wyk and colleagues note:

> Weak infusions and decoctions of the corm are used as convalescent and strengthening tonic in adults and children with wasting diseases (Ashley Mashigo, pers. comm.), including tuberculosis and cancer. These tonics are traditionally used three times daily for periods of up to a month. *Hypoxis* has been used traditionally for benign prostatic hypertrophy, urinary tract infections and testicular tumours (Alhrecht 1996), and as a laxative and vermifuge. *Hypoxis* is also used to treat anxiety, palpitations and depression (Ashley Mashigo, pers. comm.), and they are a few anecdotal reports that fresh plant tinctures are helpful in rheumatoid arthritis. Ingestion of *Hypoxis colchicifolia* has been reported to cause delirium, and it has also been used to treat delirium (2000: 146; Watt *et al.* 1962).

For these reasons, there is huge demand on the current populations of these plants in southern Africa, to the extent that they are now under threat. More particularly, illegal and untrained harvesters make it difficult for the plant to sustain itself (Tables 11-12). For instance, a problem in the past has been quality control. Roots have been sold in markets and by the wayside and roughly ground dried roots have been contaminated or have lost their potency. More recently however, *Hypoxis rooperi* has been grown commercially, with controlled harvesting and preparation.

The rootstocks of most of the species of Hypoxis are used in various ways in South Africa. Zulu traditional healers used the *Hypoxis hemerocallidea (*previous name *Hypoxis rooperi)* and *Hypoxis colchicifolia* rootstocks for centuries in the treatment of urinary infections, heart weakness, internal tumours and nervous disorders. Corms of the latter species are used as an emetic against fearful dreams. The Sotho people use some species of *Hypoxis* as a charm against lightning and storms. *Hypoxis Argentea* has small white rootstocks, and in times of famine the rootstocks are boiled or roasted by the Sotho and Xhosa people as a source of food (Singh 1999: 123-125; Snijman *et al.* 2003: 1071-1074).

The particular or well-known species that dominates the South African herbal enterprise is the *Hypoxis hemerocallidea* which is also referred to by entrepreneurs as a ‘wonder herb’ and ‘miracle cure’ (Table 11). Corms of *Hypoxis hemerocallidea* are used to alleviate several immune related ailments for example common cold, flu, arthritis, tumours, HIV/AIDS and cancer. People in

southern African usually self-medicate the plant with all kinds of preparations from the above mentioned *Hypoxis rooperi* corms (Table 8-10). Some of these preparations are available over the counter in health stores as pills, capsules, tablets and solutions.

The value of the plant lies in its content of a sterol called hypoxoside:

> Which once in the human gut, [hypoxoside] readily converts to rooperol, a biologically active compound that balances the immune system. Preparations of hypoxoside are being used in primary health care in South Africa to boost the immunity in HIV/AIDS patients. The genus has great potential as a source of new drugs with immuno-modulatory properties and as such, is of economic value. However, clinical trials are first needed to confirm the anti-inflammatory and immuno-modulatory properties of *Hypoxis* (Singh 2004).

3.3.3 Western exploitation of the African potato

In 1997, the African potato hit the South African headlines: Professor Piet van Jaarsveld, head of Pharmacology at the University of Stellenbosch's Medical School, is quoted in an article in *YOU* magazine on 10 July 1997 stating that: "It's the remedy of the future. People will take it to prevent colds and infections, the way they now take vitamins." The fuller headline on the front page of *YOU* read "SA's Miracle Muti [medicine] for Deadly Diseases" (10 August 1997). The article further states that the African potato "increases the body's natural resistance to disease…sterols and sterols isolated from the plant are credited with the efficacy in treating AIDS, Cancer, and TB" (*SA Retail Chemist* 1997).

Furthermore, an article in the *SA Retail Chemist* on 1 August 1997 claimed that:

> The plant was discovered by 78 year old RW Liebenberg, a businessman from Randburg, 40 years ago, when a relative made a miraculous recovery from prostate cancer after drinking a brew made from the Sterretjie. In 1967, RW says, the plant was analysed at the University of Natal . In the 1980's research started, and in 1992 a trial on 200 HIV positive

patients began. The article claims that the preparation was successful in 'stabilising the CD4-T cell count in both HIV+ and full blown AIDS subjects'.

As a result of Liebenberg's relative's miraculous recovery Liebenberg extended his interest on the *Hypoxis rooperi* plant. When Liebenberg's relative was discharged from hospital with advanced prostate cancer a neighbour came over with a *Hypoxis rooperi* plant bulb. He told his family to make a brew from it and give it to Koos to drink. A week later Koos could sit up in bed and his appetite had returned. He lived for another ten years to the age of 86. This aroused Liebenberg's interest in traditional remedies.

International research has since shown the benefits of indigenous plant ingredients, known as phytonutrients. The *Hypoxis* has been a good example in this regard. Professor Patrick Bouic (2001: 848-850), an academic at Stellenbosch University, revealed the benefits of plant sterols and sterolins on the immune system of the human being: research done on a group of volunteers demonstrated a significant increase in the number of T-cells, which are involved in enhancing immunity (Bouic *et al.* 1996: 693-700). Beta-sitosterol and beta-sitosterol glucoside stimulate human peripheral blood lymphocyte proliferation.

Furthermore, there is substantiation that the plant sterols, mainly the beta-sitosterols, in the *Hypoxis*, provide positive effect on benign prostatic hypertrophy and the enlargement of the prostate gland (Bouic 1996). Apart from research showing beneficial effects on prostatic hypertrophy, and stimulation of the immune system, there are various medicinal claims made for the plant. *Hypoxis rooperi* is said to have anti-inflammatory effects and would therefore be useful in patients with rheumatoid arthritis. Anecdotal reports claim benefits in chronic fatigue, eczema and psoriasis, recuperation after chemotherapy and debilitating illnesses.

From the article from *SA Retail Chemist* mentioned earlier, the fact that the magazine reported that the plant was 'discovered' should be highlighted and questioned. I commented earlier that the plant has been used for centuries in southern Africa and this fact will be confirmed by the answers to a questionnaire which was given to traditional healers, herbalists and *sangomas* in Gauteng and

KwaZulu-Natal (Tables 6-11). A more appropriate term to be used by *SA Retail Chemist* would have been that he 'came to know of its medicinal properties'.

Van Wyk and colleagues provides useful information on many South African plants, including the African potato. The authors, referring to the history of the plant, furthermore assert that in the past, traditional healers regarded it as a 'wonder plant' and used it for a variety of ailments, and as a convalescent and strengthening tonic (2000: 46).

The above example further supports our aim which is to show that the current South African intellectual property law does not adequately address the specific needs of indigenous intellectual property (Table 13). The knowledge emanates from the indigenous community. But In this particular case, the link to the traditional community has been totally disregarded despite the fact that its traditional use has been documented by many scientists (Van Wyk *et al.* 2000: 146).

More worrying is the fact that Liebenberg is the founder of a pharmaceutical company that now holds the patent rights to a product sold under the name 'Moducare Sterinols'. This product contains sterols and sterolin from the African potato which incorporates the treatment which Liebenberg obtained from a neighbour whose knowledge arose from the indigenous communities.

I shall examine the information supplied in applying for the patent as we proceed in the study. This will indicate how people with better resources financial and otherwise have misappropriated traditional medicine. To make matters worse, there has been no sharing of the financial benefits accrued from exploitation of the indigenous knowledge of the plant. The owner of the patent – Liebenberg, controls all the profits!

The African potato in this case is denied socio-historical and cultural existence in 'being discovered' by Mr. Liebenberg. This form of control which Said described earlier as orientalism is about creating tightly organised discourses in which the colonised are 'managed' or 'controlled' in such a way that colonial interests were fore-grounded. After all, orientalism is about the European's 'management' and 'control' of power with regard to the 'other'. For Said states: "Orientalism can be discussed and analysed as the corporate institution for dealing with the Orient – dealing with it by

making statements about it, authorising views of it, describing it, by teaching it, settling it, ruling over it: in short, orientalism is a Western style for dominating, restructuring, and having authority over the Orient" (2003: 3). On a similar note Moore-Gilbert also supports the assertion that: "Western systems of knowledge, representation and ownership have been involved for a long period of time in the history of the European or colonialists' material and political subordination of the indigenous world" (Moore-Gilbert 1997: 38).

Since 1992, the African potato has been used to treat HIV-positive patients (Table 3). The results of the treatment showed that the CD4 - T cells of HIV patients: "The cells which keep the immune system alert to invaders in the body - usually drop every year by some 130 cells per 1000" (*SA Retail Chemist* 1997). The article in the *SA Retail Chemist* further stresses that: "Even though the remedy is not a cure for AIDS, it seems it can increase HIV-positive patients' lifespan dramatically" (1997).

Dr. Luc Montagnier, the French doctor who identified the AIDS virus almost thirty years ago, also showed interest in the treatment. Other academics such as Professor Ben Smit, who headed the Department of Oncology at Cape Town's Tygerberg hospital from 1978 to 2001, urged caution stating that the supplement also seems to slow down the growth of certain types of cancer (*SA Retail Chemist* 1997). It is important to note that while supplements containing sterols and sterolins are available over the counter in the retail shops, the concentrations of their active ingredients is nowhere concentrated more abundantly than in the *Hypoxis rooperi* or African potato.

The supplements, however, containing sterols and sterolins are extracted from the African potato plant which grows among the community. The knowledge and the plant which comes from the indigenous communities is now being sold back to the indigenous communities through the patent of Liebenberg. The owners of the knowledge, that is, the indigenous communities, are paying for the knowledge which belongs to them because they did not have the resources to operate fully in the Western legal framework. If the legal system could adequately protect their knowledge they could make plausible use of this system. Unfortunately, the current legal systems are alien to most indigenous communities and hence the need for new systems which will also protect the interests of these communities.

To fully grasp the extent of the acts of misappropriation in the case of the African potato and emphasise the fact that the specific needs of the intellectual property are not met, I must highlight issues which I consider to be 'wrongful actions': With regard to the African potato, the 'wrongful actions' are not as obvious as in the violation of consent and promise in the case of the *Hoodia*. South Africa's National Environmental Management Biodiversity Act (no. 10 of 2004) expressly outlaws bio-prospecting activities in the absence of Prior Informed Consent (PIC), and compliance with other relevant requirements such as a Material Transfer Agreement (MTA) and an Access Benefit Sharing agreement (ABS). In essence, the Biodiversity Act confirms that all bio-prospecting of the African potato by Liebenberg through his pharmaceutical company without the requisite PIC, MTA, and Access Benefit Sharing (ABS) might be a 'wrongful act' retrospectively (see section 5.6.3). It might also be a 'wrongful act' in the present context as Liebenberg still owns the patent derived from the African potato and has continued further bio-prospecting on the plant after 1995 when South Africa ratified the CBD (Mills *et al*. 2005; Bouic *et al.* 1995; 1999 & 2001) . The Biodiversity Act states that there must be provision "for a fair and equitable sharing by stakeholders in benefits arising from bio-prospecting involving indigenous biological resources" (Section 80 (1). To my knowledge, this has not transpired in the case of the African potato.

The regulations also set out specific permitting requirements with regard to bio-prospecting that results in commercialisation of the resources and/or associated indigenous knowledge, in this case, the moducare capsules. In this regard, bio-prospectors are required to disclose all pertinent information to all stakeholders, obtain the necessary PIC and MTA from those giving access to the resources and traditional knowledge and enter into a benefit sharing agreement with such stakeholders. Full disclosure of information is required pertaining to the resource, the quantity that is being collected, and any environmental impact arising from such collection. In the context of a benefit sharing agreement, the regulations contemplate a range of monetary and non-monetary compensatory measures to be agreed upon between the parties, including, training, conservation, co-ownership of intellectual property rights, co-authorship, inclusion in research, milestone and/or upfront payment. These regulations thus provide greater clarity and guidance to the obligations that Liebenberg might be bound since 2 November 1995 when South Africa ratified the CBD as stated above.

Said's theory of orientalism clearly throws light on this transaction: Liebenberg considered the custodian of the knowledge to be the 'other' and did not take proper cognizance of the importance of the plant in the various communities, the role it played amongst the healers, its origin and use. He misappropriated the plant because he thought as Mostert indicated earlier, he was "acquiring ownership by taking of possession of a thing (*res nullius*) which belonged to no one" (1987: 485). As Van Wyk has indicated, the plant has been used by traditional healers for centuries in southern Africa (2000:146). Liebenberg however, stated that he got the mixture from a neighbour but did not get PIC, MTA and offer ABS after he discovered the medicinal value of the plant. Instead, he misappropriated the economic benefits and kept all the profits for himself at the expense of the 'other', that is, the indigenous communities, the custodians of the knowledge.

I must point that there might be some grey areas with regard to the knowledge of the African potato's medicinal properties by other ethnic groups (such as Afrikaners and the so-called coloureds) in South Africa, however more evidence is needed to substantiate these claims. There is some archaeological evidence which suggests that *Hypoxis* was used on a seasonal basis by the Khoisan well before the arrival of Bantu-speaking people of South Africa. The Afrikaners, (Liebenberg ethnic group), have a history of co-existence with the San in the Kalahari and even other groups in the interior of South Africa such as the Tswana and Pedi speaking people. Consequently, by the late 1960s it is plausible that the knowledge of the healing qualities of the *Hypoxis* may have been widespread (Russell 2009). However, there is not enough evidence to support this assertion and further, one runs into complications as to who is considered to be indigenous or native to South Africa - this is a complicated issue which might be addressed in another investigation. For the purpose of this thesis, I am limiting my ethnic grouping to the four categories I mentioned earlier in chapter one.

It is against this background that I conducted an ethnographic research to substantiate my claim that there is a need to protect indigenous knowledge in South Africa; that the African potato is indigenous to southern Africa; that traditional healers have used the plant since time immemorial; that there are oral rituals and performances which protect this knowledge which are different from the western written forms and finally to stress the importance of the community and how it should be considered primal in formulating any laws with regard to protecting and preserving indigenous

knowledge. The questionnaire also highlights the theme of the 'other' as explained by Said, the responses given mostly allude to the fact that indigenous cultural practices are considered to be 'second-class' or even inferior, this perception needs to be changed if South Africa is to be in the forefront of social, ethnic, cultural and economic reforms with regards to indigenous knowledge systems.

3.3.4 Questionnaire on the African Potato

For the purposes of this study a questionnaire was formulated to evaluate the relevance and usage of the African potato amongst the indigenous communities in South Africa. The interviews were conducted amongst herbalists, traditional healers and *sangomas* (traditional doctors). Two communities of traditional healers were chosen; in Johannesburg (East Rand) and from Pietermaritzburg, KwaZulu-Natal (Tables 1-2). The candidates were selected if they: knew of or used the African potato; were aware of any problems of misuse of indigenous medicine / knowledge and had possibly experienced or knew of any misappropriation of indigenous knowledge (medicine, food or intangible knowledge). The questionnaire requested the following information of the participants: background information, that is, name, profession, age, tribal affiliation, and location of interview; the products sold by them, for instance, what products and which products sold the most. They were also asked if they had any knowledge of any African medicines being converted into pills/tablets/ capsules form, their knowledge of the African potato and/or any other traditional medicines which have been converted to the above mentioned forms (Tables 1-6).

The second section of the questionnaire focused on the main thrust of the research project, that is protection of indigenous knowledge systems and the protection of the knowledge associated with healing properties of the African potato and other plants. Under this section, the respondents were asked to give detailed information on the African potato; the section included questions such as: which community does the African potato come from? How was the African potato or any other plants identified used by the ancestors in the communities? Are there communities which are benefiting from the medicinal plants which have been converted to pills\tablets\capsules? If the respondents identified such plants, they were asked whether they thought that it was necessary for

the government to protect these plants through intellectual property rights. They were also asked whether there were any indigenous laws in their community which protected their knowledge and the knowledge specifically associated with these plants (Tables 7-13).

In some instances, indigenous medicinal plants are associated with rituals and other customs. The questionnaire went on to ask whether there were any rules, laws, rituals, ceremonies when planting or harvesting the plants, and what happened if these where not adhered to (Table 14 & Graph 7). The next section then looked at conservation issues amongst the indigenous communities asking questions on endangered species of plants, how to avoid extinction of plants, and how the traditional healers would ensure that these plants were available to users in the communities. The final section looked at preparation and administration of traditional medicines; for example whether medicines were labelled, how the concoctions were prepared for consumption, the main clientele and any other information the healers wished to share with us.

TABLE 1: Summary of questionnaire

Section A	Background information, age, sex, tribe, profession etc.
Section B	Products which were sold by the traditional healers.
Section C	Protection: protection of indigenous knowledge systems and the protection of the knowledge associated with healing properties of the African potato and other plants.
Section D	Preparation and administration of medicinal plants.

See appendix for a complete questionnaire.

TABLE 2: The respondents to the questionnaire

Of the twenty nine interviews conducted, the average age of the healers was 49 years. The majority of the respondents were from KwaZulu-Natal, with a Zulu background. Some respondents were from Xhosa, Tswana, Pedi and Ndebele speaking communities, mainly in the Gauteng region from places such as Springs, KwaThema and Duduza (the East Rand). There was a balance in the gender of the respondents to the background information:

Name*	Profession	Gender	Age	Tribe	Location
1)Colbert Vara	Herbalist	Male	59	Xhosa	Springs
2)John Lesedi	Traditional healer	Male	36	Tswana	Tsakane
3)Moropane	Traditional healer	Female	47	Pedi	Springs
4)Phillemon Nkosi	Traditional healer	Male	37	Zulu	KwaThema
5)Jange Babalo	Traditional Doctor	Male	54	Xhosa	Springs
6)Zanele Nomathe	Sangoma	Female	25	Zulu	KwaThema
7)Frans	Herbalist	Male	56	Mopedi	KwaThema
8)Abram Mnguni	Sangoma	Male	62	Ndebele	KwaThema
9M. Khumalo	Sangoma	Female	52	Zulu	Springs
10)T. Gumede	Herbal Pharmacy	Female	49	Zulu	Duduza
11)M. Kwelemtini	Traditional medical pr	Male	58	Xhosa	Springs
12)Indlu Yemithi	Herbalist	Female	54	Zulu	Pmb
13)Zinhle herbalist,	Trad. healer/doctor	Female	66	Zulu	Pmb
14)Madlmo Sothini	Herbalist, Traditional healer	Female	58	Zulu	Impendle
15)Sibonelo Zuma	All the categories	Male	65	Zulu	Pmb
16)Mehlwana Zungu	All the categories	Male	48	Zulu	Pmb
17)D. Mncube	All the categories	Male	47	Zulu	Pmb
18)Nonsiky Mbatha	Herbalist	Female	38	Zulu	Pmb
19)Abraham Ncabo	Sells medicinal plants	Female	69	Zulu	Springs
20)Elizabeth Makwaza	Traditional healer	Female	62	Zulu	Pmb
21)Thokoza	Herbalist	Female	33	Zulu	Pmb
22)Nonhlahla Mtolo	Traditional Doctor	Female	47	Zulu	Pmb
23)Michael Hadebe	Traditional healer	Male	39	Zulu	Pmb
24)Thembi Janke	Umthandazi (Spiritual healer)	Female	46	Zulu	Pmb
25)Mhlalisi Mdunge	Herbalist	Male	36	Zulu	Pmb
26)Bertina Ngubane	Trd. healer and Umthandazi	Female	47	Zulu	Pmb
27)Mhlongo	Herbalist	Male	63	Zulu	Pmb
28)Jabulani Mkhize	Traditional healer	Male	58	Zulu	Pmb
29) Sibongile Shezi	Herbalist	Female	39	Zulu	Pmb
		Average age	49		

* All interviewees agreed to have their names published for the thesis only.

In responding to the first section, which deals with products, most of the answers were obtained from people selling herbs, medicinal plants, animal parts, a variety of products and African traditional medicines which cured different ailments. The most popular products included plants which make people attractive, especially women; plants which remove bad luck from people so that they could prosper and get better jobs and money in life; barks, roots, leaves, male aphrodisiacs and *Makqonatsothle (*herb able to cure a variety of ailments)*, Maropane* used for internal sores. Furthermore, plants for sexually transmitted diseases and infections, business charms, infant charms for protection, plants related to HIV and AIDS; *Vukuhlale* (wake up and sit) *and Zifozonke* (all diseases). Other plants such as for love; for making *Impepho* (Zulu incense) and help with *Isisqiba inyongo* (bile) are also in demand (Table 4).

TABLE 3: Key Zulu / Xhosa words used in questionnaire

Zulu/Xhosa words	Meaning or usage
Cimamlilo/ cishamlilo	Extinguish the burning sensation (direct translation: put out the fire - used for swollen and aching feet)
Ibhohlolo	Bottle
Ihlaba	Devil claw plant word meaning piecing pain
Imfingo for nine - pains	Charm portion used for good luck or bad luck depending on the mixture
Impepho	Traditional incense
Impila	Plant used for prevention of bad breams in children
Ingwe	Leopard
isibakga /isbhahga umuthi obabayo	Bitter medicine(used as a cough mixture)
Isidwaba	Traditional leather skirt for women
Isigqik/ isiqiki	Wooden stool
Isisqiba inyongo/ isikhipha nyongo	Removal of bile
Lolwandle, ulwandle	The ocean of from the ocean
Makqonatsothle	Herb able to cure a variety of ailments
Mayime / vuka vuka	For sexual prowess
Mnqandani	Herb boys (*abafana*)used to prevent lighting damage and also used clean stomach by vomiting i.e. *ukuphalaza*
Mokgapha	A plant in the Aloe family
Mokgapha	Aloe plant
Nukani	Sniff or snuff; direct translation - smell them out) - used to ward off evil spirits
Somkhovu	Animal like *tokoloshe* (an entity used for supernatural activities)
Umhbnyane/ ubhanyane	Blue gum used for Vicks
Umhlonyane	Used nasal congestion relief
Umlulama Mahlabekufeni/ umithi wokululamisa	To revive back into life
Uphondo Lukabhekani/ lukabhejane	Rhino horn
Vukuhlale	All purpose tonic especially for erection problems
Zifozonke	For all ailments

TABLE 4: Products sold and which one sell the most?

What products do you sell?	Which sell the most?
1)* Herbs	Plants that make people to be attractive
2) N/A (Not Applicable)	N/A
3) Herbs	Lungs
4) Medicinal plants	Bad luck
5) Medicinal plants and parts	Barks, roots, leaves
6) Medicinal plants	Male aphrodisiacs
7) Herbs	*Makqonatsothle, Maropnae* for internal sores
8) Healer	Bad Luck, Sexually Transmitted Diseases
9) Sell and Heal	Business charms, infant marks behind the head
10) Medicinal plants	Not sure
11) N/A	N/A
12) Variety of products	Related to HIV?AIDS: *Vukuhlale & Zifozonke*
13) Different herbs	Depends on situation
14) Different illnesses	All
15) Different illnesses	All
16) Everything you want if you are sick	All
17) Many different types	The one for Love
18) To many to mention here	*Isifo Zonke* (all diseases) get well and sit
19) African Traditional medicine	*Impepho, Isiqena, Mathenga, Isisqiba inyongo*
20) Healing	African potato
21) Medicinal plants	For Healing
22) Healing	For Healing
23) Healing people	Many products
24) Not for sale, depends on client	African potato
25) *Isiwasho* (water) *Impepo* (incense)	*Isiwasho* (water)
26) Medicinal Plants	*Cimamlilo*
27) Not for sale, consult clients	African potato
28) None	N/A
29) Medicinal plants	African potato

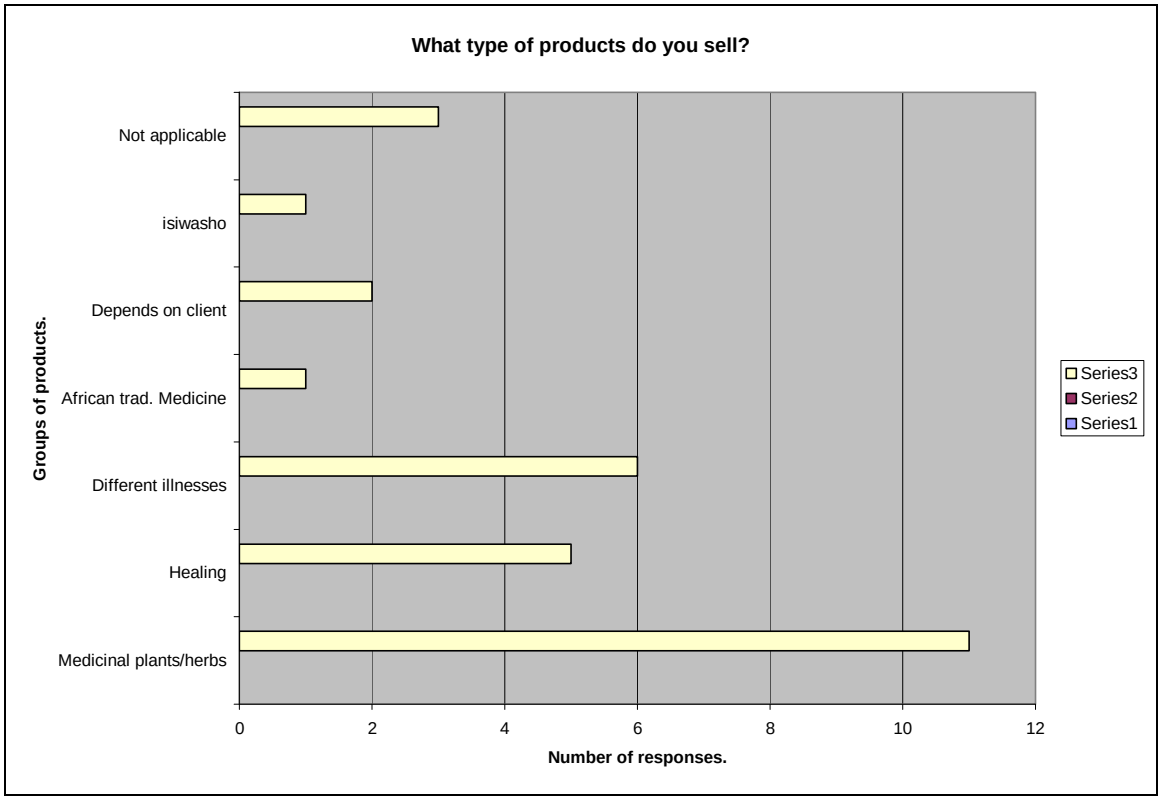
*The numbers represents the respondents from Table 2 in all the following tables and graphs.

TABLE: 5: Division of products and services offered by traditional healers:

Groups	Responses from questionnaires (No. denotes the corresponding response from the interview list)	Total number of responses
Medicinal plants / herbs:	3) Herbs 4) Medicinal plants 5) Medicinal plants and parts 6) Medicinal plants 7) Herbs 1) Herbs 10) Medicinal plants 13) Different herbs 26) Medicinal Plants 29) Medicinal plants 21) Medicinal plants	11
Healing	22) Healing 23)Healing people 20) Healing 8) Healer 9) Sell and Heal	5
Different illnesses/variety of products	12) Variety of products 14) Different illnesses 15) Different illnesses 16) Everything you want if you are sick 17) Many different types 18) To many to mention here	6
African Traditional medicine	19) African Traditional medicine	1
Not for sale depends on consultation with client	24) Not for sale , depends on client 27) Not for sale, consult client	2
Other (*isiwasho*)	25) *Isiwasho* (water) *Impepo* (incense)	1
Not applicable/ None	2) N/A 11) N/A 28) None	3

A graph representing the groups is given below:

GRAPH 1: What type of products do you sell?



With regard to the question whether plants were being converted to pills, tablets or capsules the answers ranged from 'no' to 'yes'. Those who gave positive answers said that the plants they knew which had been converted were - Vicks from *Umhbanyane* (Blue gum)*, Umhlonyane (nasal congestion relief)* and *Cimamlilo* for nasal congestion and *ilabatheka* (African potato). Some simply stated that: So many of the plants were used by whites. Furthermore, in order to answer the question as to whether other plants had been converted into European style medicine the following responses were given: *Mokgapha* (Aloe plant), *inhlaba* (Devils claw) *Umgalakane* has been converted to a syrup, *Ibhohlolo (bottle), lolwandle (*of (an/the) ocean*)*, *Sena* leaves converted to *Sena* ponds.

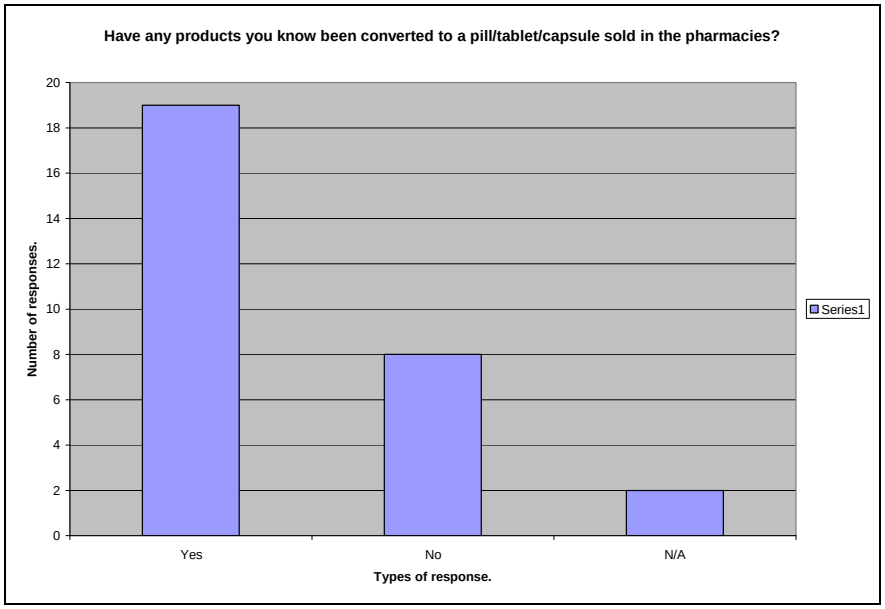
TABLE 6: Products that have been converted to pill/tablet/capsule	
Vicks from Blue-gum	*Ihlaba* Aloe plant / Devils Claw
Umhbanyane	*Umgalakane* has been converted to a syrup
Aloe	*Mokgapha* (Aloe family)
Imfingo for pains *Ingwe*	*Cimamlilo*
Umhlonyane for nasal congestion	*Ibhohlolo*
African potato	*lolwandle*
Roseline into perfume and tablets	African potato
Nukani (snuff or to sniff)	*Sena* leaves and *Sena* ponds
Double cellulose	Aloe *(inhlaba*)
Ubani (for lightning)	*isbhahga - umuthi obabayo* (bitter medicine)
Uphondo lukabhejane (Rhino horn)	for cough mixture

TABLE 7: Responses from the questionnaire as to whether or not the respondents knew any traditional medicines which had been converted to a pill/tablet/capsule?

Types of response	Response according to questionnaires	Total responses
Yes	28) Yes, Roseline into perfume 29) African potato 27) African potato 24)African potato 23) Many products 21) Yes, African potato 20)Yes 19) So many of the used by whites 18) HIV/AIDS 17) Yes 16) Yes 12) So many of them 10) *Umhlonyane* - nasal congestion 8) *Imfingo / Ingwe* 7) Aloe 6) *Umhbanyane* 4) Yes 3) Vicks like Bluegum 2) Yes	19
No	26) Not sure 25) I don't know 22) Not sure 15) No 14) No 13) No 9) None 1) No	8
Not applicable		

The above responses are shown in the graph below:

GRAPH 2: Have any products you know been converted to pills or capsule?



The responses to that part of the questionnaire which asked about the African potato and its uses can be divided into three categories: body and material, building environment and spiritual functions:

Material and body functions: the following responses were given:

The plants can be used for washing, emetic, fighting colds and flu. In a case where one's body was swollen, it could also be used as a blood purifier; it helps the lungs, heart, veins and arteries. It can also be used to remove pimples, septic wound, internal wounds, sexually transmitted infections, pains in the body; it helps HIV/AIDS. For these reasons the plant is called 'the African Asprin' (Interview with Indlu Yemithi, 29 June 2007, Pietermaritzburg). Traditional Doctor Mlindelwa Longway Kwelemtini, summarised the functions when she said: "It helps with many diseases, sick people become strong and it is the oldest medicine in Africa which treats many ailments" (Interview, conducted on 27 June 2007, Springs).

The plant is also used in the building environment – it is mixed with cow dung for making the floor in houses and traditional huts. Its spiritual attributes include chasing away bad spirits, for removing bad luck, curing people suffering from mental depression, removing bad dreams and alleviating

cases of mental disorder. Further uses in the community past and present associated with the African potato include (but are not limited to) strengthening bulls, respiratory problems, *vimbela* (protection) for babies (the charm is worn around the neck), cleaning, curing all kinds of sicknesses, giving power, strengthening blood, an emetic (vomiting in a cleansing ritual) and an immune booster (Tables 8-11).

TABLE 8: What do you know about the African potato?

1) Wash, emetic for cold
2) Cure all diseases
3) Yes blood purifier in person with swollen body
4) Chase away bad spirit
5) Pimples, mixed for removing bad luck
6) Cures people suffering from mental depression
7) Pains in the body
8) Septic wound, bad dreams, mental disorder
9) Internal wounds, Sexually Transmitted Diseases (STIs), mix with cow-dung for flooring
10) Many diseases, cleans blood, evil spirits
11) Helps lungs, heart, veins or arteries
12) Infections, African Aspirin
13) Cures different illnesses
14) Cures many illnesses protect yourself from
15) Very useful fights infection all homes
16) Helps with many diseases, sick people become strong
17) Give strength to body after long illness, helps
18) All diseases
19) Oldest medicine in Africa; treat many ailments
20) Heal all diseases
21) Helps with appetite – immune booster
22) *ilabatheka*
23) Treating boils and sores
24) Used for BP and various diseases
25) Mix with other medicine for BP and other disease
26) Treats some diseases e.g. witchcraft
27) Treat many diseases
28) Various diseases and STDs
29) Miracle drug with other herbs

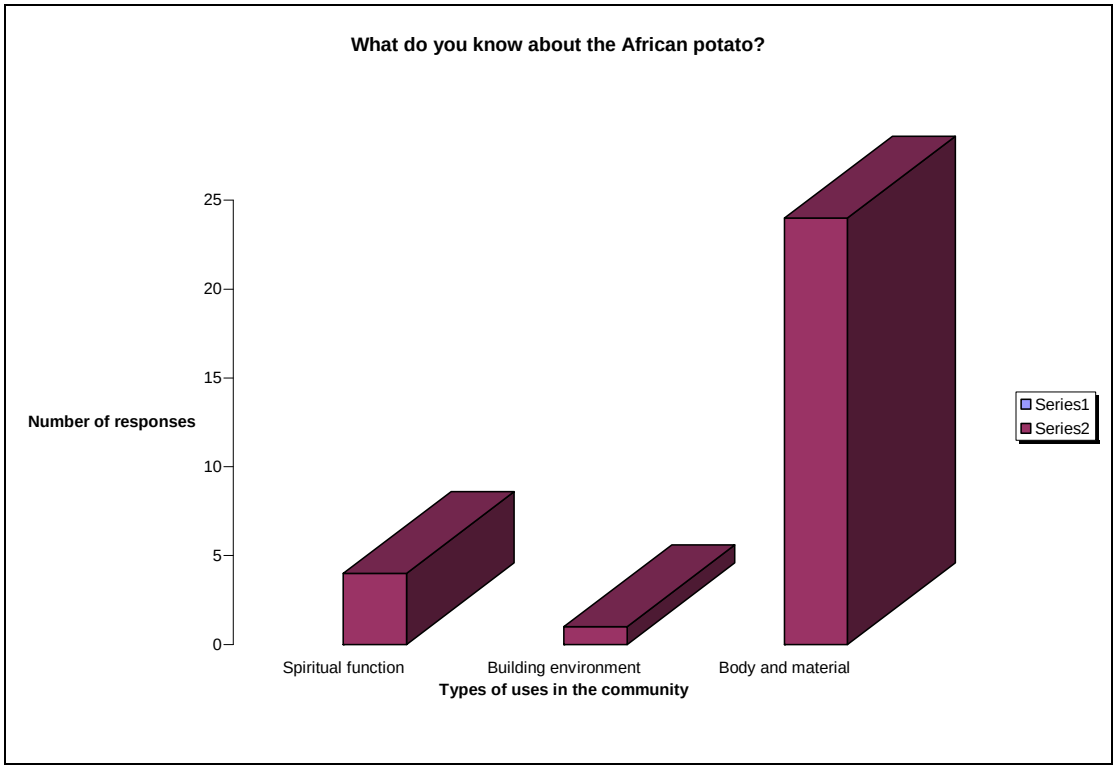
The types of usages in the community can further be divided into the following categories:

TABLE 9: Types of uses for the African potato

General group of use	Specific uses	Total responses
spiritual functions	4) Chase away bad spirit 6) Cures people suffering from mental depression 5) Pimples, mixed for removing bad luck 8) Septic wound, bad dreams, mental disorder	4
building environment	9)Internal wounds, STI, mix with cow-dung for flooring	1
Body and material	1) Wash and emetic for cold, 2) Cures all diseases, 3) Yes, body purifier in person with swollen body 25) Mix with other medicine for BP and other disease, 27) Treat many diseases 29) Miracle drug with other herbs 26) Treats some diseases e.g. witchcraft 24) Used for BP and various diseases 23) Treating boils and sores 22) *ilabatheka* 21) Helps with appetite – immune booster 20) Heal all diseases 7) Pains in the body 10) Many diseases, cleans blood, evil spirits 11) Helps lungs, heart, veins or arteries 12) Infections, African Aspirin 13) Cures different illnesses 14) Cures many illnesses protect yourself from 15) Very useful fights infection all homes 16) Helps with many diseases, sick people become strong 17) Give strength to body after long illness, helps 18) All diseases 19) Oldest medicine in Africa; treat many ailments	24

The above information is presented in the following graph:

GRAPH 3: What do you know about the African Potato?



The respondents were then asked to give their opinion on the issue of protection, that is, whether there were any indigenous laws or rules protecting indigenous knowledge in the communities and whether there were any rules or laws protecting the knowledge associated with the indigenous plants. Most of the informants said that there were no rules or laws. However, some said that the knowledge was protected by the ancestors and that in modern times people who dug any medicines must have a letter or certificate from the police. This was quite important for me to establish because in this investigation I would like to propose a system of protection that caters for the needs of indigenous communities. If such a system existed in the past we could adapt it to the present situation for protection. I must also point out that indigenous law is often oral and performance based. That is, it is does not take the same form of Western law (promulgated rule) nor is it enforced in the same way. However, one needs to note that there were oral laws protecting the knowledge and in some instance very few people knew what the plants could do. Also, as mentioned by Traditional Doctor Madlomo Sothini from Impendle near Pietermaritzburg, for these plants to work effectively, they have to be mixed with other herbs. This knowledge is held by the healers themselves.

TABLE 10: Ancient use of African potato/ Economic Benefit to communities/Should government do something about it?

Ancient usage of African Potato	Are com. benefit econ.?	Should govt do something
1) Yes	No	Yes
2) Used to strengthen a bull	No	Govt must have laws
3) Respiratory problems	No	Stop white stealing knowledge
4) Yes	No	Yes
5) N/A	N/A	N/A
6) Inflammation	No	Govt teach healers on protect
7) *Mokganotsotlhe*	No	Can't stop it
8) *Vimbela* for baby on neck	None	Build clinics & register
9) Use it for cleaning	None	No dealings with witchdoctors
10) All kinds of sickness	Yes, scientific validation	Short term research
11) Yes	No	Can solve this problem
12) For many illness	I do not know	Do not know
13) Yes	I do not know	N/A
14) Yes they used it	I do not know	I do not know
15) Always used it by ancestors	I do not know	I do not know
16) Always gives power	I do not know	Govt must support trad. medicine
17) As used before	From the clinic	N/A
18) Strengthen blood	None	None
19) Many uses for vomiting	N/A	N/A
20) Immune booster	Chemist gained from info	Benefits/sickleave
21) Many uses because of new diseases	N/A	Government must protect us
22) Bad spirits/nightmare	Yes	We need beds for our patients
23) Used by our ancestors	Not sure, many buy it	To all healers to sell own AP
24) Used to make snuff	No idea	Yes, they must help
25) Yes, depends on knowledge	No	Allow us to see med in prof. way
26) Yes, for women to give child	No, need other med too	Allow us treat big diseases also
27) Yes, for traditional sickness	No, medicines too weak	Access to game reserves
28) Yes	No, only white people	Bring laws to protect
29) Yes	Yes, a little bit	Open more traditional clinics

The above information from the questionnaire can be further divided into the following table 11 and graph 4.

TABLE 11: Ancient use of African potato? (From Table 10 column 1)

Groups of responses	Types of responses	Total
Yes it was used	1) Yes 4) Yes 11)Yes 13) Yes 14) Yes they used it 15) Always used it by ancestors 16) Always gives power 17) As used before 23) Used by our ancestors 24) Used to make snuff 25) Yes, depends on knowledge 26) Yes, for women to give child 27) Yes, for traditional sickness 28) Yes 29) Yes 10) All kinds of sickness 21) Many uses, new diseases 12) For many illness	17
For preventing bad spirits	22) Bad Spirits/ nightmare	1
For Cleaning	9) Use it for cleaning	1
Protection for baby	8) *Vimbela* for baby on neck	1
For Vomiting	19) Many uses for vomiting	1
To treat various illnesses	18) Strengthen blood 20) Immune booster 3) Respiratory problems 6) Inflammation 7) *Mokganotsotlhe*	5
Strengthen Bull	2) Used to strengthen a bull	1
Not applicable	5) Not Applicable	1

GRAPH 4: Does the African potato have any ancient usage in the communities?

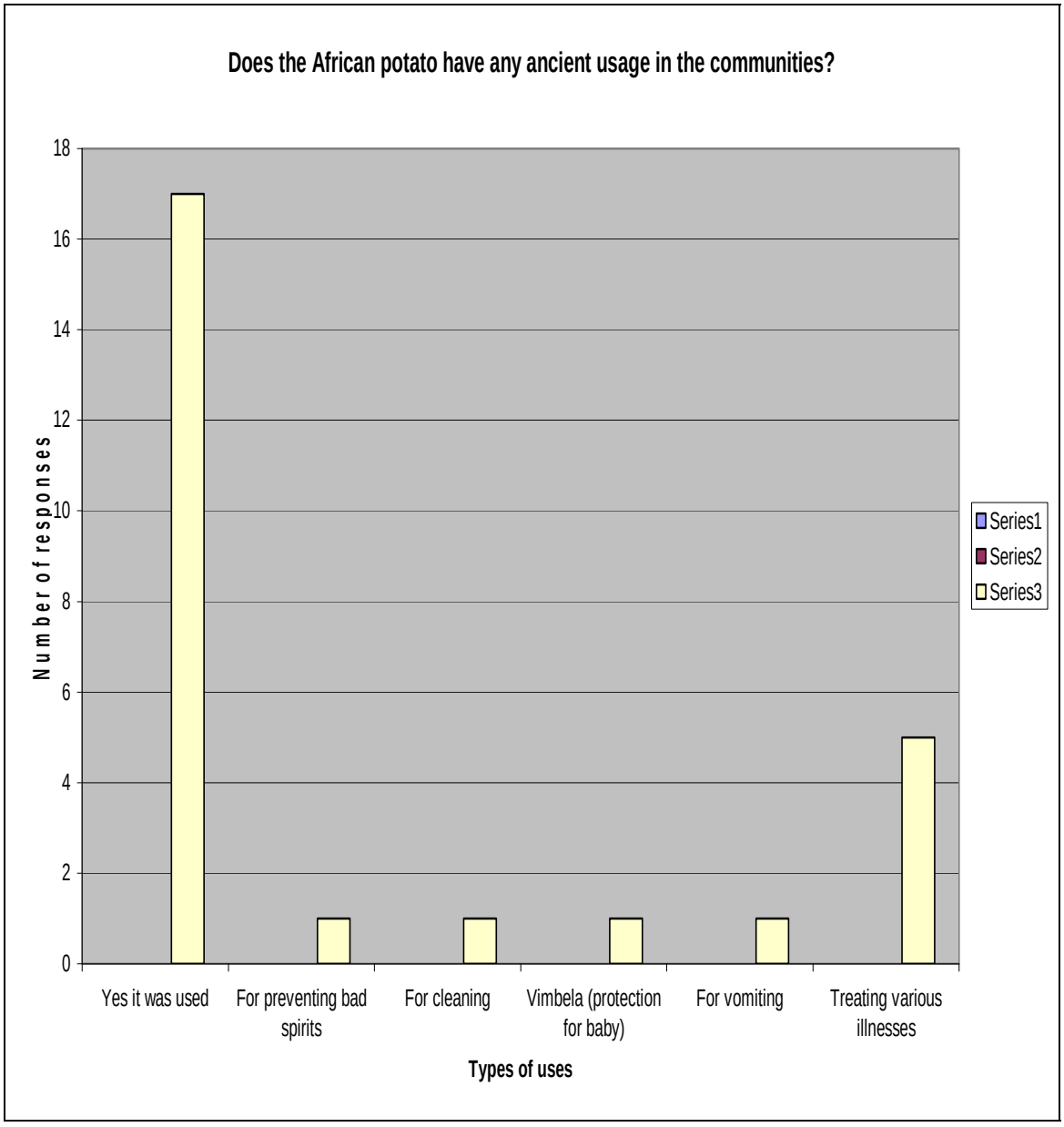


TABLE 12: Are communities benefiting economically from the medicinal plant which have been converted to pill/tablet/capsule? (from table 10 Column 2)

Group response	Types of responses	Number of responses
No	1) No 2) No 3) No 4) No 6) No 7) No 8) None 9) None 11) No 12) I don't know 13) I don't know 14) I don't know 15) I don't know 16) I don't know 18) None 23) Not sure, many people buy it, 24) No idea 25) No 26) No 27) No 28) No	21
Not applicable	5) N/A 19) N/A 21) N/A	3
Yes	10) Yes, scientific validation 20) Chemist gained from information 22) Yes, 17) From the clinic 29) Yes, a little bit	5

GRAPH 5: Are communities benefiting economically from medicinal plants which have been converted to pills?

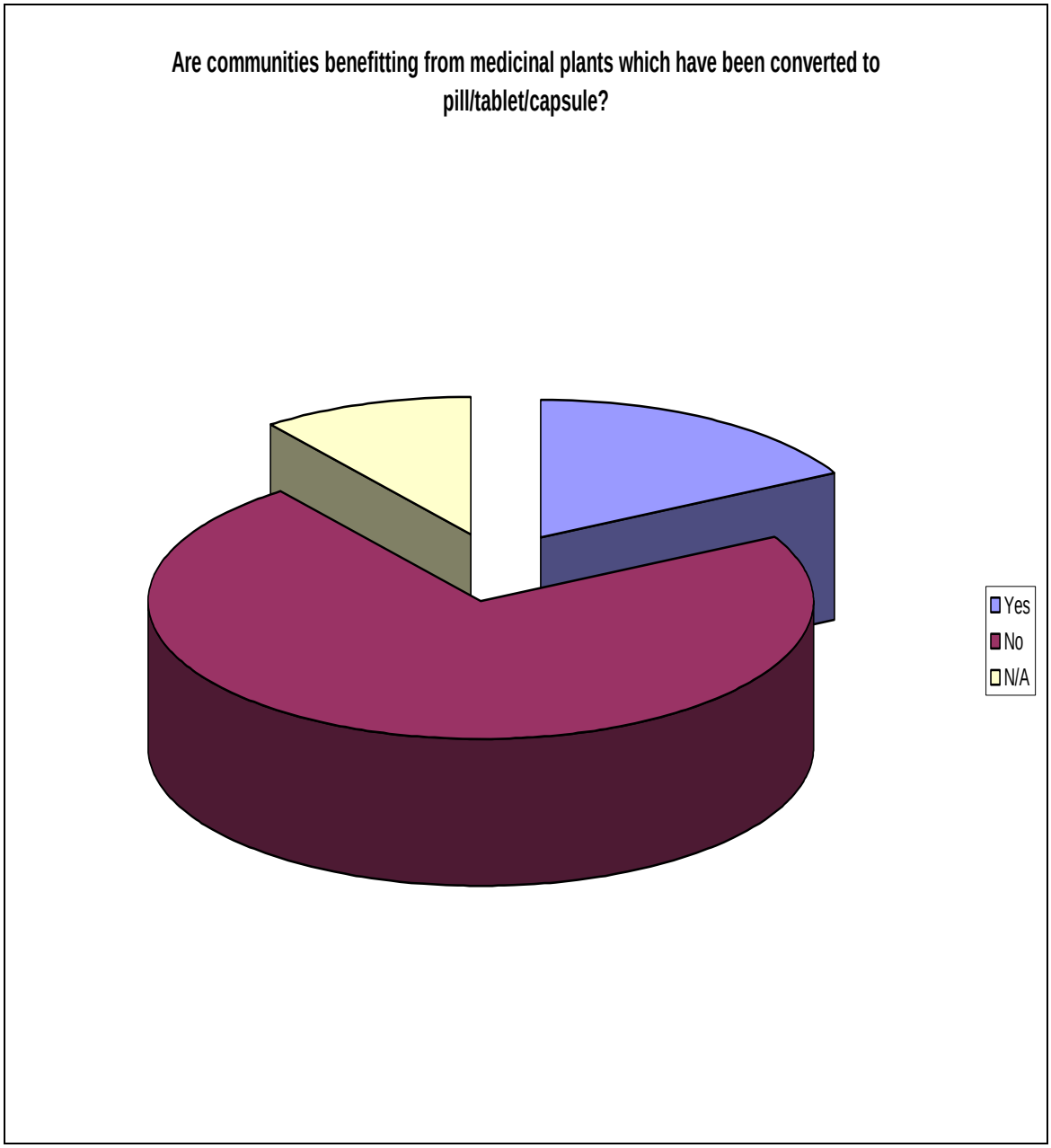
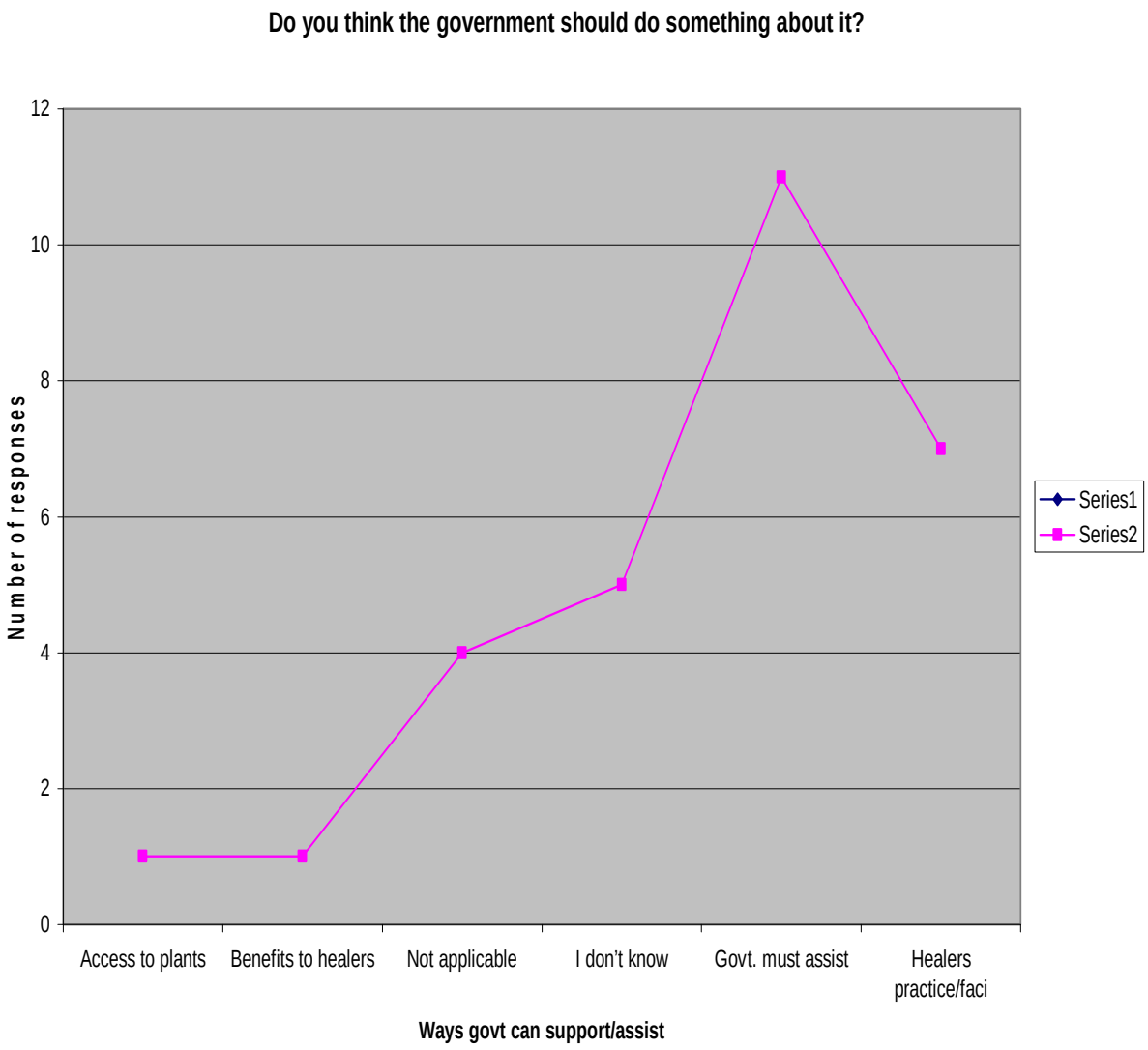


TABLE 13: If you do not benefit economically from the conversions should government do something about it? From Table 10 column 3.

Types of responses	Responses	Number of responses
Help with traditional healer's practices and facilities	8) Build clinics & register 10) Short term research 29) Open more traditional clinics 22) We need beds for our patients 23) To help all healers to sell own AP 25) Allow us to sell medicine in professional way 26) Allow us treat big diseases also	7
Yes, Government must help	1) Yes 4) Yes 24) Yes, they must help 2) Govt must have laws 3) Stop white stealing knowledge 6) Gov teach healers on protect 16) Govt must support traditional medicine 21) Government must protect us 11) Can solve this problem 7) Can't stop it 28) Bring laws to protect	11
I don't know	14) I do not know 15) I do not know 12) Do not know 18) None 9) No dealings with Western doctors	5
Not applicable	5)N/A 17)N/A 19)N/A 13)N/A	4
Better working conditions benefits/ for traditional healers	20)Benefits/sick-leave for traditional healers	1
Access to medicinal plants	27)Access to game reserves for medicines	1

GRAPH 6: Do you think government should do something about it?



The interviews also revealed that there were certain harvesting methods used and in certain cases the plants were revealed through dreams and one had to perform certain rituals when collecting the plants. If the ritual was not performed, the plants either lose their power, they are not effective, or nothing will happen when they are administered. In severe cases, if the ritual was not followed, anyone who comes near the plant or uses the plant might die, the plant was rendered ineffective and if the ancestors were annoyed people were punished. Also, in some instances the plant can disappear right in front of you – because you did not perform the rituals which were prescribed by the ancestors.

The rituals which were supposed to be performed included *inter alia,* no harvesting during mourning periods, washing the plants before harvesting them and in winter the use of snuff while harvesting was recommended. There were further rituals which involved paying money, using sheep, goats, chickens and sometimes milk as a sacrifice before harvesting the prescribed plants. In the case of *Mahlulazinga* (the powerful stem), the potential harvester had to talk to the plant and leave silver coins. Similarly with *iphakama* (used to raise one's spirit), one had to use money when it was dug. Other rituals identified prescribed that the person harvesting should not have intercourse with his or her partner the day before or when handling that particular plant. In some cases, before harvesting the healer or traditional doctor would first ask permission from the ancestors by using *impepo* (traditional incense) and *igazi lenkuku* (the blood of a chicken which would be slaughtered). As stated earlier, since indigenous cultures do not have promulgated rules, these ceremonies and rituals might have been performed before the use of a particular medicine or there may have been protocols to follow when gathering the medicine. This supports my assertion that indigenous law is often oral and performance based as shown in the examples above.

TABLE 14: Rituals and ceremonies: planting and harvesting African potato*

Are there any laws in your community protecting the knowledge from these plants?	Are there any rules when planting or harvesting the plants	Are there any ritual/ceremonies associated with the harvesting of the plants
No. For those who trained under traditional healers. Depends on different organisations. I do not know. Comes from the ancestors. Not quite. Anyone can access the plants. No rules as such. One needs a letter/certificate. No rules, except digging rules.	You defecate before you harvest some plants in Botswana. Yes. No. Harvest the some plants only in the morning. For certain plants. For *isigqiki* (wooden stool) *somkhovu* (animal like tokoloshe) *impila* (for prevention of bad breams in children) *Unakani* *isidwaba* (name for a medicinal plant , the name also mean a traditional leather skirt for women) should not be harvested. Ancestor in dreams will tell how to go and harvest the prescribed plant Depends on usage. Yes. Not about planting but when Harvesting. African potato only harvest in morning. With some plants you shouldn't have sex with your partner. Yes, you must follow the rules. None. Use mud to replenish tree After harvesting	No harvest in mourning period. Wash with plants before harvesting In Winter use snuff. Paying money before harvesting Slaughtering a goat. *Mahlulazinga* talk and leave silver coin. *iphakama* use money before you dig. Only in some plants. Use sheep, goat, chicken, money sometimes milk. No intercourse before harvesting. Ask from ancestors by using *impepo*, *igazi le nkuku*.

*The above table gives a view of the responses to the three questions not necessarily linked to the respondents.

This table highlights the fact that indigenous law is a performance and oral based interaction as the healers in their responses to the laws protecting indigenous knowledge responded negatively but by and large responded positively with regards to rituals and ceremonies, showing us where the laws really have impact.

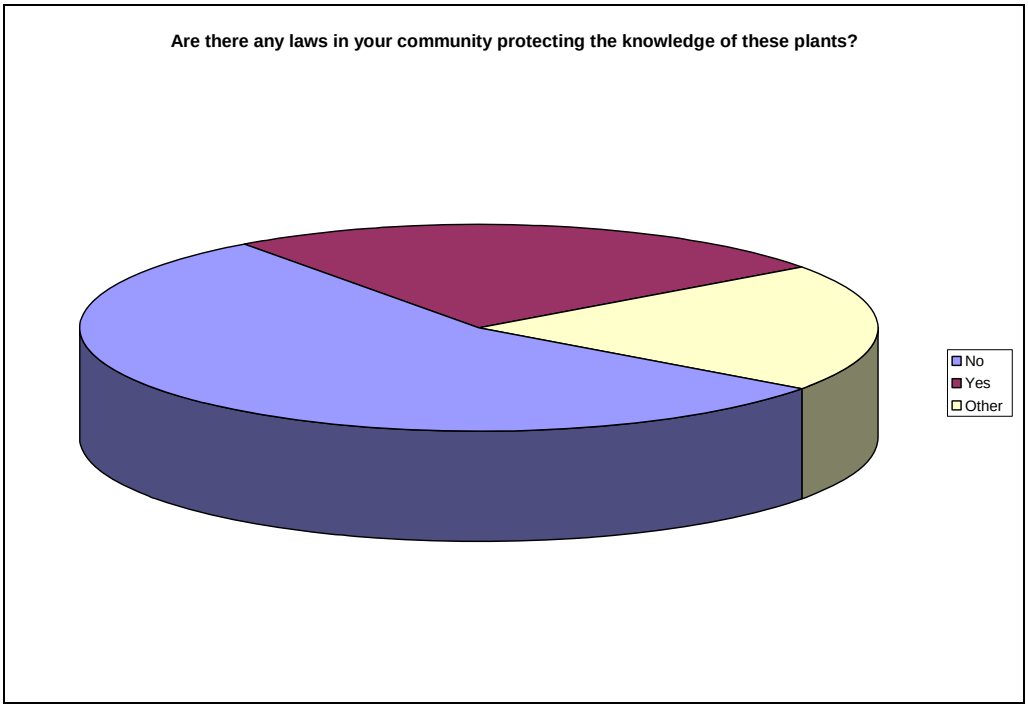
TABLE 15: Spreadsheets and graphs from twenty respondents numbering 1-20 above.

This section gives a brief presentation of some of the responses I received from the questionnaire. This is very helpful in trying to see where the gaps are with regards to intellectual protection among indigenous communities in South Africa. In this section, I only use information from twenty interviews. The selected interviews give us a picture of the views of the traditional healers interviewed in KwaZulu-Natal and Johannesburg.

TABLE 15.1: Are there any indigenous laws protecting plants/Rules when harvesting/ Any other comments?

Ind. law protecting knowledge of plants	Rule/Laws when planting	Any other medicine
1) No		No
2) No	You defecate before in Botswana	Aloe
3) For those trained	Yes	Aloe
4) No	No	Aloe plant / Devils Claw
5) Affl to diff organisation	Yes	N/A
6) No	No	*Umgalakane* has been
7) Converted to a syrup	N/A	N/A
8) No	In the morning	*Mokgapha* (Aloe family)
9) Wkshp with THO	Yes	*Cimamlilo*
10) None	In certain plants	None
11) N/A	In *isigqiki somkhovu and implia*	*Umhlonyane* - nasal
12) Congestion	N/A	N/A
13) No	*Unakani & isidwaba* should not be harvested	N/A
14) Do not know	Ancestor in dreams will tell how to go about it	*Ibhohlolo, lolwandle,*
15) African potato	N/A	No
16) Do not know	Depends on usage	No
17) Comes from ancestor	Yes	No
18) I do not know	No about planting but when harvesting	No
19) Not quite	AP only harvest in morning no sex with wife	No
20) Anyone can access it	Yes, you must follow them	No

GRAPH 7: Are there any laws in your community protecting these plants?



GRAPH 8: Are there any rules/laws when planting or harvesting medicinal plants?

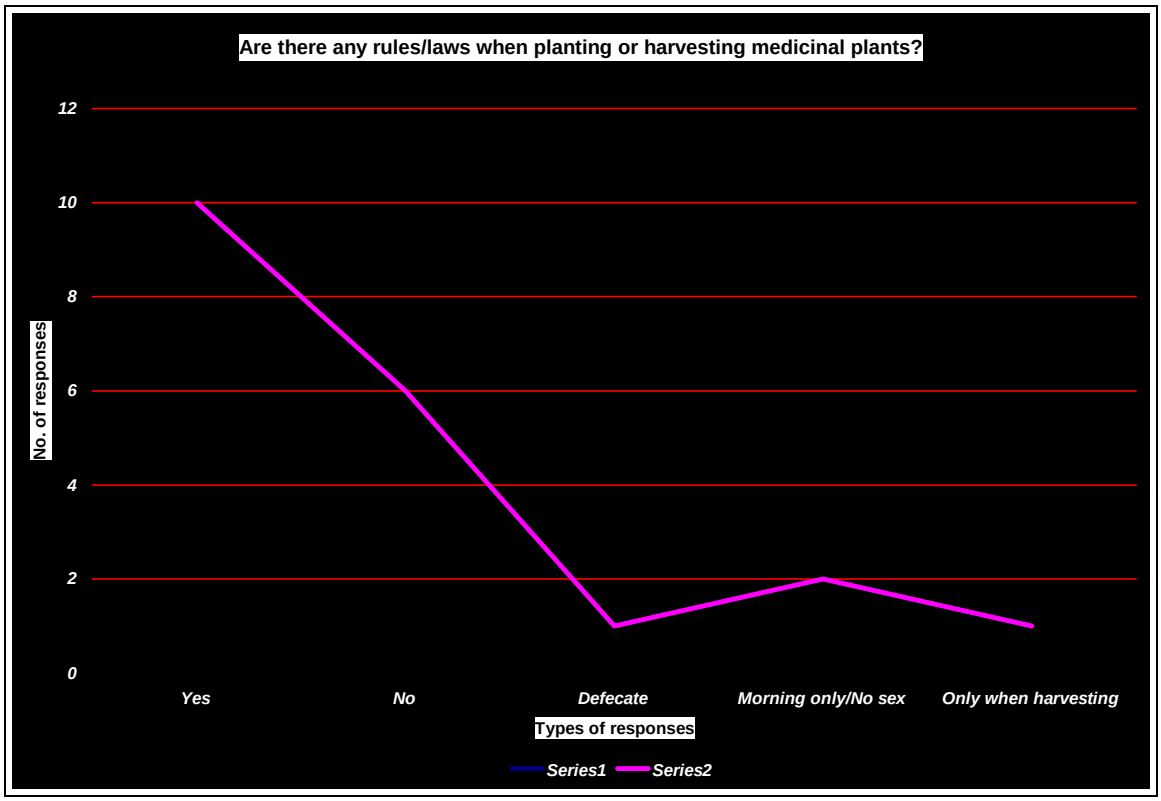


TABLE 16: Sample I: Responses to the questionnaire

Questionnaire on IKS and IPL in South Africa.
A. Background information *1. Name:* Mhlalisi Mdunge. *2. Profession:* Herbalist. *3. Age:* 36. *4. Tribal Affiliation:* Zulu. *5. Location of interview:* Slahla (Richmond).
B. Products *1. What products do you sell? Mayime* (tree), *Cimamlilo* (tree) and *Mnqandani* (tree). *2. Which products sell the most? Cimamlilo.* *3. Have any products you know been converted to a pill / tablet / capsule sold in the pharmacies?* Not sure. *4. What do you know about the African potato?* Treats some diseases e.g. witchcraft. *5. Any other medicines you know about which have been converted?* Not sure.
C. Protection 1. Which community does it come from? From the ground. *2. Does it (the African potato or any other plants identified above) have any ancient use in the communities?* It has been used in the past by our forefathers. But I can't be sure how or what it was used for infact it depends on one's knowledge about it. *3. Are the communities benefiting economically from the medical plants which have been converted to pill / tablet / capsule?* I don't think so because with us we mix it with other things unlike using it alone. *4. If they are not do you think the government should do something about it?* The government should allow us to sell our medicines in a professional way as chemists do. *5. Are there any laws in your community protecting the knowledge of these plants?* Farmers/farm owners do not allow us the access to dig or use their trees to make medicines. In the community, we have been told to get permission for digging. Another alternative is to buy them where I need to pay to as much as R500 and transport. This affects my work. *6. Are there any rules\laws when planting or harvesting the above mentioned plants?* No except in farms. *7. Are there any rituals\ceremonies associated with the harvesting of the plants?* Not with the community at large but it does happen with the family in particular. *8. If there are rituals/ceremonies and people do not adhere to them what are the negative effects of the plants?* This is a cultural thing and may have effects on that particular family but it requires the strength of a family leader. *9. Which plants are endangered? Mayime* is becoming scarce simply because most people even in-experienced ones use it and one finds in chemists as well. *10. How can we prevent them from becoming extinct?* Not sure but there are people who harvest more than enough. Or more of these should be replanted. *11. How can you ensure that plants are available for users in your community?* By means of making my own medicines.
D. Preparation and administration *1. How do you label your plants?* Put them in plastic bags and that is why I need more space. *2. How do you prepare your plants for consumption?* Mix different plants for various sickness with different procedures. *3. How are these plants administered to clients?* I give them ready made one. The client is given instructions as to how he should make it. *5. Who are your main clients?* I mostly deal with my community and from other areas. I have had one r two Indian clients. *6. Any other information you would like to share with us?* 1)If the government can built for us rooms where ?I can put in my clients 2)Government must give me the right to refer my clients to the doctors 3)Space for accommodation for my doctor

TABLE 17: Sample II: Responses to the questionnaire

Questionnaire on IKS and IPL in South Africa.
A. Background information *1. Name*: Bertina Ngubane *2. Profession:* Traditional healer and umthandazi *3. Age:* 47 *4. Tribal Affiliation:* Zulu *5. Location of interview:* Willowfountain (Pietermaritzburg)
B. Products *1. What products do you sell?* Not for sale but it is in a package after consultation with the client. *2. Which products sell the most?* Since clients have various problems none are for sale. *3. Have any products you know been converted to a pill / tablet / capsule sold in the pharmacies?* African potato. *4. What do you know about the African potato?* Used variously like drinking medicine for treating many diseases. *5. Any other medicines you know about which have been converted?* It is *ihlaba* (Aloe) and *isibhakga* (cough mixture).
C. Protection *1. Which community does it come from?* African potato come from around the veld. *2. Does it (the African potato or any other plants identified above) have any ancient use in the communities?* Its been used in the past by our forefathers. They used for fertility if a woman does not give birth. *3. Are the communities benefiting economically from the medical plants which have been converted to pill / tablet / capsule?* Such converted medicinal plants for example African potato are not strong enough, without the other traditional mixture. *4. If they are not do you think the government should do something about it?* We respect doctor's experience but we feel there is a disease we can treat much better than them. *5. Are there any laws in your community protecting the knowledge of these plants?* None because we dig everywhere. *6. Are there any rules\laws when planting or harvesting the above mentioned plants?* N/A *7. Are there any rituals\ceremonies associated with the harvesting of the plants?* Yes, first step is to burn i*mpepo* and ask my ancestor to give me luck of getting the plant. *8. If there are rituals/ceremonies and people do not adhere to them what are the negative effects of the plants?* If you do not perform the above ritual, you may not get the right plant. *9. Which plants are endangered?* Building of many houses, roads, roads destroy plants, like *Nsukumili* and *Mayisaka. Mbune* can't exist close to many people. *10. How can we prevent them from becoming extinct?* Only people with the right skill to dig should be allowed to. *11. How can you ensure that plants are available for users in your community?* The areas where our plants are available should be put aside. We need t have a right to plant these plants.
D. Preparation and administration *1. How do you label your plants?* Keep them in bottles but my room is too small. *2. How do you prepare your plants for consumption?* Some are despatched in plastics while some are in bags. *3. How are these plants administered to clients?* Given instructions on how to use the medicine and should come back for a check up. *5. Who are your main clients?* Whites and Indians and people from other provinces, for example the Eastern Cape and Gauteng. *6. Any other information you would like to share with us?* We need to work together with doctors and have our own surgeries. We need to be recognised by the government and given proper responsibility. We need rules to prevent people from stealing our knowledge.

TABLE 18: Sample III: Responses to the questionnaire

Questionnaire on IKS and IPL in South Africa.
A. Background information *1. Name:* Mlindlelwa Longway Kwelemtini *2. Profession:* Traditional Medical practitioner *3. Age:* 58 years *4. Tribal Affiliation:* Xhosa *5. Location of interview:* Springs
B. Products *1. What products do you sell?* N/A *2. Which products sell the most?* N/A *3. Have any products you know been converted to a pill / tablet / capsule sold in the pharmacies?* N/A *4. What do you know about the African potato?* To share my knowledge: The African potato helps the heart, lungs and veins or arteries. *5. Any other medicines you know about which have been converted?* N/A
Protection *1. Which community does it come from?* All communities. *2. Does it (the African potato or any other plants identified above) have any ancient use in the communities?* The African potato helps with many diseases, sick people become strong and it is the oldest medicine in Africa which treats many ailments. Indigenous plants have been used by our forefathers to cure all kinds of sickness. The sharing of information without exploitation is ideal. *3. Are the communities benefiting economically from the medical plants which have been converted to pill / tablet / capsule?* My comment is that they are / should be beneficial we are in the process of scientific validation (CSIR is the institution). *4. If they are not do you think the government should do something about it?* The government should encourage / enforce the shorter time of research in indigenous medicine. It is definitely not true that a herb discovered 100 years ago it needs 10 years research. *5. Are there any laws in your community protecting the knowledge of these plants?* We are aware that our knowledge has been indirectly stolen from us without any economic benefits to the community. Government should pass laws that are in favour of the community from the past to the future – plough back to the community whatever is due to the community. Balance the imbalanced past. *6. Are there any rules\laws when planting or harvesting the above mentioned plants?* Rules and laws exist in certain plants such as *impila, isigqiki, somkhovu* and other plants for certain. *7. Are there any rituals\ceremonies associated with the harvesting of the plants?* Rituals exist only in some plants. *8. If there are rituals/ceremonies and people do not adhere to them what are the negative effects of the plants?* The belief is that their full effective capacity is then limited. *9. Which plants are endangered? impila, isigqiki, somkhovu* and others. *10. How can we prevent them from becoming extinct?* By controlling the sale/marketing and the way they dug or chopped from the field and forest "preserve seeds and plant". *11. How can you ensure that plants are available for users in your community?* By ordering and purchasing from Faraday and other places of note where herbs are available.
D. Preparation and administration *1. How do you label your plants?* By labelling the name and the curative functions of the herb or mixture with other herbs. *2. How do you prepare your plants for consumption?* Depends on each plant and how much measurement. *3. How are these plants administered to clients?* Depends on illness of the client. *5. Who are your main clients?* The community comes with many illnesses but STI is a challenge and problems pertaining to ancestors. *6. Any other information you would like to share with us?* The community should be encouraged to know more about their ancestors regardless of certain church groups who allege that ancestors are demons. The community has a challenge of not knowing their true fathers and who their guardian angels are.

3.4 Conclusions

In this chapter I have established the claim that the existing intellectual property laws in South Africa do not adequately recognise and protect some aspects of indigenous knowledge systems, that is, traditional foods and medicines. As I have shown, in some cases intellectual property law is considered to be a threat to indigenous community's cultural maintenance. I have looked at two examples where the current intellectual property law did not protect indigenous intellectual property, and rather misappropriated this knowledge without proper cognisance of the beholder of the knowledge.

Hoodia: Patents were granted to the CSIR for the invention derived from indigenous knowledge. From 1998 till today intellectual property rights have received priority on the development agenda of organisations dealing with the San communities especially WIMSA and RSH&CC. The fact that CSIR had forwarded their finding to a pharmaceutical giant without acknowledging the origin of the information was very problematic. This was discovered by Survival International. CSIR acknowledged their mistake and actions were taken to remedy the situation. Consequently different benefit sharing models are being worked out for the moment.

Hypoxis rooperi: Though the African potato never received wide media coverage with regards to the patenting, the fact is that the patent is held by one person. The media never concentrated on the fact that 'moducare' was patented and registered by one person only. This was because great attention was given the fact that it had the potential to slow the progress of HIV infection. The fact that the Africa potato was patented by one person is a dilemma and point of contention, given the fact that the knowledge belongs to the indigenous communities of South Africa, and these communities have used it for many generations. Because so many people know the medicinal values of the African potato, there has been huge demand for the plant, so much so that the current populations are almost extinct due to over harvesting. Fortunately, from 2005, the Patents Act has been amended and now all new applicants are required to furnish information relating to any role played by indigenous biological resources, genetic resources and traditional knowledge. This is too late to address the *Hypoxis* issue as the patent has already been granted and Liebenberg has reaped economic benefits that should have been more widely shared. He was

given the medicinal properties by an indigenous person who was trying to be helpful and used this knowledge to enrich himself at the expense of the indigenous communities of South Africa. The responses I received from the questionnaire clearly supports this fact: that the African potato has been used by indigenous communities for many centuries. The traditional healers in some instances used the plant in conjunction with other plants. However, this knowledge was 'owned' by the community and was used to the advantage of the whole community.

The two cases, *Hoodia* and *Hypoxis,* clearly exemplify the fact that indigenous knowledge is not adequately protected. The *Hoodia* was exploited by the CSIR, who later claimed that the San communities were extinct. However, WIMSA challenged the CSIR and we have one of the success stories in indigenous property right protection.

The African potato on the other hand, is not a success story; the patents from products of the plant are now held by one person only. The indigenous communities in South Africa do not share any of the profits accrued from the plant. As was the case with the *Hoodia*, the patent holder did not acknowledge the indigenous sources of the plant when he applied for the patent. My conceptual framework has clearly outlined the possible explanation of the misappropriations: The non-indigenous community consider African to be the 'other' – which cannot invent or initiate despite the fact that traditional healers clearly indicated that the medicines have been used over extensive periods of time and are still being used by many local communities to help them achieve better personal physical health conditions.

The central problem in the above examples is the patent law of South Africa. Prior to 2005, its form and content was to promote the interests of non-indigenous communities. After the amendment, parliament wanted to address the inadequacies of the Act by including indigenous knowledge systems. In the case of the African potato, it was too late. As for the *Hoodia*, the case was salvaged before worse damage was done. Patents are granted for any new inventions which involves an inventive step and the invention must be capable of being used in trade, industry or agriculture. The invention must not be in the public domain, that is, it should not already be known. This presents huge problems for protecting African knowledge as this knowledge has existed for thousands of years among indigenous communities and its specific inventor is no longer known.

How then do we start appropriating ownership to individuals or groups without considering the interests of the community? Chapter five will look in detail at the definition of some of the intellectual property laws and see how they might be applicable to indigenous communities.

Before, I look at the current South African intellectual property law, it is crucial to look at what has transpired elsewhere with regards to indigenous ownership and see whether we can learn from the experiences of the United States of America and Australia. In Chapter four l shall look at the divergent approaches to intellectual property rights from these two countries.

CHAPTER FOUR

DIVERGENT APPROACHES TO INDIGENOUS COMMUNITIES: THE LEGAL REGIMES OF THE UNITED STATES AND AUSTRALIA

4.1. Introduction

This chapter will look at the divergent approaches in protecting the intellectual and cultural rights of indigenous communities. I shall closely examine the recognition and incorporation of indigenous knowledge values into the Western legal order in the United States and attempts to recognise these values amongst the indigenous communities in Australia.

The aim of this chapter is to look for clues and possible solutions in other legal systems, and critically engage, compare and contrast the extent to which changes in the protection of indigenous intellectual property can be implemented in the South African legal framework.

The historical background and unique cultural context of indigenous communities require and justify special protection. The question I need to ask is, can intellectual property law help rectify this problem. It is vitally important to establish what has been done and achieved elsewhere concerning indigenous intellectual property and cultural contexts. Thus, I will examine and not try to re-invent the wheel of different settings and divergent approaches to indigenous communities of the United States and Australia. Although these legal regimes faced similar requirements relative to indigenous populations, they responded quite differently.

In the United States there is the recognition and incorporation of indigenous knowledge values into US legal order through: The Native American Graves Protection and Repatriation Act (NAGPRA) is a Federal law passed in 1990. NAGPRA provides a process for museums and federal agencies to

return certain Native American cultural items, for example human remains, funerary objects, sacred objects, and objects of cultural patrimony, to lineal descendents, culturally affiliated Native American tribes, and Native Hawaiian organizations (Fine-Dare 2002: 200). Although it is not legislation about intellectual property law, NAGPRA is a good example of legislation that is consistent with a post-colonial approach embedded in the lived experiences of indigenous peoples because it brings the laws and perspectives of indigenous people out of the realm of 'other' into the Western legal orders (or mainstream of knowledge). I must also point out that some aspects of NAGPRA will not be fully applicable to South as the context is different and some of the information in the following section is given as background to NAGPRA. For example, the section dealing with common law that has recognised indigenous property and sovereign right does not apply to South Africa. However, the underlying theoretical assumptions, protection of indigenous culture and human rights are aptly applicable to South Africa.

4.2 The need for protection of Native American graves

In all societies, mankind protects the sanctity of the dead. "Indeed, respect for the dead is a mark of humanity and is as old as religion itself "(Trope *et al.* 2000: 124). In the United States, respect for dead people is deeply ingrained in American social fabric and jurisprudence:

> [American cases] all agree in principle: The normal treatment of a corpse, once it is decently buried, is to let it lie. This idea is so deeply woven into our legal and cultural fabric that it is commonplace to hear it spoken of as a 'right' of the dead and a charge on the quick. [No] system of jurisprudence permits exhumation for less than what are considered weighty, and sometimes compelling reasons (Martin 1950: 472).

These values are strictly protected and adhered to in all fifty states in America. The criminal law of the USA does not permit grave robbing, disinterring and disarticulating of the deceased and makes certain that human remains are not mistreated and ignored (Richman 2004: 237).

Statutes in most states guarantee that all persons - including paupers, indigents, prisoners, strangers, and the unclaimed dead - are entitled to a decent burial (Carrillo 1998). Common law also goes to great lengths to protect the sanctity of the dead (Bray 2001: 11).

The above legal protections are taken for granted by most people. However, these legal protections have failed greatly to protect and preserve the graves and the dead of Native Americans. Huge numbers of deceased Native Americans have been dug up from their graves and carried away:

> National estimates are that between one hundred thousand and two million deceased Native people have been dug up from their graves for storage or display by government agencies, museums, universities, and tourist attractions. The practice is so widespread that virtually every Indian tribe or Native group in the country has been affected by non-Indian grave looting (Trope *et al.* 2000: 125; Bray 2001: 11).

The circumstances under which the indigenous dead were obtained has been thoroughly documented and recorded by historians and indicate that pothunters, soldiers, private citizens, government agents, museum collecting crews and scientists have all in the name of research or development, profit, entertainment and science, retrieved the native dead.

The problem which NAGPRA seeks to solve is one that has categorized Native American – Settler relations since the settlers landed on the Americas in 1620 (Hadfield 2001: 28): "The first Pilgrim exploring party returned to the Mayflower with corn taken from Indian (sic) storage pits and items removed from a grave: 'We brought sundry of the prettiest things away with us, and covered up the corpse again'" (Heath 1986).

Interest in collecting native body parts started before the Civil War. Dr. Samuel Morton (father of American physical anthropology) collected numerous Native American crania in the 1840s. His main aim was "to scientifically prove, through skull measurements, that the American native was a racially inferior 'savage' who was naturally doomed to extinction (Watkins 2005: 338). Morton's conclusions from his research established the 'Vanishing Red Man' theory, which the government policy makers embraced as 'scientific justification' for relocating native American tribes to native reserves, forcefully grabbing tribal land, and performing mass genocide in some instances, against indigenous Native Americans (Thornton 1987).

From the 1840s onwards collecting crews from newly founded American museums engaged in competitive expeditions to obtain Native American skeletal remains. At the end of the nineteenth century, Congress legislated in favour of its appalling federal policy with the passage of the Antiquities Act of 1906 (Lee 1970).

This Act, which was intended to protect 'archaeological resources' located on federal lands from looters, defined dead Native Americans interred on federal lands as 'archaeological resources' and, contrary to long-standing common-law principles, converted these dead persons into 'federal property'. The Antiquities Act allowed these dead persons to be dug up pursuant to a federal permit being granted "for the permanent preservation [of the remains] in public museums" (Carrillo 1998: 179). Since then, thousands of dead Native Americans have been classified as 'archaeological resources' and exhumed as 'federal property' (Carrillo 1998: 179).

Furthermore, American social policy has historically treated the dead Native Americans differently from other dead people from other races. Dead Native Americans have not been treated as human beings but as property, archaeological resources, pathological material, specimens, data, or library books. Moreover, many recent examples of maltreatment of Native American remains and dead bodies transpired in recent years. This shocked the nation's conscience as social ethics have changed since then and the American society has become highly sensitive to the issue of equal protection.

In the past, a pattern that defined Native American – settler relations in the United States of America was the one-way transfer of Native American property to non-Native American ownership:

> [an] enormous transfer of cultural property… occurred in a short, fifty-year period: during the half-century or so after 1875, a staggering quantity of material, both secular and sacred - from spindle whorls to soul-catchers - left the hands of their native creators and users for the private and public collections of the European world (Cole 1985: 286-310).

Some of that property transfer was through legitimate and legal trade and interaction; but a great amount of Native property transfer was also gained through illegitimate and illegal ways. In many

instances, there has been refusal to return stolen or improperly acquired sacred material. This has impacted upon later legislation of the rights of native tribal religious practitioners and their basic property rights. This issue of illegal possession is also of great concern among traditional religious practitioners and tribes.

The legal system has greatly contributed to the incongruent treatment of indigenous human remains and their funerary objects by not incorporating indigenous values and needs into the common law as it developed in the USA. For example laws covering the deceased did not consider the unique indigenous mortuary practices, for instance, scaffold, canoe and tree burials. The law only protected marked European graves and failed to protect unmarked Native graves. Furthermore, it did not take cognisance of the fact that indigenous people retain a very close religious association with ancient dead; rather, the right to protect the deceased was limited to the decedent's immediate next of kin. As Bray (2001: 15) expands:

> Native people were faced with highly ethnocentric decisions in some common-law cases. For example, in *Wana the Bear v. Community Construction, Inc.,* the court held that a historic Indian cemetery was not a 'cemetery' within the meaning of state cemetery-protection laws. In State v. Glass, the court held that older human skeletal remains are not considered 'human' for purposes of an Ohio grave-robbing statute, which leaves only aboriginal remains in an unprotected status in that state.

The above goes to support my theory on orientalism. It also goes on to highlight some key aspects of our theoretical perspective: as Said argued: through orientalism, the European West sought to enter into a relationship of power with the orient or 'other' on various levels, social, cultural, religious, political, burial asserting its identity and supporting over the 'other'. According to Said, this relation of power entailed cultural and ideological assertion in which the orient was used by the institutions, vocabulary, scholarship, imagery, doctrines, and colonial styles (Said 2003: 2).

4.2.1 State Statutory Law

Before NAGPRA was enacted there were many loopholes in the statutory law and this led to the failure to protect native graves (Yalung *et al.* 1992: 419). The protection statutes characteristically regulated and protected marked graves only. Thus many unmarked Native American graves were exposed, messed and disturbed or exposed during construction and or as a result of natural causes (Galloway 2006: 402).

These remains, which were exposed, were never reburied. For instance, in Illinois, despite all-inclusive grave-protection statutory laws, a whole Native American cemetery containing 234 men, women and children was uncovered and put on show at the Dickson Mounds Museum. The exhibition began in 1927 and after nearly seven decades of desecration, the show was only finally closed on 3 April 1992 after numerous protests (Dellios 1991: 1).

4.2.2 Legal Theories Supporting Protection and Repatriation of Native Dead

Five US sources of law exist that can provide the underpinning for tribal grave protection efforts and repatriation claims in addition to new statutory rights, these are:

The common law; the equal protection clauses of the Fifth and Fourteenth Amendments; the First Amendment; the sovereign right of Native American tribal governments to govern internal domestic affairs; and Native American treaties.

Although there are a bundle of rights clearly afforded to Native American tribes by the Bill of Rights, treaties, common law, and Federal Native American law, protecting these rights through the court system is very expensive, time consuming and uncertain.

Before NAGPRA was finally enacted, there was a series of legislation which led to final legislation of NAGPRA. This is usually referred to as Pre-NAGPRA and then in 1990 NAGPRA was signed into law. I shall now look at legislation before NAGPRA was enacted.

4.2.3 Pre – NAGPRA State Legislation

There were two types of state legislation relevant to NAGPRA: protection for unmarked graves; and actual repatriation legislation (Bray 2001: 18).

4.2.3.1 Protection for unmarked graves and repatriation legislation

Since 1989 five US states namely, California, Kansas, Nebraska, Hawaii and Arizona, have passed repatriation statutes. The repatriation statutes are state laws protecting Native American burial sites, sacred materials and artefacts (Trope *et al.* 2000: 135). In 1989, Hawaii appropriated $5million to purchase Native Hawaiian burial ground. Kansas also passed "implementing legislation concerning a reburial agreement between state officials" (Trope *et al.* 2000: 135), in 1989 and the same year, Nebraska enacted a general repatriation statute entitled the 'Unmarked Human Burial Sites and Skeletal Remains Protection Act' (Richman 2004: 216). This was landmark legislation, as it required all "state-recognized museums to repatriate 'reasonably identifiable' remains and grave goods to tribes of origin on request. Under Nebraska's law, the Pawnee Tribe repatriated over four hundred Pawnee dead from the Nebraska State Historical Society…. In 1990 Arizona passed a sweeping repatriation statute to repatriate human remains, funerary objects, sacred objects, and objects of tribal patrimony" (Watkins 2001: 59; Amato 2004: 232). Finally, in 1991 California passed a law which stated that Native American remains and artefacts shall be repatriated.

The passing of these various acts designed to protect the treatment of Native Americans remains and funerary objects from 1989 to 1991 assisted with the Federal enactment of NAGPRA. The Federal government, with pressure from Native tribes and national organisations, started considering a uniform legislation to address the issue of repatriation among the Native Americans.

4.2.3.2 Federal Legislation

In 1986 a number of Northern Cheyenne leaders discovered that almost 18,500 human remains were warehoused in the Smithsonian Institute. This discovery served as a catalyst for an intensive national effort by Native American tribes and organisations to seek legislation which could assist to

repatriate human remains and cultural artefacts to indigenous tribes and descendents of the deceased. So between 1986 and 1990 several bills were introduced in the 99th, 100th, and 101st Congresses to address this issue.

The focus of these bills was to protect against the future illegal excavation of burial sites: the McCain, Inouye, and Udall Bills provided for an inventory, notice, and repatriation process for human remains and certain cultural artefacts in the possession of federal agencies and also provided for a repatriation process applicable to federally funded museums. The Inouye and Udall Bills extended the requirements relating to inventories and notices to federally funded museums. The McCain, Udall, and Bennett Bills included criminal penalties for illegal trafficking in protected remains or objects. The Inouye and one of the Udall bills created a review committee to oversee implementation of the legislation. These bills were each considered at the congressional hearings that preceded the enactment of NAGPRA (Bray 2001: 20).

The provisions in these bills were subsumed in or outdated by the final enacted legislation.

4.2.3.3 National Museum of the American Indian Act

On 28 November 1989, the National Museum of the American Indian Act ('Museum Act') came into force. The Museum Act created a National Museum of the American Indian within the Smithsonian Institute (Trope *et al.* 2000: 137). The Museum Act requires: "the Smithsonian, in consultation with Indian tribes and traditional Indian religious leaders, to inventory human remains and funerary objects in its possession or control. Upon request of a lineal descendant or culturally affiliated tribe, human remains and funerary objects associated with those remains are required to be expeditiously returned" (Anderson 2004: 328). Funerary objects defined in the Act include all objects found with the remains and objects which were removed from a burial site of an individual who was culturally associated with a particular Native Indian tribe" (Watkins 2001: 53). The Act establishes a special committee to review and monitor the inventory, identification, and return of Native American human remains and Native American funerary objects.

4.2.3.4 Panel for a national dialogue on Museum - Native American relations

This Act was followed by a dialogue that lasted for one year. The process was suggested by the American Association of Museums and sponsored by the Heard Museum in Arizona (Bray 2001: 21). Among the participants in the dialogue were representatives from museums, scientists, and indigenous Native Americans. The centre of the dialogue was around the appropriate treatment of human remains and cultural artefacts. Early in 1990, the *Report of the Panel for a National Dialogue on Museum/Native American Relations* came out. The major conclusions of the panel who participated in the dialogue were as follows:

> The Panel found that the process for determining the appropriate disposition and treatment of Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony should be governed by respect for Native human rights…. The Panel also recommended the development of judicially enforceable standards for repatriation of Native American human remains and objects…. (Bray 2001: 21).

The panel's report provided a framework for NAGPRA (Waters 2003: 244) which will be examined in detail in the following section.

4.3 The Native American Graves Protection and Repatriation Act (NAGPRA)

On 16 November 1990, The Native American Graves Protection and Repatriation Act (NAGPRA) was signed into law (Tweedie 2002: 14).

4.3.1 Legislative Intent

NAGPRA is, primarily, human rights legislation. It is designed to address the flagrant violation of the "civil rights of America's first citizens" (Blake 2005: 347). This legislation will give Native Americans greater ability to negotiate with museums and institutions that have consistently ignored the requests of Native Americans. Other parts of the legislative history also emphasise the 'human rights' genesis of NAGPRA, of how the civil rights of Native Americans has been disregarded in the

past century. NAGPRA was intended to create a procedure that would balance and reflect both the needs of museums as repositories of the nation's cultural heritage and the rights of Native American people. Significantly though, NAGPRA's intention was to establish a process that restored the dignity and respect that the nation's indigenous people deserve. For congress strongly believed that NAGPRA would encourage a continuing dialogue between museums and Native American tribes and Native Hawaiian organisations which would in turn promote some greater understanding between the groups.

4.3.2 Repatriation: Human Remains and Associated Funerary Objects

NAGPRA requires the following organisations: federal agencies (excluding the Smithsonian Institution) and museums (including state and local governments and educational institutions), to return the artefacts when requested by their descendents (Bray 2001: 23).

4.3.3 Repatriation: Unassociated Funerary Objects, Sacred Objects, and Items of Cultural Patrimony

This is to be done following a four-step process:

4.3.3.1 Identification of the item

First, the claimant must show that the item claimed is an unassociated funerary object, sacred object or cultural matrimony object. Unassociated funerary objects are:

> a part of the death rite or ceremony of a culture, are reasonably believed to have been placed with individual human remains either at the time of death or later, where the remains are not in the possession or control of the Federal agency or museum and the objects can be identified by a preponderance of the evidence as related to specific individuals or families or to known human remains or, by a preponderance of the evidence, as having been removed from a specific burial site of an individual culturally affiliated with a particular Indian tribe (NAGPRA Section 2 [b]);

Sacred objects are defined as “specific ceremonial objects that are needed by traditional Native American religious leaders for the practice of traditional Native American religions by their present day adherents (NAGPRA Section 2 [c]). “[T] he definition of ‘sacred objects’ is intended to include both objects needed for ceremonies currently practiced by traditional Native American religious practitioners and objects needed to renew ceremonies that are part of traditional religions. The operative part of the definition is that there must be ‘present day adherents’ in either instance” (Trope *et al.* 2000: 143).

Finally, cultural patrimony is an object of such significance to Native American tribe(s) that it is considered inalienable, that is, communally-owned. Some objects of cultural patrimony may also meet the definition of ‘sacred object’. Hence: cultural patrimony is defined as “an object having ongoing historical, traditional, or cultural importance central to the indigenous American group or culture itself” (NAGPRA Section 2 [d]).

Furthermore, the collective Native group must have considered the object inalienable when the object was separated from such group. The property should not have been owned and been transferable by an individual person.

4.3.3.2 Cultural affiliations and prior ownership or control

Once it is evident that that an item is an unassociated funerary object, sacred object, or item of cultural patrimony, then the cultural affiliation must be determined. In the case of sacred objects and items of cultural patrimony, the tribe or Native Hawaiian organisation requesting the item must show or provide evidence that the object was previously owned or controlled by the tribe, organisation, or a member thereof.

4.3.3.3 Right of possession: claimant's prima facie case

The third step in the process requires that the claimant present “evidence which, if standing alone before the introduction of evidence to the contrary, would support a finding that the museum or federal agency did not have the right of possession” of the items. The definition of “right to possession” is designed to ensure that the object did not pass out of tribal or individual Native American possession without appropriate consent (Trope *et al*. 2000: 145).

4.3.3.4 Right of possession: burden of proof

If for instance, the federal agency or museum cannot prove right of possession, the unassociated funerary object, sacred object, or item of cultural patrimony must be returned - unless the scientific study or competing claims exceptions apply. As Trope and colleagues state:

> NAGPRA makes clear that these provisions, as well as those pertaining to human remains and associated funerary objects, are not meant to limit the general repatriation authority of federal agencies and museums. NAGPRA does not preclude agencies or museums from entering into agreements with tribes and organizations regarding any Native American objects owned or controlled by museums or agencies (2000: 145-146).

4.3.4 Inventory: Human Remains and Associated Funerary Objects

NAGPRA requires museums and federal agencies to complete an item-by item inventory of human remains and associated funerary objects that are a "a part of the death rite or ceremony of a culture, are reasonably believed to have been placed with individual human remains either at the time of death or later, and both the human remains and associated funerary objects are presently in the possession or control of a Federal agency or museum, except that other items exclusively made for burial purposes or to contain human remains shall be considered as associated funerary objects (NAGPRA Section 2 [a]).

'Inventory' is defined as a simple itemized list that summarizes the information called for by section 5[e] of NAGPRA. As part of the inventory, the museum or agency is required to "identify the geographical and cultural affiliation of each item, to the extent possible, based upon information within its possession" (Rosier 2003: 91).

4.3.5 Summary: Unassociated Funerary Objects, Sacred Objects, and Items of Cultural Patrimony

NAGPRA requires that federal agencies and museums summarize their collections of unassociated funerary objects, sacred objects, and items of cultural patrimony. This had to be done within three

years “The summary is ‘in lieu of an object-by-object inventory’ and requires the museum or agency to describe the scope of the collection, kinds of objects included, reference to geographical location, means and period of acquisition and cultural affiliation, where readily ascertainable” (Amato 2004: 235).

4.3.5.1 Tribal Ownership and Control: Imbedded Cultural Items

NAGPRA also provides rules that address ownership or control of cultural items that are discovered in the future on tribal and federal land. With regard to human remains and associated funerary objects, all lineal descendents have the initial right of ownership and control. If lineal descendents of the human remains and associated funerary objects cannot be ascertained or can come out when unassociated funerary objects, sacred objects, and items of cultural patrimony are involved, the ownership or control is determined in the following statutory order:

The tribe or Native Hawaiian organisation owns or controls the disposition of all cultural items discovered on tribal land; in the case of federal land, the tribe or Native Hawaiian organisation with the closest cultural affiliation to the items has ownership or control. If cultural affiliation of the items cannot be established, but the objects are discovered on Native American land that has been the subject of a final judicial determination by the Indian Claims Commission or United States Court of Claims, the tribe that has obtained the judgment has the right of ownership and control over the items, unless another tribe can show a stronger cultural relationship (Bray 2001: 29).

4.3.6 Prohibitions against trafficking

NAGPRA prohibits all trafficking in Native American human remains for sale or profit except for remains that have been “excavated, exhumed or otherwise obtained with full knowledge and consent of the next of kin or the official governing body of the appropriate culturally affiliated Indian tribe or Native Hawaiian organization. The prohibition is intended to prevent trafficking in human remains that were wrongfully acquired, regardless of when and where obtained, including those removed prior to the enactment of NAGPRA” (Trope *et al.* 2000: 149).

4.3.7 Review committee

NAGPRA creates a review committee, appointed by the secretary of the interior, to monitor and review the implementation of NAGPRA. The review committee consists of seven members: three appointed by the secretary from nominations submitted by Native American tribes, Native Hawaiian organizations, and traditional Native American religious leaders (at least two of the three must be traditional Native American religious leaders); three appointed from nominations submitted by national museum and scientific organizations; and one person chosen from a list compiled by the other six members. Federal officers and employees may not serve on the review committee. The review committee composition and nomination process differs from that of the National Museum of the American Indian Act.

4.3.8 Enforcement and implementation of NAGPRA

NAGPRA enables the Secretary of the Interior to assess civil penalties against museums that do not comply with NAGPRA and entitles aggrieved parties to allege a violation of NAGPRA through a legal cause of action to enforce NAGPRA's provisions. As Bray (2001: 31) notes:

> This action is in addition to any existing procedural or substantive legal rights secured to tribes or Native Hawaiian organizations. Tribes and Native Hawaiian organizations may also receive grants to assist them in repatriating cultural items. After centuries of discriminatory treatment, the Native American Graves Protection and Repatriation Act finally recognizes that Native American human remains and cultural items are the remnants and products of living people and that descendents have a cultural and spiritual relationship with the deceased.

TABLE 19 : Summary and Inventory Overview: what Museums and Federal agencies must prepare

Summaries of their collections that may contain Native American • unassociated funerary objects • sacred objects • objects of cultural patrimony See 43 CFR 10.8	Inventories of their Native American • human remains • associated funerary objects See 43 CFR 10.9
The Summary – • serves in lieu of an object-by-object inventory • provides information to lineal descendents, Native American tribes, or Native Hawaiian organisations who may wish to make claims	The Inventory – facilitates repatriation by providing clear descriptions of human remains, associated funerary objects, and their cultural affiliation
Content – • estimate of the *number* of objects in the collection • description of the *kinds* of objects • Collection history • Information relevant to identifying *cultural affiliation*	Consultation The inventory is prepared in consultation with – • lineal descendents • Native American tribes (includes Native Alaskan villages and corporations) • Native Hawaiian organisations The purpose of the consultation is to share information with the consulting parties and to obtain information that can be used by the museums or Federal agency to determine cultural affiliation. The museum or Federal agency is responsible for initiating consultation no later than the completion of the summary.
Completion – Inventories must be completed not later than November 16, 1995. Copies of the inventory must be provided to lineal descendents, Native American tribes, Native Hawaiian organisations, and the National Park Service.	Content – • a listing of all human remains and associated funerary objects that are identified as culturally affiliated with one or more present-day Native American tribes of Native Hawaiian organisations • a listing of all culturally unidentifiable human remains and associated funerary objects

Consultation Consultation must take place with – • lineal descendents • Native American tribes (includes Native Alaskan villages and corporations) • Native Hawaiian organisations The purpose of the consultation is to share information with the consulting parties and to obtain information that can be used by the Museums or Federal agency to determine cultural affiliation and the identification of cultural items. The museum or Federal agency is responsible for initiating consultation no later than the completion of the summary.	Completion – Inventories must be completed not later than November 16, 1995. Copies of the inventory must be provided to lineal descendents, Native American tribes, Native Hawaiian organisations and the National Park Service.
	Notification – For culturally affiliated human remains and associated funerary objects, a Notice of Inventory Completion must be published in the Federal Register.
Notification – For culturally affiliated human remains and associated funerary objects, a Notice of Inventory Completion must be published in the Federal Register.	Repatriation – • must proceed within 90 days of receiving a request from a lineal descendant or culturally affiliated Native American tribe or Native Hawaiian organization • may not proceed earlier than 30 days after publication of the Notice of Inventory Completion In the event of competing claims, the Native American human remains and/or other items may be retained until the claims are resolved. The place and manner of delivery shall be determined in consultation with the recipients. See 43 CFR 10.10

(http://www.nps.gov/history/nagpra)

The failure of the US Government and other institutions to understand and respect the spiritual and cultural beliefs and practices of the indigenous peoples is a part of a larger historical tragedy. But after centuries of discriminatory treatment, NAGPRA finally recognises that indigenous American human remains and cultural items are the remains and products of once-living people and that descendents have a cultural and spiritual relationship with the deceased. NAGPRA is therefore unique legislation because its focus is on the indigenous communities' perspective. For the first time the non-Native institutions and federal government have considered what is sacred from a Native American perspective and one can hope that future legislation will be imbued with this same heightened consciousness of the nature of Native American culture and spirituality.

4.3.9 Contentious issues of NAGPRA

When NAGPRA was legislated in 1990, the scale of the problem with human remains was huge. For instance, 52,500 human remains were recovered from over 5,120 mortuary sites which were excavated. Furthermore, the number of associated and unassociated cultural objects is enormous as well; just to give an example there are over 10,000 skeletal remains and over 8 million artefacts at Peabody Museum at Harvard. However, in 1990 after NAGPRA was legislated 1,000 remains of Native Americans excavated on Kodiak Island were returned to their lineal descendents. The bones dated as far back as almost two centuries ago (Sinclair 2010)

In terms of the remains in public museums, there has been a realization that the number is enormous and it is more than people had anticipated. A positive result has been that there is a change in the way the Native Americans are treated with regard to their dead ancestors. For instance, when excavations come across deceased Native Americans, the skeletal remains are now treated according to the wishes of the Tribal authorities and the remains are then made available for re-burial. There has also been a creation of Native American Groups dealing with archaeological services for Native Americans, the best being the Navajo Nation Archaeology Department. Furthermore, the re-burial debate and enactment of NAGPRA has forced archaeological organizations to come up with amicable codes of ethics which control their members, such as the Archaeological Institute of America and the Society for American Archaeology.

Given the above successes and developments there are, however, a number of key problems which have developed with regard to the how the process of NAGRPA works, especially with the way the consultation process works: In some cases the consultation is not followed properly by federal agencies. There is also some confusion as to what should happen when skeletal remains are discovered inadvertently. With regard to consulting tribal authorities, many Native Americans assert that the Native American Tribal Councils (which were elected bodies formed by the Native America Re-organisation Act of 1930) are sovereign nations but this process of consulting with them only makes them entities within the Federal system and not sovereign nations. Finally, some Native Americans have argued that some anthropologists have been using the inventory system required by the Act to actually carry on further, unwarranted research under the false pretext of determining the cultural affiliations of the remains

.

Certain amendments have been made to NAGPRA: for instance dealing with obtaining a written consent from Native groups before archaeologists embark on their work. Accidental discoveries should be reported to relevant bodies in a timely fashion and be treated like other remains. The most well known case which also led to an amendment of NAGPRA was the Kennewick Man Skeleton or the Ancient One, which was discovered on federal land. The skeleton was discovered by the US army and they determined that it could fall under NAGPRA and returned it to a coalition of Native American groups. This return was challenged by a group of scientists who successfully argued that provisions in NAGPRA were not applicable in this case. The US Court of Appeals concluded in the Bonnichen vs US that the remains could not be identified with any current day Native Americans and NAGPRA did not apply. So the fundamental question raised by this is whether NAGPRA should be applicable to remains which are over nine thousand years old. The two dilemmas in this case evidently are: are these remains authentically related to modern Americans and should anthropologists be given preferential treatment so as to conduct scientific research on these remains? As Hall (2003: 27) notes:

> The identification and return of sacred objects, items of cultural patrimony, funerary objects, and human remains has often led to conflict between tribes/villages, academic researchers, and museum collections managers. The return and disposition of human remains is the source of greatest controversy and dispute in the

> repatriation process. The central issue in repatriation remains the accurate attribution of lineal descent and cultural affiliation (Dongoske 1996; Rose *et al.* 1996; Kosslak 1999;). Given that race/ethnicity and culture are inherently transient concepts, this controversy may be impossible to resolve (Meighan 1992; Nafziger & Dobkins 1999; Clark 1999).

To deal with this case an amendment was proposed to NAGPRA in section 108 of S. 563, the Native American Omnibus Act of 2005:

> If enacted, the amendment would define 'Native American' within the context of NAGPRA so as to include a tribe, people, or culture that is or was indigenous to any geographic area that is now located within the boundaries of the United States. If enacted, the amendment could have an impact on the ultimate disposition of the remains of the Kennewick Man, as well as the control and custody of any other ancient human remains and related objects which may be discovered (Weimer 2005: 1).

The implementation of NAGPRA in some instances has been a contentious process (Meighan 1992; Ferguson 1996; Mihesuah 1996). Hall (2003: 27) asserts that in some instances: "The repatriation conflict has been characterized as resulting from fundamental differences between the hegemonic Western secular/scientific worldview and the sacred worldview of many American Indians and Alaska Natives." There has been a clash of two world views which has brought about numerous misunderstandings and misconceptions (Deloria Jr. 1992; Echo-Hawk 1992, 1999; Meighan 1992; Clark 1999). The creation of NAGPRA is seen like an affirmation of the religious freedom of Native Americans (Deloria Jr. 1992), an issue dealing with the genesis of human rights among the Native Americans, and finally an issue dealing with equity when treating deceased individuals in America (Deloria Jr 1992; Rose *et al.* 1996).

Many academics (archaeological and anthropological) present themselves as legitimate protectors and interpreters of the past. They say that the information they gain will benefit all humanity, but ironically there was little interest in studying the remains prior to the implementation of NAGPRA (Hall 2003: 27). The Native Americans also ask why the study of the remains of their ancestors should be considered to be more important than the study of other ethnic groups in the United

States (Hibbert 1998). NAGPRA has sparked a lot controversy and debates and it will take a long time to resolve some of the contentions contained within the Act as Hall expands:

> Many American Indian and Alaska Natives and non-Natives insist that there is no identifiable Pan-Indian position regarding repatriation requests, scientific study of human remains, or the appropriate disposition of repatriated remains (Clark 1999; Mihesuah 1996; Zimmerman 1992). Rather, 'universal repatriation' is not unanimously advocated by American Indian and Alaska Natives, and no consensus on reburial issues can be identified among tribes/villages (Gulliford 1996). Archaeologists and physical anthropologists also possess and articulate diverse values and beliefs regarding repatriation (Ferguson *et al.* 1997; Rose *et al.* 1996; Watkins 1999; Zimmerman 1997, 1997b). Regardless, dogmatic positions regarding repatriation continue to be presented by some archaeologists/physical anthropologists and American Indian and Alaska Natives, leading to the assumption by many of the inevitable and immutable polarization on this issue (2003: 27).

4.3.10 What can South Africa learn from this?

A new law which was enacted by five states: Arizona, California, Nebraska, Hawaii and Kansas specifically to protect the remains of indigenous communities in the US, was further developed by the federal government into a national all-encompassing legislation protecting the remains of deceased Native Americans. This was an entirely new law, though there was some legal precedence such as:

The 1906 Antiquities Act, when the sites belonging to Native Americans were classified as archaeological sites;

The 1934 Indian Reorganisation Act whereby Native American nations were to be organised with elected councils and function within the federal system. This undermined the Native American status as separate nations within the USA and only the nations which were organised in this way were to receive federal assistance;

The 1969 National Environment Policy Act under which all Native American sites were now classified as environmental resources. This Act was influenced by the work of Vine Deloria Jr and the Black Power and Civil Rights movements of the southern states in the 1960s.
The 1975 Indian Self-Determination Act, 1978 Indian Child Welfare Act and 1978 Indian Religious Freedom Act all made the Native Americans responsible for running their own affairs.

In the 1970s the Native Americans started to re-look at the burial movement and the treatment of ancestral remains by scientists and other organisations. In 1979 the National Historic Preservation Act was passed and this entitled the Native Americans to assess land prior to development. In 1980s reburial of deceased Native Americans became a huge issue and it grew in Australia as well. Museums started removing skeletal remains from public display and NAGPRA followed in 1990.

From these, though, after many centuries of abuse and mistrust, a legislation specifically meant for native people was enacted. It did not follow the existing colonial laws for it was made in its own right and form. As stated earlier the creation of NAGPRA is seen as affirming the religious freedom, human rights and treating all dead people equally in the US. This in itself shows an appreciation and protection of an indigenous knowledge system of Native Americans. The laws enforce many social and cultural values of the Native American and without these some societal roles and functions could not be enforced. Though it is not a simple process it is a step in the right direction as the indigenous communities now know that they have a recourse, which is formulated in their terms to protect their deceased relatives.

The spiritual aspect is very important as it preserves an important aspect of Native American religious and cultural life. Furthermore, it treats people with the rightful respect taking into account their practices and knowledge systems as Conklin (2006) expands:

> NAGPRA is usually defended on the grounds of decency, spirituality, and racial equality. Every racial, cultural, or tribal group is entitled to equal treatment under the law. Everyone is entitled to be treated with common decency, which includes treating dead people and their possessions in accord with the customs and expectations of

> their own families and groups. There are many spiritual beliefs regarding the afterlife, the ongoing relationship between living people and their ancestors, and the ongoing relationship between a soul and the bones and artifacts from which it departed or in which the spirit may continue to reside.

So NAGPRA protects an aspect of an indigenous knowledge system of Native Americans. South Africa can learn a great deal from this. Our indigenous knowledge systems are not protected in this way. The new proposed South African legislation is suggesting protection using colonial concepts which will result in many problems. As with NAGPRA, the South African government must begin to promote and protect the indigenous systems and find indigenous solutions in a way which promotes the indigenous communities so that they are more consistent with contemporary post-colonial legislation.

Another way of looking at NAGPRA is to see it as a way of enforcing the property rights of the Native Americans. This is important for our study. We typically see an indigenous problem with regard to protection which has been solved using legislation. The important point to note is that the protection is for Native Americans addressing their own needs. This is a lesson which South African can learn from NAGPRA. As Conklin (2006) expands:

> NAGPRA …is sometimes defended as a way of enforcing property rights. Under longstanding laws of all the states, the body of a dead person is regarded as the property of the next of kin or the property of whomever it may have been willed to…. Thus, human remains and artifacts are considered the property of the lineal descendants if they can be found, or of the tribe. The logical extension of regarding bones and artifacts as property is this: a tribe has a right to repatriate bones and artifacts from laboratories, museums, or commercial establishments, and the tribe may then exhibit or even sell the bones or artifacts if it chooses.

As with the case of intellectual property rights among indigenous communities, there are also conflicts with regards to human bones and artefacts that cross the boundaries between the property rights of individual persons and families and the greater property rights of the tribe. The

importance of the tribe is to preserve the cultural objects and also to inspire and educate the future generations.

Then finally, the protection of indigenous knowledge systems on its own terms could be seen as a political retribution. Indigenous communities in South Africa have been misappropriated for over 300 years, first under colonialism and then secondly under apartheid. By addressing the issue of indigenous protection it could be a way of putting right that which went wrong when the settlers came to South Africa in 1652. Similarly with South Africa, the Native Americans are also not happy with the way the US government, the state government and white people treated their ancestors. As Conklin expands:

> NAGPRA can be used as a vehicle for venting that anger and 'getting even'. NAGPRA gives real power to individual Indians and to tribes, allowing them to sue government and private institutions (especially museums) and to take back what was previously stolen from their ancestors (including the ancestors themselves!). NAGPRA can be a way for people who were previously powerless underdogs to attack, defeat, and humiliate those they perceive as oppressors. Thus, some Indian groups might occasionally take actions which seem irrational or unproductive, but can be thought of as displays of power or 'flexing the muscles' (2006).

So these three areas: spiritual protection, property right and retribution can be key drivers to assist South African law makers to learn from NAGPRA and its existence. Regardless of the criticisms and mishaps which have occurred, South Africa can look at NAGPRA holistically as the main message is vitally more important than the internal contradictions within the Act. If South Africa is to learn from the US experience, we must consider the US example 'warts and all,' that is, the whole thing; not concealing the less attractive parts.

4.4 Indigenous Cultural and Intellectual Property (ICIP) Project in Australia

The Aboriginal and Torres Strait Island Commission (ATSIC) funded the Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS) to coordinate a project, which aimed at developing practical reforms that would improve protection and ensure recognition of indigenous

cultural and intellectual property. AIATSIS appointed Michael Frankel & Company, Solicitors, to carry out the project. Terri Janke was the principal consultant. A Steering Committee comprising representatives from ATSIC, the Inter-Departmental Committee (IDC), the Indigenous Reference Group (IRG) and AIATSIS were convened to oversee the ICIP Project. A discussion paper entitled *Our Culture: Our Future*, which put forward proposals for the improved recognition and protection of indigenous cultural and intellectual property, was released in July 1997. The report was part of a process to develop practical reform proposals for the improved recognition and protection of indigenous cultural and intellectual property (von Lewinski, 2003: 362). The discussion paper responded to the following government inquiries: Stopping the Rip-offs: Intellectual Property Protection for Aboriginal and Torres Strait Islander Peoples; The House of Representatives Standing Committee on Aboriginal and Torres Strait Islander Affairs Inquiry into Culture and Heritage; and Social Justice Reports and findings.

The discussion paper was sent to various indigenous organisations, industry bodies and government organisations seeking responses to various reform options for the improved recognition and protection of indigenous cultural and intellectual property.

The paper also aimed at informing indigenous peoples about the current laws and international developments, which affect their rights to use and control their cultural and intellectual property.

The *Our Culture: Our Future* discussion paper contains findings and recommendations, which were to be presented to the Board of Commissioners of the Aboriginal and Torres Strait Islander Commission for consideration. The findings and recommendations are based on feedback from various workshops, meetings, consultations and submissions received in response to the *Our Culture: Our Future* discussion paper:

Part one of the discussion paper discusses the nature of Indigenous cultural and intellectual property and the aspects of it that Indigenous people feel should be protected.

Part two of the discussion paper examines how far the existing Australian legal system protects these aspects of Indigenous intellectual and cultural property.

Part three of the paper considers possible solutions under the headings: Legislative solutions; Administrative responses and Policies, Protocols and Codes of Ethics.

4.4.1 Indigenous cultural and intellectual property

Terri Janke subscribes to the accepted view that the concept of property rights and ownership applying to knowledge and ideas was developed in England and Europe after the 15th century, as we saw in chapter two. Through the invention of the printing press, people's works for the first time were copied at a faster pace, which was at relatively high volumes. Legal statutes were introduced to protect individual creations and inventions:

> Today's intellectual property laws originate from this era. Thus, intellectual property rights are based on the notion that innovation is the product of the creative, intellectual and applied concepts and ideas of individuals. The state grants specific economic rights to inventive people to own, use and dispose of their creations as a reward for sharing their contributions and to stimulate inventive activities (Janke 1998: 1).

From the time of the impact with European colonisation and conquest, indigenous Australian cultural heritage material was seen by the colonizers as material which was freely available for anybody to use or abuse. Until recently it was considered unlikely that intellectual property rights could be applicable to the special features of indigenous cultural heritage material. However, this perception has now changed. Indigenous dances, lifestyles, songs, artworks, stories, knowledge, "biogenetic resources and resource-management practices are increasing in value to modern society as commercial property. In an age of new technology and increasing global markets, indigenous people worldwide are seeking to protect their cultural and commercial interests. So too, are Indigenous Australians" (Janke 1998: 1). Although Janke's document has not been enacted into law in Australia, parts of the document discussed below exemplifies the need for a post-colonial approach rooted in the lived experience of the community because it brings the perspective and traditional laws of these communities out of the realm of the "other" into the mainstream.

Part one of the first chapter began by introducing the concept of indigenous cultural and intellectual property rights which are defined as: “Indigenous Australians’ rights to their heritage. Such rights are also known as Indigenous Heritage Rights. Heritage consists of the intangible and tangible aspects of the whole body of cultural practices, resources and knowledge systems developed, nurtured and refined by indigenous people and passed on by them as part of expressing their cultural identity” (Janke 1998: 11).

The discussion paper sees heritage encompassing the following aspects: literary, performing and artistic works (including music, dance, song, ceremonies, symbols and designs, narratives and poetry); languages; scientific, agricultural, technical and ecological knowledge (including cultigens, medicines and sustainable use of flora and fauna); spiritual knowledge; all items of moveable cultural property including burial artifacts; Indigenous ancestral remains; Indigenous human genetic material (including DNA and tissues); cultural and environment resources (including minerals and species); immovable cultural property (including Indigenous sites of significance, sacred sites and burials); and documentation of Indigenous peoples’ heritage in all forms of media (including scientific, ethnographic research reports, papers and books, films, sound recordings) (Janke 1998: 11-12).

The heritage of an indigenous community is a living one, it is not static, it is changeable and includes items that might be created in the future, based on that heritage. Thus:

> Any definition of Indigenous Cultural and Intellectual Property should be flexible to reflect the notions of the particular Indigenous group and the fact that this may differ from group to group and may change over time” (Janke 1998: 111).

Chapter one concludes by making two recommendations: firstly, that informed debate concerning the definition of indigenous cultural heritage in relation to commerce versus culture should take place; discussions on property versus heritage should be fostered and Indigenous Australians should be kept abreast of cultural and intellectual property and the protection of folklore (Janke 1998: 12).

The second chapter examines the commercial value of indigenous cultural and intellectual property. There was an overwhelming response that indigenous cultures contribute substantially to the Australian economy in a range of industries, amongst them arts and crafts; tourism; rural assets (including bush foods and traditional medicines); biotechnology; advertising; film and import/export. Also, "Respondents also noted some other commercial uses of Indigenous cultural heritage, including: Academic/research; Music and Didgeridoo" (Janke 1998: 13-16).

Another overwhelming response received from respondents was that indigenous people should receive compensation or royalties for use of indigenous culture where appropriate. Indigenous people should be able to stop commodification of certain aspects of their cultures. Some things cannot be sold, such as secret/sacred objects and information. Many felt that culture was very important, the significance of which was supposed to be reinforced, rather than merely commercially applied (Janke 1998: 16-18).

The respondents to the discussion document felt that indigenous people should be empowered with negotiation rights regarding the use of their cultures. Several recommendations were made in this chapter which looked at independent economic evaluations to determine cultural losses and that support should be given to Indigenous people to negotiate "terms in relation to the commercial use of their cultural heritage" and that education supporting the reinforcement of cultural values should be supported (Janke 1998: 18).

The third chapter examined the major concerns of Indigenous people which included the various uses of their "heritage, including the appropriation of Indigenous arts and cultural expression, unauthorised use of secret/sacred material and the appropriation of indigenous biodiversity knowledge, often without their informed consent or knowledge. There is also a concern for the use of cultural resources developed and nurtured by Indigenous people" (Janke 1998: 19). The following is a list of some of the concerns raised:

> "Appropriation of Indigenous arts and cultural expression; Unauthorised use of secret/sacred material; Appropriation of Indigenous languages; Appropriation of Indigenous Spirituality; Appropriation of Indigenous Biodiversity Knowledge; Appropriation of Cultural Objects; Retention of Indigenous Ancestral Remains; Misuse of Indigenous

Human Genetic Material; Not fully informed concerning research; Impact of New Technology; Unfair Contracts" (Janke 1998: 21-22).

Issues of cultural integrity and authenticity lay at the heart these concerns.

Finally, the fourth chapter of part one looked at the rights that Indigenous people wanted recognised in relation to their cultural and intellectual property.

4.4.2 How far the existing Australian legal system protects indigenous intellectual and cultural property?

In part two, the document deals with the current Australian legal framework, which like most other international legal frameworks offers very limited protection and recognition of Indigenous cultural and intellectual property as in most cases, intellectual property laws are generally inadequate in recognising and protecting cultural and intellectual property rights because non-indigenous ideals of protection differ greatly from indigenous beliefs. As Janke notes: "Cultural heritage laws are considered inadequate in the application to all aspects of indigenous cultural and intellectual property and do not recognise many rights indigenous [persons] consider important for their continuation of their culture" (1998: 49).

Part two of the report covers: intellectual property laws; cultural heritage laws and other relevant laws such as native title, archives and broadcast laws.

4.4.2.1 Copyright in Australia

While some Indigenous artists might have used copyright law to protect their interests in their artistic creations (Sterling 1981; von Lewinski 2003: 365), there are several problems which arise out of the application of copyright provisions to Indigenous works because these works may fail to satisfy the requirements of copyright in the form of:

Originality;
Material form;
Identifiable author.

Copyright law in Australia is based on the British system just as in South Africa. The two systems share some similarities. Some of the practical results of the laws of copyright in Australia include the following: exclusive rights are granted to individual authors and makers of recordings to use and deal with the copyright in their works; no special protection is given to secret or sacred material; performances of oral indigenous material are not protected under copyright provisions and receive only limited protection under performers' rights and there are no performers' rights in relation to still photography.

The effects and limitations of the protection afforded by the Australian Copyright Act are the following: commercial interests are protected under copyright law, rather than interests pertaining to cultural integrity; there is no right of attribution for Indigenous communities in respect of works that include or incorporate aspects of their cultural heritage; rights are valid for a limited period and then become freely available, whereas under indigenous customary laws, they exist in perpetuity and only individual notions of ownership are recognised, rather than the Indigenous concept of communal ownership.

4.4.2.2 The Designs Act

The Act in Australia also offers limited protection for indigenous cultural and intellectual property: The focus of design protection is to enable commercial interests to gain a competitive edge; a limited period of protection is offered whereas traditional rights to indigenous designs exist in perpetuity. Protection is afforded to a registered owner, whereas indigenous laws recognise communal rights and ownership.

4.4.2.3 The Patents Act

The Patents Act often does not recognize indigenous material as patentable because it is not novel in the sense that it is not known by others or used by others before the inventor claims to have invented the material and it does not involve an inventive step.

Moreover, human beings and the biological processes that contribute to their make up do not constitute a patentable invention. Nevertheless, a contentious issue that arises is that patent application is allowable where human genetic resources such as genes are concerned.

4.4.2.4 Trademarks

In Australia, to be registered as a trademark, indigenous cultural material would have to be used in the course of trade, which is not appropriate to the cultural significance or the traditional use of such material. Indigenous people, however, may be able to make use of the restrictive provisions under the Trade Marks Act to challenge culturally offensive trademarks, which are scandalous or contrary to their customary laws or culture.

4.4.2.5 Legislation governing Breach of Confidence

This may be useful when indigenous cultural material has not previously been published.

4.4.2.6 Passing Off

This is a limited remedy for indigenous communities, because in Australia it has to be proven that damage to goodwill and reputation has occurred through deception by the respondent.

With regard to protecting indigenous cultural knowledge, Janke concluded and made the following recommendations on the above legislative systems: Indigenous people need to be informed about existing intellectual property laws and how these affects their cultural obligations; indigenous people need to be informed about how existing intellectual property laws might benefit their needs regarding the use and control of their indigenous cultural heritage; and there is a need for greater protection for indigenous heritage, particularly in relation to communal rights, and the protection of sacred/secret material.

4.4.3 Possible solutions

Janke found that there was a great need for measures which will redress the shortfall in the Australian legal systems, especially with regard to its "ability to provide sufficient recognition, protection, remedies and access to the right to cultural heritage" (Janke 1998: 109). The document looked at a range of possible strategies which would grant the protection demanded by indigenous communities, including*:* changing existing legislation; enabling specific legislation-administrative responses; developing policies, protocols and codes of ethics; and education and awareness strategies.

Janke established that indigenous laws that deal with indigenous cultural and intellectual property already exist, and have existed and developed over thousands of years (see part one: section 9) and the feedback of the respondents showed that indigenous communities in Australia live(d) by a set of rules and laws that governed how they could use, deal and disseminate indigenous cultural knowledge. Max Stuart, Deputy Chair of the Central Land Council and member of the Indigenous Reference Group, noted as well that indigenous people already live by codes. Indigenous Reference Groups were given questionnaires by Janke and her research group. The discussion paper deals with some of these responses. So with regards to the connection between indigenous law and the culture it explained that:

> The rights given to a particular group of indigenous people are given to them and no other group. Other indigenous people understand this. For instance, the law is different between Kimberley Mob and Tiwi Mob and Central Australian Mob, but we can understand and respect all laws. The white law has to respect indigenous law. Parliament can change tomorrow - our laws never change (Janke 1998: 110).

The Australian legal system is not in line with indigenous laws and as such there is a great need for it to change and recognise indigenous laws: "Any new law should respect, adapt to, and be responsive to indigenous laws" (Janke 1998: 110). This position was emphasised and reinforced by a statement by members of the Association of Northern and Kimberley Artists of Australia at the Indigenous Reference Group meeting:

> The paintings and patterns come from the land. Dancing comes from the land. Names come from the land. The traditional ochres come from the land. Stories come from the land. Sacred ceremonies come from the land. The land belongs to our ancestors and now the clans and the tribes. All of this was looked after by the Yolngu (all Aborigines). Today we are the clans and tribes. We were given it by our ancestors. Each culture, clan and tribe is different. Each clan/tribe gets their own culture from their country. We Arnhemlanders have two moieties - Yirritja and Dhuwa. Our skin names come from our moieties. Our languages are spoken differently. Belonging means responsibility - that is why we have ceremony to show it comes from the land. Your new laws will not change our culture or the meaning of country but your new law has to respect and protect our law. We can't change and won't change. We respect your law. We know your law. You can respect and protect our law. You should respect our law as we respect your law (Max Stuart, Indigenous Reference Group Meeting, 15-16 September 1997, Sydney).
>
> Your copyright law only lasts 50 years after the artist's death. For rock paintings thousands of years old, in your law you can copy this. In our law, it clearly belongs to clans, tribes and families. Your law must be made stronger. What about writing of our stories. If a story maybe thousands of years old is written or recorded, the writer holds the copyright. In our law the story is ours. Your law must be made stronger to protect our stories. Filming of our stories or open ceremony. Our stories and ceremonies are very very old. If a filmmaker documents the dance or story they own the image. In our law that belongs to us. Your law must be made stronger. You can change your law, but our law cannot change (Janke 1998: 111).

It should be noted that indigenous law is not static, it is dynamic and it changes and moves to accommodate cultural shifts and changes, as distinguished from mainstream law, which is far more susceptible to political and economic pressures. As Janke further explains: "What is meant by the statement that our law cannot change is that the underlying rule of indigenous law in serving and maintaining the culture cannot change. In indigenous law, cultural issues are paramount" (Janke 1998: 111).

Indigenous people must be empowered to protect, preserve and enhance their cultures. For as Max Stuart noted, understanding and respect is linked to maintaining the significance of culture: "Fire has to burn all the time - keep it in the mind - we have to hold it together –don't let it blow

away - our land is our title - Tiwi Islands are title for Tiwi Islanders - we don't need a paper"(Janke 1998: 111).

Much of the debate with regard to reforming the law until the last century assumed the need to introduce some specific legislation to effect indigenous rights. Janke notes that:

> For this reason, many submissions for reform have focused on this option. In many cases, the enactment of specific legislation was favoured to amending existing laws in a piecemeal fashion. However, it should be noted that if specific legislation were enacted, existing Australian laws would have to be amended to harmonise with indigenous law. There needs to be a more flexible interface between Australian law and indigenous law. This first requires Australian lawmakers to recognise and respect an indigenous system of law (Janke 1998: 111).

Another issue of concern looks at whether non-indigenous laws should be the vehicle for recognising indigenous cultural and intellectual property rights. In the Indigenous Reference Group, Liz McNiven noted:

> The Government can easily take away legislative rights. Further, many Indigenous people expressed reservations about the Government s commitment to enact specific legislation. Hence, while the adoption of specific legislation is favoured, the recommendations also aim to enable indigenous people to assert their rights within the current framework as best as possible, with a view to future legal reforms after extensive consultation with indigenous people (Janke 1998: 111).

Respect and understanding of culture entails recognising that there are two parallel and equal systems of law, that is the indigenous and the non-indigenous. Existing non-indigenous Australian laws have to be modified and reformed to provide recognition for parallel existence of indigenous cultural and intellectual property laws. As Janke expands:

> Reform should respect both indigenous and non-indigenous laws by recognising the coexistence of laws. There must be due regard to Indigenous Cultural and Intellectual Property Rights within the Australian legal and policy framework. This means not only recognising the uniqueness of indigenous culture but also respecting it and understanding that indigenous knowledge and Western knowledge are two parallel and equal systems of innovation (1998: 111).

Each legal system must be given proper recognition and be allowed to function in society:

> Furthermore, it must be recognised that indigenous customary law and the existing Australian legal system are two parallel systems of law, both of which need to be given proper weight and recognition. It is fundamental that any reforms should allow indigenous people self-determination at all levels, including the way reforms of the Australian legal system, if any, should happen (Janke 1998: 111).

The aim and thrust is therefore to establish an indigenous solution to the problem so that the issues can "be dealt with in a culturally appropriate way and also empower indigenous decision makers" (Janke 1998: 111), that is, one which exists and is recognised by the indigenous communities. In this way, they will know that their law exists and is recognised and they can always refer to something, which they have used for centuries, rather than relying on something which is alien and foreign.

4.4.3.1 Amendments to the current Australian legal system

In formulating the amendments in the current Australian legal system the following major observations were noted by Janke: that a body of indigenous law exists in Australia and that the current Australian legal system provides limited protection for indigenous cultural and intellectual property rights; that the indigenous peoples have a responsibility for their culture, and measures should be put in place to empower indigenous people and that respect and understanding of culture means that Australia has to recognise that there are two parallel and equal systems of law.

It is essential that any change to the law or major policy initiatives ought to allow indigenous people self-determination all levels.

4.4.3.2 Key conclusions of the ATSIC discussion paper

After a careful examination of the current Australian intellectual property law, the discussion paper came to the conclusion that the laws were not adequate in protecting indigenous communities and their interests were not even factored into these laws. The indigenous communities had laws, which protected, promoted and enhanced their own cultural heritage and background. These however, were not taken into consideration - a similar case with the South African law. The laws were western paradigms, very inappropriate for indigenous ownership. The document tried to mainstream the interest of indigenous communities in the current Australian intellectual property laws by proposing changes and amendments that could account for the indigenous perspective.

I should note that with all these suggestions nothing much as changed in Australia with regard to indigenous rights protection (Rimmer 2008; Janke 2008:24). The Australian experience with regard to protection has been a mixed one with success and failures. For instance "von Doussa J of the Federal Court of Australia has shown judicial innovation in a number of cases – most notably, the "Carpets" case, and the "Bulun Bulun" decision. However, there have been limits to the extent of judicial innovation in Australia – as illustrated by the refusal of the High Court of Australia to recognise the linkage between native title rights and traditional knowledge in the case of *Ward* v *Western Australia*" (Rimmer 2008).

Australian case law has established that greater need for drastic legislative restructuring of laws with regard to indigenous knowledge. As Rimmer pointed out:

> Unfortunately, the Australian Parliament has thus far failed to heed the recommendations of Terri Janke's landmark report, *Our Culture, Our Future*. The old Howard Conservative Government showed little interest in the protection of traditional knowledge. A Federal bill on the recognition of communal moral rights in respect of copyright works created by indigenous communities has not been implemented. Thus far, there have only been

> piecemeal reforms. The authenticity trade marks scheme, which was set up in 2000, has collapsed. The Federal access to genetic resources scheme does make reference to native title rights; but only provides limited remedies for non-compliance with the regime. The Queensland access to genetic resources regime fails to adequately address the issue of the protection of traditional knowledge (2008).

The new Labour Federal Government headed by Mr Kevin Rudd has not yet set its priorities with regards to indigenous protection. In a recent lecture at AIATSIS, Janke also concluded by stating that: "Very little of the measures were considered, not even a draft of a *sui generis* law…. Most of the initiatives have involved the development of protocols, and the use of contracts by indigenous people, and supporting industry organisations. There was however, the proposal to amend the Copyright Act to include indigenous communal moral rights" (Janke 2008: 24-25).

4.4.3.3 Application to South Africa

The discussion paper, however, teaches some key lessons which South Africa can learn from this process. The most important is the recommendation that the Australian intellectual property law be amended to include and factor-in indigenous interests. The suggested amendments to the Copyright Act are important: "The new act should recognise indigenous cultural ownership in visual arts, craft, literary, music, dramatic works and indigenous knowledge systems; and provide rights in that material that allow Indigenous people the rights of prior consent and to negotiate rights for suitable use" (Janke 1998: 112).

Similarly, the suggested amendments to the Australia Design Act, which say that: "There must be protection for indigenous communities who wish to commercially exploit their designs (if appropriate under indigenous customary laws). The Designs Act and its registration process should allow for registration of group interests so that communal ownership of cultural designs is recognised and enforced. Allowing trusts and other group entities to become the registered proprietors of a registered design might do this. Rights granted under the Designs Act should not interfere with the traditional and customary use of indigenous cultural material" (Janke 1998: 113). This should also be considered when re-looking at the Design Act in South Africa.

Furthermore, the following considerations made by Janke ought to be given to amending the Patents Acts in South Africa: allowing indigenous communities to register their interests or to patent indigenous knowledge despite the fact that there has been prior publication, and to allow secrecy of these processes, so that people are not forced to disclose details of the knowledge; and whether the knowledge should be available for public use when the patent expires.

Finally, for Trade Marks Act the following should be considered: “Indigenous and non-indigenous persons and/or companies should be able to obtain registration of marks containing or incorporating indigenous designs, sounds, words or symbols but only with the prior informed consent of the particular indigenous community and provided further that other conditions regarding cultural appropriateness are met (Janke 2003: 44). So prior informed consent from indigenous communities should be sought before registration of a trademark is granted.

4.5 Conclusions

In this chapter, I looked at the divergent approaches in protecting the intellectual and cultural rights of indigenous communities in the United States of America and Australia. I closely examined the legal regimes of the United States by looking at the recognition of the legal status of the indigenous communities in the United States (NAGPRA) and the recognition of the legal status of the indigenous communities in Australia. NAGPRA has achieved and covered a big gap in United States legislation, protecting the cultural heritage of indigenous communities.

South African intellectual property law development can learn a great deal from the Australian debate which clearly emphasises the importance of indigenous community perspectives, input and approval. In this way, the rights of the communities are not compromised.

I must acknowledge that there are problems with and criticisms of both systems. There have been problems both in US and Australia with the practical implementation of these laws. In both cases there has been strong criticism even from within the indigenous communities. Native Americans do not feel that NAGPRA has fully resolved their concerns. It fails to deal with some intellectual property issues of the kind raised, for example, in the Kennewick Man case.

The issue of contested cultures and orientalism plays a significant role in the way indigenous intellectual property rights have been treated in the USA and Australia. The fundamental problem is how to protect indigenous cultures under a system of intellectual property laws. Coombe highlighted the fact that the cultural and lived experiences of indigenous communities are part of their knowledge systems and these systems, if brought into the mainstream, have direct contribution to the legal reform debates. These debates will, in turn, inform new hegemonies. In the case of NAGPRA, it is not a perfect system, for example it is vague in some instances and can cause huge problems as we saw with the Kennewick Man case. The important contribution is the fact that the cultural and lived experiences of the Native Americans fundamentally informed the formulation of NAGPRA. It was legislation enacted for the protection of Native American ancestral remains.

Similarly, the issue of contested cultures amongst the Aboriginal peoples of Australia is the key determining argument for Janke's discussion paper. Janke asserts that indigenous culture and its protection laws have existed for a long time. The current intellectual property laws in Australia must acknowledge the fact that there are two legal systems which have existed for a long time. The indigenous system has existed at the expense of the non-indigenous. This has led to much misappropriation and exploitation of indigenous knowledge. For any reform to be effective, it should start by addressing the needs of indigenous communities. With regard to Said's orientalism, the two examples of NAGPRA and Janke's documents give a clear overview of the relationship between indigenous communities and non-indigenous communities. The basic thrust is that the occident controls, manages and has power over the orient. With NAGPRA, the case is lesser as aspects have been protected. With Australia the battle still continues as the intellectual property laws of Australia have little or not regard for indigenous input.

When considering NAGPRA, the important point is that it is seen as affirming the religious freedom, human rights and treatment of the deceased for all Native Americans. The concept of equal treatment is important when dealing with changes in the intellectual property laws. Whatever changes are enacted should be done in such a way that the indigenous knowledge systems are brought into the main stream of knowledge. This becomes a way of enforcing rights within the

indigenous communities and furthermore becomes a political retribution since most of the indigenous communities have suffered a great deal under the colonial systems.

If South Africa is to learn from NAGPRA it should, however, proceed with caution: given the positive aspect, there are also some drawbacks. For instance, NAGPRA was framed to address a specific problem, which is that remains of Native Americans were not respected and deceased relatives were exhumed and sold to all kinds of people. As Kreps notes: "NAGPRA establishes a national standard and procedure for the return of this property to Native owners" (2003:86). For South Africa, this is a bit too specific. In South Africa we need a system which will address protection from a holistic point of view. There is a need to use this type of protection to protect all spheres of indigenous life in South Africa. What we can learn from NAGPRA is the fact that indigenous cultural experiences and needs were taken seriously and a new law was enacted which protected the Native American. The lesson for us is that we can also legislate to protect our own indigenous cultural values. If a holistic perspective is followed it will be a way of looking at the change as a positive way of enforcing property rights of the Indigenous communities in South Africa. As stated earlier it could also be a form of political retribution due to the negative settler and indigenous community relationships in South Africa.

Another problem with NAGPRA is that it is a very complex and sometimes vague piece of legislation and in some instances it is not easy to understand. These complexities are recognised by the Native Americans and academics, federal agencies and other relevant parties. Also, when any society deals with the dead, it usually deals with them at a spiritual level. But, with NAGPRA, the issues of dead people are institutionalised by federal legislation and furthermore, it places ethnicity and religious belief on an equal footing with science, with regard to proof of ancestry lineage.

For Australia, the important point to consider is that indigenous laws have existed which protect intellectual property rights. The western legal concepts should take these seriously. However, the major drawback with this has been that very few if any of these recommendations were ever legislated in Australia. There has not been an application of these suggestions and so the views of Janke and the discussion paper still exist largely on a theoretical level. The implication of the

recognition that there are two parallel and equal systems of law in Australia has yet to be seen and drawn out (Janke 2008).

For the South Africa intellectual property regime, we should see if any of the above mentioned concerns are dealt with adequately. It is important to note that the same problem of not considering the cultural and lived experiences of indigenous communities is also relevant here.

In Chapter five I shall discuss the intellectual property laws of South Africa.

CHAPTER FIVE

INTELLECTUAL PROPERTY LAWS IN SOUTH AFRICA

5.1 Introduction

South Africa finds itself in a very interesting situation in the global intellectual property arena in the sense that we have a First World / Third World dichotomy within our borders (Wolson 2001: 1; Högdahl 2006: 88). On the one hand South Africa formulates policy which aims to grow the established economy, that is, through exports and foreign investment. On the other hand, South Africa must improve the basic living conditions of the poorest citizens and eliminate the inequalities which were brought about by the legacy of apartheid and colonialism (Wolson 2001: 2). While these objectives align with each other and are not mutually exclusive they do call for differing policy interventions which sit very uncomfortably alongside one another. This is especially true when we are dealing with areas such as trade, intellectual property, biological resources and indigenous knowledge systems. South Africa has grappled with the management of these issues since 1994. And since then it has come up with policies, Bills and Acts which are leading the country in the right direction (Wolson 2001: 2).

This chapter looks at key aspects of the country's intellectual property framework, legislation, current developments with regards to indigenous knowledge systems policy, that is, the Department of Trade and Industry (DTI) proposed policy framework for the Protection of Indigenous Knowledge through the Intellectual Property System (2007) and the Intellectual Property Amendment Bill (2007) and other forms of protection closely aligned with indigenous knowledge.

5.2. South Africa's intellectual property system

South Africa has a well established and reputable intellectual property framework in place (Wolson 2004: 148; DST IKS Policy 2004: 12). The legal statutes are guided mainly by equivalent European

and British intellectual property rights Convention legislation. Moreover the Intellectual Property Laws Amendment Act, 1997 has made most of these statutes compliant with the TRIPS Agreement. Unfortunately, few changes of substance were implemented with regard to the protection of indigenous knowledge systems and biological diversity (World Bank 2006: 2).

In 2005, the Patents Amendment Act, No. 20 of 2005 was enacted by the South African Parliament, which required an applicant for a patent to furnish information relating to any role played by an indigenous biological resource, a genetic resource or traditional knowledge or use in an invention.

Furthermore, in 2007 intellectual property laws were further revised with the Intellectual Property Laws Amendment Bill, 2007. This Bill makes some substantial changes and provides *inter-alia*:

> that the law of trade marks/geographical indications may be able to provide protection of certain names/features associated with traditional knowledge, e.g. Rooibos and Honey bush tea;
>
> that a National Council consisting of experts on traditional knowledge must advise the Minister and the Registrar of intellectual property on traditional intellectual property (TIP) rights;
>
> that communities may form business enterprises such as collecting societies in order to administer their traditional intellectual property, as well as commercializing such TIP;
>
> that such business enterprises may enter into licensing agreements (commercialization of TIP) with third parties;
>
> that other rights in the copyright regime should preferably also be subjected to 'collective management of copyright regime' (DTI General Notice No 310: 2008).

I shall look at the proposed bill and policy in the next chapter. For now, I will consider the current situation in South Africa.

5.2.1 The Current intellectual property law implementation and enforcement

The courts are usually considered to deal competently with intellectual property litigation: "Litigation is instituted in the Court of the Commissioner of Patents, which is part of the High Court" (Wolson 2001: 3). In most cases, it is believed that the courts overly protect the owners of patents at the expense of the public good. For instance, in 1998, thirty nine drug companies had sued South Africa to prevent it from importing cheaper anti-AIDS drugs and other medicines. The courts overly protected them for over three years until 2001 when the companies dropped their legal effort due to mounting public pressure (*The New York Times*, 20 April, 2001).

The intellectual property protected by intellectual property law includes patents, industrial designs, trademarks, trade secrets, moral rights and copyright. In this thesis, as stated earlier I specifically focus on the Patents Act 57 of 1978, Copyright Act 98 of 1978, Trademark Act 194 of 1993 and the Designs Act 195 of 1993. It should be noted that intellectual property law confers rights on individuals and groups whilst Patents, Copyrights, Trade Marks and Designs are a form of intellectual property.

South Africa is party to various international agreements and conventions relating to the protection of intellectual property (Bainbridge 2002: 16), including Patents, Trademarks, Designs and Copyright. Being a party to the World Trade Organisation (WTO) and the TRIPS Agreement. South Africa is obliged to comply with the minimum standards set by TRIPS for the protection of intellectual property.

5.2.1.1 Patents Act 57 of 1978

Section 25 (1) of the Patents Act states that: "A patent may, subject to the provisions of this section, be granted for any new invention which involves an inventive step and which is capable of being used or applied in trade or industry or agriculture".

Therefore a patent is a negative right, as it excludes other people from using the patent in whatever way, either by selling, making, distributing or using the invention without the permission of the inventor and for a fixed period only (Stern 2006: 89). TRIPS and the Patents Act stipulate that the

protection will run for 20 years minimum from filing date. In South Africa, “The duration of a patent shall, unless otherwise provided in this Act, be 20 years from the date of application…, subject to payment of the prescribed renewal fees by the patentee concerned or an agent’ (Section 46 (1)). Society in return requires that the patent holder or applicant discloses the particular invention in a way that enables others to put the invention into practice, when the patent period has expired. Society hopes that this will increase the body of knowledge which can be used to carry out further research. An invention can be patented if it satisfies the following three requirements: it must be new; it must involve an inventive step that is not obvious to one skilled in the field, and it must be industrially applicable (Section 25).

Therefore: “a patent is a grant of a property right to the inventor of an invention by the government acting through the Patent Office…. A patent, like any other form of property, can be sold, bought, rented or hired” (Stern 2006: 87). However, it is important to note that: “Patents are territorial rights and a South African patent will only give the holder rights within South Africa” (Stern 2006: 87).

In South African patent law for any new invention to be registered and patented it must meet the necessary intrinsic and extrinsic requirements, important requirements which are found in section 25 (1) of the Patents Acts (Stern 2006: 89).

5.2.1.1.1 Intrinsic requirement

The intrinsic requirement is important for patenting, as Stern says: “The intrinsic requirement is that the invention must be a patentable invention *per se”* (Hanabusa 1991: 105; Westerlund 2002: 44; Stern 2006: 89). Whereas “the repealed Act of 1952 provided that an invention is any “art (whether producing a physical effect or not), process, machine, manufacture or composition of matter” (Stern 2006: 89), the Patents Act of 1978 does not define what is an invention, only what is not. Hence, anything which does not form part of the list of non-inventions in the Act is an invention. Patentable inventions do, however, include the following: “Machines, devices, tools, apparatus, electrical circuitry; chemical compounds and compositions including pharmaceutical compositions and food stuff; methods of processing of manufacture, e.g. a method of refining gold or of making plastic bottles; and methods of working, that is, a method of cleaning and transporting” (Stern 2006: 89).

For the purpose of the Patents Act, the non-inventions are listed in section 25 (2) as:

> discovery;
> a scientific theory;
> a mathematical method;
> a literary dramatic, musical or artistic work or any other aesthetic creation;
> a scheme, rule or method for performing a mental act, playing a game or doing business;
> a programme for a computer or
> presentation of information.

5.2.1.1.2 Extrinsic requirements

The standards which an invention must meet in order to be patentable are: “Novelty; Non-obviousness or inventiveness; capable of being used or applied in trade or industry or agriculture” (Stern 2006: 91).

1) Novelty

The basic concept of the patent law is that an invention must be new immediately before its priority date in order to be the subject of a valid patent. This requirement: “[c]an be traced back to the basic theory of the patent system, which is that a person is granted a limited monopoly in return for disclosing the invention to the public. If the invention is already in the public domain, i.e., is not new, then this *quid pro quo* no longer holds” (Stern 2006: 91).

The definition of novelty is different in respective countries and in South Africa, the definition of novelty has not always been the same (Stern 2006).

Furthermore, with regard to novelty, section 25 (5) & (6) states that:

> An invention shall be deemed to be new if it does not form part of the state of the art immediately before the priority date of that invention. And the state of the art shall comprise all matter (whether a product, a process, information about either, or anything

> else) which has been made available to the public (whether in the Republic or elsewhere) by written or oral description, by use or in any other way.

Prior art could be anything, for example, oral disclosures:

> such as a lecture or presentation; written publications such as books, magazines, earlier filed published patents, scientific papers; television or radio programmes; prior use by carrying out a method, or manufacture or sale of an article. The disclosure must, however, have been made to the public. Thus if the disclosure is to be found in a written document which has been kept confidential, this would not count as prior art (Stern 2006: 92).

For example the case of the Pelagonium Patent challenge against Dr Willmar Schwabe, where one of the main grounds for revoking the patent was that the traditional healers of Alice community had been using Pelargonium for a very long time to cure a wide spectrum of viral, bacterial infections and inflammations. In the 1980s, with the AIDS pandemic they used the therapy as well. This constitutes highly relevant prior art as the knowledge is part of the traditional intellectual property of the Alice community and for a sometime has been in the South African public domain and cannot be monopolised by an sole company (ACB 2010).

Disclosure also can be done anywhere in the world. “The standard of novelty is known as absolute novelty” (Stern 2006: 62; de Carvalho 2005: 64). In South Africa, the South African patent applications with earlier priority dates than the priority date of the patent application in which the invention is claimed, also count as prior art, for the purposes of novelty, even though they are not publicly available at the priority date. The underlying principle is to prevent double patenting (Stern 2006). In terms of Section 25 (8), if an invention was used secretly and on a commercial scale within the South African border, it may also be deemed to form part of the prior art. For instance, an agricultural process carried out in secrecy and on some commercial scale can later be patented.

In order to determine whether a piece being claimed as new destroys the novelty of such an invention, there is a three step process to be followed:

> First: the claims of the patent have to be construed (see Gentiruco AG v Firestone (Pty) Ltd);
> Second: the piece of prior art has to be construed;
> Third: the claims have to be compared with the piece of prior art (Stern 2006: 92).

And then if the claims are the same then the lack of novelty is established.

2) Non-obviousness or inventiveness or inventive step

The above terms are synonymous and they are used interchangeably. Section 25 (10) of the Patents Act provides that: "An invention shall be deemed to involve an inventive step if it is not obvious to a person skilled in the art, having regard to any matter which forms, immediately before the priority dates of the invention, part of the state of the art, by virtue only of subsec[tion] 6 (and disregarding subsection 7 & 8)".

Obviousness must be notable from lack of uniqueness and is well thought-out after it has been found that the claims are original as Stern quotes Burrell:

> The ground for obviousness is the ground of revocation most frequently invoked in practice in attacks of the validity of patents. It is a ground in which, more than in any other, the circumstances and facts surrounding the particular invention at times far outweigh abstract principles and definitions enunciated by courts of law under different sets of facts… it is difficult, if not well-nigh impossible, to formulate a satisfactory general principle as to how a court is to arrive at an eventual decision on whether or not an invention is obvious, for everything must depend on the facts of the particular case" (Burrell 1999: 549; Stern 2006: 93).

Ensign Bickford 1999 (1) SA 70 (SCA) decision laid down the following procedure for determining of obviousness: "In essence the principles to be applied are the following, after first determining who the person skilled in the art is and what the state of the art was at the priority date:

a) What is the inventive step?

b) In what respect does the step go beyond or differ from the state of the art at the priority date?

c) Having regard to such development or difference, would the taking of the step be obvious to the skilled person?" (Stern 2006: 94).

3) Capable of being used or applied in trade or industry or agriculture

If an invention is to be patented it must be capable of being utilised or used in trade or industry or agriculture as Stern expands:

> Trade can be taken to include all activities in society where services or commodities of any kind are exchanged for money or other goods of value. Industry can be taken to be a particular branch of productive labour. Agriculture covers the science of farming, whether animals or crops, and in its broad sense also includes forestry, gardening and horticulture. It is thus difficult to conceive of an invention which is not capable of being used or applied in trade or industry or agriculture, except for medical methods of treatment that are specifically excluded in the Patents Act (2006: 94).

5.2.1.1.3 Procedure

The following legal persons can apply for a patent: "An application for a patent in respect of an invention may be made by the inventor or by any other person acquiring from him the right to apply or by both such inventor and such other person. (2) In the absence of an agreement to the contrary, joint inventors may apply for a patent in equal undivided shares (Section 27 [1-2]) and the legal representative of a deceased person who was an inventor. It is only natural persons that can be inventors" but assignees may also be legal or juristic persons such as companies (Stern 2006: 95).

1) Effect of the patent

Section 45 (1) states that:

> The effect of a patent shall be to grant to the patentee in the Republic, subject to the provisions of this Act, for the duration of the patent, the right to exclude other persons from making, using, exercising, disposing or offering to dispose of, or importing the invention, so

> that he or she shall have and enjoy the whole profit and advantage accruing by reason of the invention.

Furthermore:

> The right granted is a negative right, that is, the right to exclude others from doing various acts, rather than a positive right granting the patentee the right to work the invention. There is thus no obligation on the patentee to work the invention, except for the compulsory licence provision provided for in Section 56 of the Act. The positive side, however, is that the patentee shall have the whole profit and advantage accruing by reason of the invention (Stern 2006: 95).

2) Revocation of patents

Section 61 sets out the grounds for application for revocation of patents. Any person may at any time apply in the prescribed manner for the revocation of a patent on any of the grounds mentioned in the section.

The defendant in an infringement action may also counterclaim for the revocation of the patent, that is, rely on validity of the patent as a defence.

I must also point out that Section 30 of the Act limits the rights of the patent holder / inventor. This is evident in subsection (4) which states: "Any person other than the inventor making or joining in an application for a patent shall in the prescribed manner furnish such proof of his title or authority to apply for a patent as may be prescribed".

I shall now examine the Copyright Act.

5.2.1.2 Copyright

Dean defines Copyright in broad terms as:

> …the exclusive rights in relation to work embodying intellectual content (i.e. the product of the intellect) to do or to authorize others to do certain acts in relation to that work, which acts

> represent in the case of each type of work the manner in which that work can be exploited for personal gain or profit. The right to control the use of a work in all the manners in which it can be exploited for personal gain or profit is an essential right under law of copyright and that law does not achieve its objective unless such essential right is granted to the full. This is the function and purpose of the law of copyright (Dean 2001: 1-1).

For Visser (1991 THRHR 813), Copyright law is a bundle of rights and entitlements, which rights are set out in the Copyright Act (Stern 2006: 232). In other words, copyright prevents unauthorised reproduction, recording, public performance, adaptation and translation, and allows for the collection of royalties for authorised use. Unlike patents, copyright protection does not require registration or other formalities although this was not always the case. Copyright is granted for a period of either 50 years after the death of the author or from date of publication (See Section 3 [2]).

5.2.1.2.1 Various approaches to the nature of copyright

The approaches to the nature of copyright include personality rights theories, individual versus communal ownership, natural law and the economic theory, all of which try to justify the need for copyright in our society as I outlined earlier.

1) The ownership approach

This theory states that: “A copyright in immaterial property is analogous to ownership of corporeal property. But is copyright the same as ownership? The courts in the past perceived it as such, talking of ownership of copyright, treating it as a ‘species of the real right of ownership’(Visser 1991 THRHR 813), failing to distinguish between the substantive differences between copyright and ownership” (Stern 2006: 232). For example, in Video Parktown North v Paramount Pictures 1986 (2) SA 623 T p. 631 G-632B. In these cases ownership and copyright were equated: “The proprietary interest in that object of knowledge is the ownership of it and is called copyright. It might just as well be called ‘ownership’, but we have called it by another name, reserving ‘ownership’ for the proprietary interest in corporeal things, by way of semantic but not legal distinction” (Stern 2006: 232).

This approach is too superficial. Although there might be a strong likeness between ownership and copyright, it remains a mere equivalence and cannot be equated for the following reasons:

> Only corporeal property can be owned; copyright is immaterial property; the right to corporeal property is indefinite in duration; the right to copyright is limited in duration; legal remedies are different as to the rights accorded to each, for example, possession and repossession. Also compulsory licences are rarely available to corporeal property, for instance, compulsory servitude, whereas they are not unusual in copyright (see Frank & Hirsch v Roopenand 1991 (3) SA 240), (Stern 2006: 233).

2) Personality right approach.

This concept was developed by Otto Von Gierke: "This theory recognised the close connection between author and material created by him, that is the work is an extension of the author's personality and cannot be divorced from its creator" (Von Gierke 1895: 702; Stern 2006: 233). This protection is incorporated in Section 20 (1), which protects the moral rights of the author:

> Notwithstanding the transfer of the copyright in a literary, musical or artistic work, in a cinematograph film or in a computer program, the author shall have the right to claim authorship of the work, subject to the provisions of this Act, and to object to any distortion, mutilation or other modification of the work where such action is or would be prejudicial to the honour or reputation of the author: Provided that an author who authorizes the use of his work in a cinematograph film or a television broadcast or an author of a computer program or a work associated with a computer program may not prevent or object to modifications that are absolutely necessary on technical grounds or for the purpose of commercial exploitation of the work.

As Hughes pointed out earlier: "Property rights, it was observed, are a means to protect the personality interest or 'personhood' of individuals; this seemed especially true with intellectual property rights that are draped over creations of the human mind". Along these lines, personhood proponents could understandably be found in the vanguard of 'moral rights' for authors, 'reverse shop rights' for inventors, and 'rights of publicity' for everyone.

3) Immaterial property right approach

Joseph Kohler developed the immaterial property approach stating that "immaterial property rights are distinguished from personality rights, that is, the material has a separate existence from the author, and has a commercial value in which the author has a right" (Stern 2006: 233). As Mostert (1987: 495) explains: "The doctrine of intellectual property is predicated on the principle that the creator of a work of intellect has an absolute and exclusive right to it, just as the owner of a tangible thing would have unfettered dominion to it".

5.2.1.2.2 Balance of interests

The rights to intellectual property are to be balanced between the interests of the individuals (the author) and those of the public. Two theories attempt to explain this underlying rationale in copyright (see chapter two): The Economic theory tries to balance to balance the welfare of the author and public interest. As we saw earlier, the economic reasons provide a qualified monopoly for the creator for a limited period so that he/she can "gather all the commercial fruits of his works for a limited period" (2001: 1-1). Then secondly, for the Natural law theory Stern (2006: 234) notes that the theory: "places greater emphasis on the interest of the individual, presupposing that the author is entitled to all the fruits of his labour emphasising individual rights above society's rights" (Mostert 1987: 495; D'Amato 1997: 165).

5.2.1.2.3 South African law of copyright

South Africa Copyright law adopts characteristics of the two theories, in turn promoting social welfare and the individual's right in his labour.

Social benefits could be considered as being the following:

No protection exists for ideas (social benefit);

No infringement occurs in respect of non-substantial parts of a work, that is, infringement is determined by quality rather than quantity;

Provision is made for legitimate use of copyright work (S12-19B); and
Copyright is limited in duration (S3)
(Stern 2006: 234).

Individual benefits could be considered as being the following:

Recognition of exploitation rights;
Recognition of moral rights (S20);
The holder (as opposed to author) has rights and remedies, for example, notional royalties and additional damages (S9A. S24);
Unlawful competition may be available as a means of protection;
Criminal remedies are available where the copyright is commercialised by the infringer (S27) (Stern 2006: 234).

5.2.1.2.4 Sources of South African law of copyright and related legislation

The Copyright Act No 98 of 1978

South Africa is a member of the Berne Convention (1896) relating to copyright and, as such, extends its copyright protection to any work eligible for copyright protection emanating from a convention country designated as such by proclamation in the South African Government Gazette. The Berne Convention sets out minimum standards of copyright protection, which members must incorporate in their national legislation and defines the protection to be extended by member states to works of other members.

The World Trade Organisation (WTO) agreement on TRIPS gives essence to the Berne Convention in the sense that it enforces these protection laws across borders internationally. It covers the minimum standard and enforcement of copyright.

The Constitution of the Republic of South Africa Act No 108 of 1996. The Constitution does not make any specific reference to intellectual property, as a fundamental human right. This was debated at the time of drafting but the Constitutional Court did not agree

> that intellectual property is such a right. It is, though, generally believed that intellectual property is protected under the right to property. In the United States, intellectual property is accepted as a fundamental human right (Stern & Bhana 2006: 234).

5.2.1.2.5 Requirement for vesting of copyright

It must be established that what we are dealing with is a 'work.' As Dean notes:

> The subject matter in question must have sufficient substance to warrant being the subject of protection under the Act. In assessing whether subject matter warrants categorization as a 'work' one applies primarily an objective test but subjective consideration may also be taken into account. It is also permissible to have regard to the consequences which will flow from the categorisation of particular subject matter as work and the clothing of it with copyright protection. Subject matter must not be too commonplace otherwise its endowment with copyright will place undue restrictions on others.

Therefore in order for Copyright to exist:

> There must be a 'work';
> The 'work' must fall into a category set out in Section (1);
> The 'work' must be original – the result of independent layout, judgement and skill (no novelty is required in the case of copyright);
> The 'work' must exist in material form – ideas are not protected (Stern & Bhana 2006: 236).

1. What is a work?

In order to determine a work, it must "be objectively determined but subjective elements can be referred to for example effort and ingenuity. Regard maybe given to the consequence of protection. The notion of triviality or sufficient substance can be applied to a work. The kind of work it is will determine whether it is a work and that is the expectation of it. In addition, the work must not be commonplace and only the final version is considered to be a work "(Stern & Bhana 2006: 236).

A work may embody a number of other works, for example, a book may consist of sentences, each of which possesses Copyright. Furthermore, a work may consist of a single sentence or a paragraph, but must be able to stand on its own. Nevertheless, this is artificial and does not accord with the statements as to final works (Stern & Bhana 2006: 237).

2. Categories of work

These are listed in Section 2 (1) as being:

Literary;
musical;
artistic;
sound recording;
cinematograph films;
sound and television broadcasts;
programme-carrying signals;
published editions;
computer programs;.

3. *Requirements for subsistence of copyright*

For Copyright to subsist the following must be met: it must be a work (see Waylite Diaries cc v FNB 1995 (1) SA 465 A); it must fall within categories listed in S2 (1). The work must be original, the result of independent labour, judgement and skill (novelty is not a requirement); it must exist in material form – there is no protection for ideas (Dean 2001: 1-15, 1-16). But S2 (2) excludes broadcasts and programme-carrying signals from being reduced to material form; propriety is a requirement for subsistence of Copyright and the author must be a qualified person OR first publication must have been in South Africa or a country covered by the proclamation (Dean 2001: 1-20).

4. Duration and content of Copyright

Section 1 (5) (a) states:

> A work is deemed to have been published if copies of such work have been issued to the public with the consent of the copyright holder in sufficient quantities so as to reasonably meet the needs of the public, having regard to the nature of the work.

Throughout the duration of the copyright, the holder of the copyright is granted the right to use and exploit his or her copyright for a limited term after which it falls into the public domain. Copyright is a statutory right with its content determined by S41 (4): no copyright subsists other than by virtue of the Copyright Act. The Act grants the holder the exclusive right to do certain things, to authorise others to do things and to prevent others from doing certain things (restricted acts). The list of these restricted acts varies according to the category of works (see S6-11B). The duration for copyright is covered in Section 3 (2) (a):

> Literary or musical works or artistic works, other than photographs, the life of the author and fifty years from the end of the year in which the author dies: provided that if before the death of the author none of the following acts had been done in respect of such works or an adaptation thereof, namely the publication thereof ;the performance thereof in public; the offer for sale to the public of records thereof; the broadcasting thereof; the term of the copyright shall continue to subsist for a period of fifty years from the end of the year in which the first of the said acts is done.

In comparison with other intellectual property laws, the duration of copyright is longer.

5. The Author

Authorship is a factual question. It follows therefore that the maker or creator of the copyright work should be the first owner, as Dean says, “the person who is responsible for the creation of the material embodiment of the work” (2001: 1-23). The author can be a joint authorship or co-authorship (equality). This depends on a question of fact and degree of contribution (Dean 2001: 1-23). The author is also the first holder of the copyright but the first holder can be someone other than the author: see S21 (1) (b) (c) (d) (e) S21 (2) and S25 (2). If two authors independently create similar works copyright will vest in both works (Dean 2001: 1-24).

6. Infringement

S23 refers to direct and indirect infringement. Dean (2001: 1-37) states that: "a direct or primary infringement of copyright in a work takes places when a person, without the authority of the copyright owner, does or causes someone else to do any of the acts which are in respect of that work designated as restricted acts and therefore within the monopoly of the copyright owner". This is to say that infringement occurs where a person, not being the owner of the copyright, without the authority/permission/licence of the copyright holder, does or causes someone else to do any of the restricted acts in respects of that copyright work which the holder of the copyright has exclusive right to do or authorise, that is copy or exploit the work commercially. There is no infringement without copying (reproduction) and/or exploiting the works commercially (Dean 2001: 1-37).

On the other hand, indirect infringement (S23 (2)) involves an act connected with Copyright goods with the knowledge that the work is protected. Indirect infringement therefore:

> occurs when unauthorized acts are done in connection with direct infringement, for example selling or dealing in infringing copies, or permitting a place to be used for public performance of a protected work. The infringer who deals in the articles must have knowledge that making such articles would be an infringement if they were made in South Africa (making is direct infringement). It is not a defence to argue that he did not believe the articles to be infringements (Stern & Bhana 2006: 260).

In the case of infringement, there are remedies; these can be found under rights of the common law, moral right, unlawful competition, passing off and privacy. Section 28 deals with embargoing of infringing copies, stipulating that infringing copies should be destroyed so that they are not released back to the public.

I will now look at the Design Act no. 195 of 1993. There are some similarities with the patents and copyright law, as we shall see.

2.1.3 The Designs Act no. 195 of 1993

A registered design is granted to the owner of a design: "for the appearance of the whole or part of an article, by the Government acting through the Design Office" (Stern 2006: 198). The Designs Act provides for the registration of both aesthetic (shape of a perfume bottle or the pattern of a fabric) and functional designs (for instance, the shape of a screw or the profile of a curtain track). The former is defined by the Act as:

> any design applied to any article, whether for the pattern or the shape or the configuration or the ornamentation thereof, or for any two or more of those purposes, and by whatever means it is applied, having features which appeal to and are judged solely by the eye, irrespective of the aesthetic quality thereof.

The functional design is defined by the Act as:

> any design applied to any article, whether for the pattern or the shape or the configuration thereof, or for any two or more of those purposes, and by whatever means it is applied, having features which are necessitated by the function which the article to which the design is applied, is to perform, and includes an integrated circuit topography, a mask work and a series of mask works.

The basic theory of design postulates that good designs should be encouraged and promoted for:

> the overall benefit of the public and while designers should be protected against promiscuous taking by others of the fruits of their labour. The proprietor of a design is, on registration of his design at the Designs Office, given a monopoly on it for a fixed period, at the expiration of which it passes into the public domain. A design registration thus, like a patent, represents a *quid pro quo* (Stern 2006: 198).

The requirements for the registrability of a design are as follows:
For an Aesthetic Design:

> intrinsically an aesthetic design is applied to an article for the pattern, the shape, the configuration, the ornamentation or for any two or more of such purposes, and by

> whatever means it is applied, having features which appeal to and are judged solely by the eye, irrespective of the aesthetic quality thereof, and extrinsically an aesthetic must be new, original and for an article which is intended to be multiplied by an industrial process (Stern 2006: 199).

For a Functional Design:

> intrinsically a functional design is a design applied to an article whether for the pattern, the shape, the configuration, or for any two or more of such purposes, and by whatever means it is applied, having features which are necessitated by the function which the article to which the design is applied, is to perform, and includes: an integrated circuit topography, a mask work, a series of mask works and extrinsically a function design must be new, not commonplace and for an article which is intended to be multiplied by an industrial process(Stern 2006: 199).

5.2.1.3.1. Novelty

Section 14 (2) of the Act says:

> A design shall be deemed to be new if it is different from or if it does not form part of the state of the art immediately before the date of application for registration thereof or the release date thereof, whichever is the earlier.

As Stern (2006: 200) notes further: “The release date in relation to a design means the date on which the design was first made available to the public, whether in South Africa or elsewhere, with the consent of the proprietor or any predecessor in title. Where an applicant relies on a release date, the design must be filed within 6 months of the release date (two years for integrated circuit topography, mask work).” This basically means that there is a six-months grace period “after an article embodying a design is made available to the public anywhere, in which a valid South African design can be filed” (Stern 2006: 200).

With regard to the state of the art, these include everything that has been opened to the public. As Stern notes: “The state of art comprises all matter that has been made available to the public, whether in South Africa or elsewhere, by written description, by use or in any other way; and all matter contained in South African designs applications with an earlier date” (Stern 2006: 200).

5.2.1.3.2. Originality

There is no definition of originality in the Design Act. It probably means that it should be the product of the author’s own labours and should not be copied from other sources as in copyright.

5.2.1.3.3 Not Commonplace

There is no definition of this in the Designs Act and its meaning is unclear.

5.2.1.3.4. Articles must be intended to be multiplied by an industrial process

Unique or handcrafted designs are excluded, for example an original work of art or a statue.

5.2.1.3.5 Further requirements

Section 14 (5) states that: No –
a) feature of an article in so far as it is necessitated solely by the function which the article is intended to perform; or
b) method or principle of construction shall afford the registered proprietor of an aesthetic design any rights in terms of this Act in respect of such feature, method or principle. In other words, features dictated solely by its function cannot be protected by aesthetic designs.

Section 14 (6) provides that:

> In the case of an article which is in the nature of a spare part for a machine, vehicle or equipment, no feature of pattern, shape or configuration of such article shall afford the

registered proprietor of a functional design applied to any one of the articles in question, any rights in terms of this Act in respect of such features.

In other words, spare parts cannot be protected by way of functional designs.

5.2.1.3.6. Procedure

Who may apply for the design?

The proprietor of the design, which is defined as:

> The author of the design;
> Where the author of the design executes the work for another person, the other person for whom the work is so executed;
> Where a person, or his employee acting in the course of his employment, makes a design for another person in terms of an engagement, such other person;
> Where the ownership in the design has passed to any other person, such other person (Stern 2006: 201).

5.2.1.3.7. Term of a design

Section 22 of the Act states that the duration of the registration of an aesthetic design shall be fifteen years and a function design shall be ten years, from the date of registration thereof or from the release date, whichever date is earlier, subject to the payment of the prescribed renewal fees. "The annual fees are payable from the end of the third year from the date referred to above. If the requisite renewal fee is not paid, the design lapses" (Stern 2006: 201).

5.2.1.3.8. Effect of the design

The effect of a design is defined in section 20 (1) of the Design Act as follows:

> The effect of the registration of a design shall be to grant to the registered proprietor in the Republic, subject to the provisions of this Act, for the duration of the registration

> the right to exclude other persons from the making, importing, using or disposing of any article included in the class in which the design is registered and embodying the registered design or a design not substantially different from the registered design, so that he shall have and enjoy the whole profit and advantage accruing by reason of the registration.

As Stern further notes: “It is important to note that the right is limited to the right to exclude others from committing an act of infringement in relation to any article included in the class in which the design is registered. Thus, correct classification is very important. For instance, a design registered for a pattern of waves in Class 5 – textiles, will not be infringed by the same pattern of waves on writing paper, which fall in Class 19” (2006: 202).

Section 31 of the Act provides for revocation of the registration and section 34 for the grant of compulsory licences.

I will now look at the trade Marks Act, No 194 of 1993. Though similar to the above laws, it differs largely because it can be owned collectively and in perpetuity.

5.2.1.4 Trade Marks Act, 1993

A trademark is defined in Section 2 as:

> …a mark used or proposed to be used by a person in relation to goods or services for the purpose of distinguishing the goods or services in relation to which the mark is used or proposed to be used from the same kind of goods or services connected in the course of trade with any other person (similar to the UK definition of 1994).

The Act further defines a mark as any sign which can be represented graphically, including a device, name, signature, word, letter, numeral, shape, configuration, pattern, ornamentation, colour or container for goods or any combination of the above-mentioned items (Section 2).

Signs constitutes the form in which the mark appears: “They are marks, symbols or devices used to represent something or distinguish the thing into which it is put…and must be able to be represented graphically, that is, a visual representation - see Esquire v Roopenand 1986 2 SA SA 576 A (Stern 2006: 2-3).

Examples of signs include: writing, diagrams, linear figures, symbolic curves and graphs, photographs, drawings, paintings, engravings/etchings, and computer created representations and so on. Marks have a dual function distinguishing the different marks of a proprietor from each other, and the marks of one proprietor from another (Stern 2006: 3).

For a trademark to be registrable it must:

Fall within the definition of a trademark
Meet the requirement of Ss 9 which specifies marks that are registrable
Fall outside the bars of Ss 10 which lists marks that are not registrable (Stern 2006: 6).

Section 9 states that a mark shall only be registrable if it is “capable of distinguishing the goods/services of a person in whose name the mark is registered from the goods/services of another” (Stern 2006: 22). There is a two-fold test of determining the distinctiveness of mark: “a mark shall be considered capable of distinguishing only if at the date of application for its registration it is inherently capable of so distinguishing or it is so capable through prior use, this is a factual enquiry” (Stern 2006: 22). Furthermore, trademarks need no longer be ‘adapted to distinguish’ as stated in the 1963 Act: “The test is now one of inherent distinctive quality (see Cadbury (Pty) v Beacon Sweets & Chocolates (Pty) Ltd 2002 (2) SA 771 SCA; Weldmesh 1966 RPC 220; Estee Lauder 1993 3 SA 43 T and Beecham v Triomed 2003 (3) 639 SCA) (Stern 2006: 7). For unregistrable marks see Ss 10 (2)-(17) for a full discussion.

The following legal persons can register a trademark: individual, partnership, company, close corporation and other legal person, for example a trust. The person who applies to register a trademark must:

Have a *bona fide* right to register the trademark

Have originated, acquired or adopted the trademark and intend using it in the future, t hat is, have the exclusive right to use the mark. Origination is wider than intention and includes use (see Tie Rack plc v Tie Rack Stores 1989 (4) SA 427 and Victoria's Secret v Edgars 1994 (3) SA 739 A). The trade is purely a territorial concept. So if a mark is a copy of a foreign trade a person can adopt a foreign trademark. P. Lorillard v Rembrandt 1967 (4) SA 353 (Spring), established the 'first time principle' which stated that a mark is purely territorial and something more is required to block a South Africa application.

Have either used the mark or have the intention to use the mark

Joint proprietors are possible or are allowed; the applicant need not however be an individual: joint ownership is possible provided they each have contributed to the origination, adoption, acquisition and use of the mark, hence a joint venture (see Palmolive trade mark 1932 49 RPC).

Non trading companies can own trade marks

A company about to be formed is acceptable. However, the mark must be filed in another's name on behalf of the company and then assigned to the company once it is formed.

Where use is intended by a registered use only, this ought to be recorded and then such use is deemed use by the proprietor. Recordal is no longer essential (S38) (Stern: 2006: 18-19).

If there is no successful opposition to the trademark application, the application is registered for a period of ten years, calculated from the date when the application is filed. The trademark registration can be renewed indefinitely for further consecutive periods of ten years, subject to the

payment of the prescribed renewal fees. As the Act states: “The registration of a trade mark shall be for period of 10 years, but may be renewed from time to time…” (Section 31 (1)).

So-called common law trademarks, that is trademarks not registered in terms of the Trade Marks Act may be protected by means of a common law action of passing-off , that is, unlawful competition:

> Passing off occurs where a person intentionally or negligently misrepresents that his good or services are those of another or are associated with those of another and the public is or is likely to be confused into believing that such goods or services are those of the plaintiff or are connected with them. Passing off is a form of unlawful competition (that is a delict), which is governed by the common law (the *lex Aquila*), The proprietary right which is protected in an action for passing off is the goodwill which is associated with the name, mark or get-up of the plaintiff (Adam & Adams 2010).

Copyright in the trademark can also be protected under the common law action of passing-off.

I have referred to four intellectual property laws used in the thesis, that is Patent, Copyright, Design and Trade Marks Acts. These Acts all share some similarities and of interest to this thesis is the fact that trademarks can be owned collectively and forever and also the fact that the artistic element in trademarks may also be protected under the Copyright Act. This might be significant for certain marks originating from traditional communities. I shall explore this possibility in the next chapter.

Different government departments in South Africa administer the intellectual property laws. The table below indicates the intellectual property law and the respective department or agency responsible for implementing the law.

TABLE 20: Government departments dealing with IP protection South Africa

TYPE OF IP	AGENCY	ACT
Patents	Department of Trade and Industry	Patents Act, 1978
Trademarks	Department of Trade and Industry	Trade Marks Act, 1993 Trade Marks Act, 1963
Copyright	Department of Trade and Industry	Copyright Act, 1978
Registered designs	Department of Trade and Industry	Designs Act, 1993 Designs Act, 1967
Plant breeders' rights	Department a) of Agriculture	Plant Breeders' Rights Act, 1976 (and 1996 amendments for compliance with UPOV 1991)

5.3. International obligations

South Africa is a party to most of the relevant international treaties and conventions dealing with IP matters. For example, South Africa is a member of the Berne Convention relating to copyright and, as such, extends its copyright protection to any work eligible for copyright protection emanating from a convention country designated as such by proclamation in the South African Government Gazette. The WTO agreement on TRIPS gives essence to the Berne Convention in the sense that it enforces these protection laws across borders internationally (Abbott 1999: 2).

5.4 Intellectual property advisory committee

Several aspects of intellectual property law in South Africa have been under review for the past ten years. The above mentioned departments as well as the Department of Arts and Culture (DAC), Department of Science and Technology (DST), Department of Trade and Industry have been grappling with formulating comprehensive policy and legislation to protect intellectual property, addressing adequately both worlds in South Africa. More particularly a sub-committee was constituted by the DTI to formulate a position on intellectual property and indigenous knowledge.

In February 2008, it presented draft comprehensive policies and Bills for public comment already approved by parliament in 2007. I must point out that these Bills to a greater extent demonstrated a more post-colonial and indigenous centred policy approach similar to NAGPRA and ATSIC's approach. For the first time in South Africa's history the lived experience of the indigenous communities was about to be incorporated into the western legal orders. However, the process was to face numerous barriers and is yet to be finalised. I shall now look at the development of this process.

5.4.1 Protection of indigenous knowledge systems

The process of enacting legislation to promote, develop, preserve and protect indigenous knowledge systems (IKS) in South Africa has been a long-drawn-out one. It is important to note that with the protection of indigenous knowledge systems in South Africa, a Bill is always supported by a policy, so we have two types of documents produced simultaneously:

1) The policy frameworks on protection of indigenous knowledge systems and
2) The Bills proposing a legislative process.

These Bills and the policies are sometimes produced at the same times to support each other and sometimes they are produced at different times. I shall now examine the different Bills presented to parliament from 1997 to date. Then I shall discuss the development of the policy framework with regards to indigenous knowledge systems from 1999 to the latest policy in 2007.

An initial draft Bill was tabled in Parliament in 1997, with a new draft appearing in 2000, but this second draft was never tabled. A further draft was drawn up in 2001. This was turned down by parliament, the main reason for this being that it conflicted with most of the international intellectual property agreements with WIPO, TRIPS and the Berne Convention, to which South Africa was party. Work on the indigenous knowledge system Bill was suspended at the end of 2002.

5.4.2 Protection and Promotion of South African Indigenous Knowledge Bill

The first draft Bill presented to Parliament was entitled the Protection and Promotion of South African Indigenous Knowledge Bill (1997). The then parliamentary Portfolio Committee on Arts, Culture, Science and Technology as a private member's legislative proposal introduced it. The Department of Arts, Culture, Science and Technology, later split to form two departments, that is, the Department of Science and Technology and Department of Arts and Culture. The first Bill was a 40-page document providing for:

IKS management principles
Establishment of an indigenous knowledge regulatory authority
Fair decision making and conflict management
Centres of excellence
Community protection
International obligations and agreements
Enforcement (IKS Bill 1997)

It proposed protecting indigenous knowledge via existing intellectual property rights, by extending the definition of "intellectual property rights" to include indigenous knowledge and amending relevant legislation accordingly. As Wolson (2001: 7) states:

> The implications of this were either that existing IPRs [intellectual property rights] would have to be modified, most likely in contravention of some of the international agreements to which South Africa is a party, or that many forms of IK [indigenous knowledge] would not qualify, as they would fail to meet the stipulated requirements for existing forms of IP protection.

Additional concerns were raised including definitions and terminology, the exclusion of biodiversity issues from the scope of the Bill, the retrospective effect of certain provisions and the structure of planned implementing organisations and bodies.

5.4.3 Promotion of South African Indigenous Knowledge Systems Bill

The second draft, entitled the Promotion of South African Indigenous Knowledge Systems Bill (2001) was in contrast outstandingly succinct. Its aim was:

> to provide for the promotion of indigenous knowledge; to provide for the preservation, development, fostering and extension of IKS in the Republic by planning, organising, coordinating and providing facilities for the utilisation of leisure and for non-formal education; for the development and promotion of IKS relations with other countries; and to confer certain powers upon the Minister in order to achieve those objects; and to provide for matters connected therewith. (Wolson 2001: 8).

The bulk of this considerably shortened version empowered the Minister of Arts, Indigenous Knowledge Systems (IKS) , Science and Technology as indigenous knowledge systems was supposed to fall under the ambit of the then Minister of the Department of Arts, Culture, Science and Technology (DACST). The minister was to perform certain stipulated acts for the purpose of promoting and developing IKS, building South Africa's relations with other relevant countries, to delegate powers so agreed, and to make rules necessary to achieving the aims and objectives of the Act. However, the second Bill was not taken further as it was felt that this draft contained insufficient substance to promote the goals which the Bill aimed to attain.

5.4.4 Submissions on the first draft Bill

In 2000, the then parliamentary Portfolio Committee on Arts, Culture, Science and Technology held public hearings on the initial draft Bill (1997) in all the nine provinces, to weigh up the extent to which the Bill was able to meet the needs of indigenous knowledge and practitioners. This was done in the light of significant comments which indicated that further research and review was needed to address the concerns which had been raised. As Wolson observed:

> The hearings were intended to obtain feedback from a spectrum of stakeholders on contentious provisions of the Bill, and were centred around the responses to a series of questions formulated to assist the Committee in its review of the problematic issues. It is perhaps useful to examine certain aspects of the submissions, which are likely to inform the latest drafting efforts (Wolson 2001: 8).

The main concerns that were raised included:

> The need to confer legal status on IKS as a matter of urgency
> The unauthorised use of secret and sacred material
> The unauthorised use of IK in the absence of benefit-sharing with or recognition of the providers of the knowledge concerned
> The Patenting of compounds derived from IK by pharmaceutical companies
> The retention of art and artefacts by universities and museums in the absence of prior informed consent
> The misinformation and misrepresentation in research involving IKS, and failure to allow the providers of the IKS to participate in decision-making about dissemination of the knowledge
> The exclusion of IK from school and university curricula, and the absence of awareness programmes
> The fact that there was no cohesive organisation to represent the interests of indigenous people, coupled with the difficulty of accessing indigenous people (Wolson 2001: 8).

Those rights considered most in need of protection were:

> The right of ownership and control of IK
> The right to benefit commercially from the authorised exploitation of IK
> The preservation of the right to cultural autonomy in any system for protecting IK
> The right to approve or reject commercial use of IK
> The right to maintain the secrecy and sacredness of IKS
> The right to prevent distortion or mutilation of IKS
> The right to legal assistance for negotiating and enforcing IK contracts (Wolson 2001: 9).

Certain types of conventional intellectual property including certification and collective marks, trade secrets and geographical indications, potentially lend themselves to protecting particular aspects of indigenous knowledge, for instance, by their ability to recognise collective traditions and to be

maintained in perpetuity. As Wolson noted: “It was suggested that a register of well known IK [indigenous knowledge] marks be established in the Patents and Trade Marks Office, to be treated in an analogous manner to well-known marks, which are a recognised concept in South African trade mark law. The compilation of a directory of inventors was supported, although concern was expressed about disclosure of IK [indigenous knowledge]” (2001: 9). The register was to include well known marks in an indigenous knowledge sense rather than the trademark sense. For inventors also, the compilation was from an indigenous knowledge perspective. As a provisional measure, it was also tabled as a suggestion that the holders of indigenous knowledge be listed on a voluntary basis outlining their area of expertise and contact details. However, the details of the knowledge they had was to be withheld.

5.4.5 Recent developments

A reference group was subsequently convened to redraft the Bill, informed by a draft policy and the submissions to the public hearings. This resulted in the Intellectual Property Laws Amendment Bill, 2007.

The proposed Bill aims to:

> to amend the Performers’ Protection Act, 1967, so as to amend certain definitions and insert new definitions; to provide for the recognition and protection of traditional performances having an indigenous origin and a traditional character; to provide for the payment of royalty in respect of such performances; to provide for the recordal of traditional performances (Sections 1 – 4 : Amendments to the Performers’ Protection Act, 1967);
>
> to amend the Copyright Act, 1978, so as to amend certain definitions and insert new definitions; to provide for the recognition and protection of copyright works of a traditional character; to provide for the establishment of a National Council in respect of traditional intellectual property; to provide for a national database for the recordal of traditional intellectual property; to provide for the establishment of a national trust and a

> trust fund in respect of traditional intellectual property (Sections 5 – 16 : Amendments to the Copyright Act, 1978);
>
> to amend the Trade Marks Act, 1993, so as to amend certain definitions and insert new definitions; to provide for further protection of geographical indications; to provide for the recognition of terms and expressions of indigenous origin and for the registration of such terms and expressions as trade marks; to provide for the recordal of traditional terms and expressions (Sections 17 – 26: Amendments to the Trade Marks Act, 1993);
>
> to amend the Designs Act, 1993, so as to amend certain definitions and insert new definitions; to provide for the recognition and registration of traditional designs of indigenous origin; to create for this purpose a further part of the designs register; to provide for the recordal of traditional designs and to provide for matters incidental thereto (Sections 27 – 36: Amendments to the Designs Act, 1993).

I shall examine the implications of the above amendments in the next chapter. In trying to protect indigenous knowledge systems, as stated earlier, a Bill is always supported by a policy framework. The Bills referred to above have always been contextualised by relevant policy framework documents. I shall now trace the development of these policies from 1999 to date.

5.4.6 The Draft National IKS Policy

In 1999 the then DACST approached parliament to formulate a policy on indigenous knowledge systems. A task team with people from different departments was formed and it embarked on a complex process of consultation and research that took longer than was originally anticipated.

The Draft National Indigenous Knowledge System Policy which appeared in 2000 focused on describing and contextualising IKS, rather than on making specific policy recommendations:

> The result was a policy which encompassed a wide scope of actions and recommendations pertaining to indigenous knowledge systems, including, *inter alia,*

> integration of IK into the national education, research and development systems, proposed administration of IK systems, institutionalisation, funding and legislative imperatives (DTI IKS Policy 2007: 3).

The draft Indigenous Knowledge System policy looked at different enabling policy frameworks to inform the process. The indigenous knowledge system was outlined and discussed, as well as the challenges involved in its promotion and protection. Case studies of innovations in working with indigenous knowledge systems were also included. However, the context of this document is primarily international, but reference is made at appropriate points throughout the document to relevant South African policy, legislation and case studies. It has been noted that much of the content of this document would more usually be found in a Green Paper-type discussion document rather than in a White Paper-type policy document. Finally, other policy areas are listed which concern the development, protection and promotion of indigenous knowledge. This serves to illustrate the cross-cutting impact of indigenous knowledge on a multitude of aspects of South African life.

The policy identified the following areas:

> Land
> Trade and industry (especially in respect of support for small, medium and micro enterprises)
> Management and enforcement of rights
> Legal aid and legal education
> Systematisation of collective management of rights by communities
> Education
> Sports
> Direct participation (in particular, the role of TK holders in international negotiations)
> Relationship between human rights and intellectual property rights (IKS Policy 2000).

Of major interest in this document is the fact that that environment, biodiversity and agriculture were omitted from this list. One reason for this might be that the need to protect and promote

indigenous knowledge systems has already been recognised in these areas, where development initiatives are underway. This is not, however, made sufficiently clear in the relevant section.

5.4.7 Comments on the policy process

The absence of clear policy to direct the earlier attempts at legislation perhaps explains some of the shortcomings of the previous draft Bills. It would appear that the speed of these efforts was hasty due to the importance given to IKS and an over-enthusiasm to legislate hastily, but that this too was pushed and quite unrealistic. Other legislation, such as the Biodiversity policy, followed the conventional procedure, starting with a Green Paper, followed by a White Paper and finally the Bill, which was passed in 2004. As Wolson noted:

> While the initial IKS [indigenous knowledge systems] drafting team self-admittedly had very little understanding of the highly specialised subject matter, the current reference group is made up of a wide range of stakeholders who are able to contribute different areas of expertise to the process. They are also able to learn from the shortcomings, as well as the positive aspects, of the previous drafts, and can take guidance from developments in other parts of the world. Release of a draft document for comment is eagerly anticipated (2001: 10).

5.4.8 Indigenous Knowledge Systems (IKS) Policy, November 2004

The Indigenous Knowledge Systems Policy which was adopted in November 2004 by Parliament was an outcome of an interdepartmental effort to create a guide for the understanding, integration, recognition, and promotion of South Africa's wealth of indigenous knowledge and vast resources. The policy was a product of extensive consultation, scholarly and academic reflection, debate and participation involving a wide range of stakeholders. The participation of holders and practitioners of indigenous knowledge was of critical importance (DST IKS Policy 2004: 12).

One of the areas of action identified by the policy is the protection of indigenous knowledge, and the holders of such knowledge, against exploitation. This will also include ensuring that

communities receive fair and sustained recognition and, where appropriate, financial remuneration for the use of this knowledge (DST IKS Policy 2004: 28).

The main policy drivers in the aims included:

> The affirmation of African cultural values in the face of globalisation – a clear imperative given the need to promote a positive African identity;
>
> Practical measures for the development of services provided by IK holders and practitioners, with a particular focus on traditional medicine, but also including areas such as agriculture, indigenous languages and folklore;
>
> Underpinning the contribution of indigenous knowledge to the economy – the role of indigenous knowledge in employment and wealth creation; and
>
> Interfaces with other knowledge systems, for example indigenous knowledge is used together with modern biotechnology in the pharmaceutical and other sectors to increase the rate of innovation (DST IKS Policy 2004: 9).

To implement this policy, the following functions, institutions and legislative provisions were identified as required:

> An Advisory Committee on indigenous knowledge systems, reporting to the Minister of Science and Technology;
> A development function; including, academic and applied research, development and innovation in respect of IKS;
> A recordal system for indigenous knowledge and indigenous knowledge holders; where appropriate, to pro-actively secure their legal rights;
> The promotion of networking structures among practitioners, to be located in the Department of Science and Technology; and
> Legislation to protect intellectual property associated with indigenous knowledge, to be administered by the Department of Trade and Industry (DST IKS Policy 2004: 9)

This policy document became the key document for IKS in South Africa for almost four years. In 2007, a new policy document formulated by the DTI complemented the 2004 IKS policy. The new policy goes a step further and suggests that the current intellectual property be used to protect indigenous knowledge systems. I shall briefly highlight aspects pertinent to my thesis.

5.4.9 Indigenous Knowledge Systems (IKS) Policy, November 2007

In 2007, a policy entitled The Protection of Indigenous Knowledge through the Intellectual Property System: A Policy Framework was released by DTI for comment. The purpose of this document was to:

> present the findings and recommendations of the DTI with regards the use of intellectual property as a tool for protecting indigenous knowledge systems. It is the framework for a proposed Protection of Indigenous Knowledge through Intellectual Property Policy, hereinafter referred to as the IP Policy for ease of differentiation (DTI IKS Policy 2007: 3).

The policy framework (2007) describes how the varying forms of the South African intellectual property system patents, trademarks, designs, geographical indications, TRIPS and copyright:

> Can be used to protect indigenous knowledge systems. It also makes a business and economic case as to why there is a great need to protect and commercialise issues pertaining to traditional knowledge systems. Finally, it makes conclusions and recommendations on the best mode of implementing this protection, including the amendment of intellectual property legislation to bring it in line with the objectives of the IKS Policy and the contents of this latest policy framework (DTI IKS Policy 2007: 3).

5.5 International practice in protecting indigenous knowledge systems

At many international forums the use and exploitation of indigenous by other nations has become a subject of intense discussion. Developing and developed countries similarly have involved in discourses and debates and concluded agreements: “Which include the protection of indigenous knowledge. Intergovernmental organisations such as WIPO, UNESCO, UNEP [United Nations

Environment Programme], WTO [World Trade Organisation] and UNCTAD [United Nations Conference on Trade and Development], have opened debates on the possible protection of indigenous knowledge using intellectual property systems" (DTI IKS Policy 2007: 3). UNESCO was largely influenced by debate from developing nations and it formulated the Convention on the Protection of the Diversity of Cultural Contents and Artistic Expressions (DTI IKS Policy 2007: 3). This was adopted recently by its member states. However, with regard to negotiations at the WTO, the progress has not been successful. The policy notes:

> Unfortunately, negotiations at the WTO around amendments to the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) surrounding traditional knowledge have collapsed. Article 27(3) (b) of TRIPS empowers member states to consider protection of traditional knowledge using intellectual property systems. During discussions on the review of the TRIPS Agreement at Doha, Qatar, developing countries proposed amendment of article 27(3)(b) to cater for the protection of the use of traditional knowledge that leads to an invention. Developed nations are opposed to this, leading to the collapse of negotiations (DTI IKS Policy 2007: 3).

The negotiations in the TRIPS have gone into great details, with several proposals and ideas on how to deal with this issue. Recently, the topic has been discussed informally through consultations chaired by WTO director general and his deputies. The current debate deals with the way the TRIPS Agreement related to Convention on Biological Diversity. The ideas to provide a solution to the complex issue include:

> Disclosure as a TRIPS obligation: A group represented by Brazil and India and including Bolivia, Colombia, Cuba, Dominican Republic, Ecuador, Peru, Thailand, and supported by the African group and some other developing countries, wants to amend the TRIPS Agreement so that patent applicants are required to disclose the country of origin of genetic resources and traditional knowledge used in the inventions, evidence that they received 'prior informed consent' (a term used in the Biological Diversity Convention), and evidence of 'fair and equitable' benefit sharing (www.wto.org/TRIPS);

The second solution is provided through the:

> Disclosure through WIPO: Switzerland has proposed an amendment to the regulations of WIPO's Patent Cooperation Treaty (and, by reference, WIPO's Patent Law Treaty) so that domestic laws may ask inventors to disclose the source of genetic resources and traditional knowledge when they apply for patents. Failure to meet the requirement could hold up a patent being granted or, when done with fraudulent intent, could entail a granted patent being invalidated (www.wto.org/TRIPS).

The third alternative entails:

> Disclosure, but outside patent law: The EU's position includes a proposal to examine a requirement that all patent applicants disclose the source or origin of genetic material, with legal consequences of not meeting this requirement lying outside the scope of patent law (www.wto.org/TRIPS);

The final option is found in the:

> Use of national legislation, including contracts rather than a disclosure obligation: The United States has argued that the Convention on Biological Diversity's objectives on access to genetic resources, and on benefit sharing, could best be achieved through national legislation and contractual arrangements based on the legislation, which could include commitments on disclosing of any commercial application of genetic resources or traditional knowledge (www.wto.org/TRIPS).

> WIPO established an Intergovernmental Committee (IGC); its main focus was to initiate discussion on the protection of indigenous knowledge, genetic and biological resources and folklore using intellectual property systems. Although treaties that can protect these issues are being debated, many developed nations are opposed to "such treaties and negotiations are on the verge of collapse (DTI IKS Policy 2007: 3).

> Also, recently, in July 2008, a group of members of the World Trade Organisation (WTO) called for a procedural decision to negotiate three property issues in parallel: "two geographical indications and the 'disclosure' proposal (see document TN/C/W/52 of 19 July 2008). But members remain divided over this idea (www.wto.org/TRIPS).

United Nations Environment Programme (UNEP), which is the guardian of the Convention on Biological Biodiversity (CBD), has requested WIPO, WTO and FAO (Food and Agriculture Organisation) to consider protection and benefit sharing for indigenous communities that have contributed to an invention or intellectual property development (DTI IKS Policy 2007: 3). The IGC mentioned above, was convened by WIPO and UNCTAD, voiced its support, emphasising the economic value of traditional knowledge systems (DTI IKS Policy 2007: 3).

As the policy notes: "Regional organisations such as the Asia and Pacific and the African Union have started to treaties and conventions regarding the regulation of traditional knowledge. Member states of these regions are legislating accordingly" (DTI IKS Policy 2007: 4). This is contained in 'Disclosure as a TRIPS obligation' of the debate on the Convention of Biological diversity (see www.wto.org/TRIPS)

5.5.1 The protection of indigenous knowledge systems locally

It is against this international background that the indigenous knowledge systems Policy (2007) has identified that there are various means of protecting indigenous knowledge in the South African context. These would include: "the intellectual property system; databases; *sui generis* laws (laws of a special kind) and registers" (DTI IKS Policy 2007: 4).

One should note that these systems fall under different government departments and one has to be careful to ensure that matters that are crosscutting in their nature are dealt with in a consistent manner. For instance, genetic issues need to be looked at and protected in terms of both the environmental legislation and the patent system (DTI IKS Policy 2007: 4).

As the policy further elaborates:

> All participating departments agreed that each should initiate legislative amendments based on the IKS Policy. For example, the DTI initiated amendments to the Patents Act, 1978, now the Patents Amendment Act, 2005 and DEAT initiated amendments to the Biodiversity legislation (Biodiversity Act, 2004). (T)he DTI is proud of the fact that the Patents Amendment Act, 2005 is being used at the WTO and to a certain extent at WIPO as model legislation in this regard (DTI IKS Policy 2007: 5).

Even though Section 30 of the Patents Act of 1978 was amended to the Patents Amendment Act, 2005, the DTI must still explore the suitable use of the remaining intellectual property tools, namely copyright, trademarks, designs and geographical indications to protect and commercialise indigenous knowledge. The policy emphasises the limitation in this approach:

> This IP Policy framework therefore deals with the protection of traditional knowledge using the orthodox intellectual property system. It must however be pointed out that in many circumstances, the IP system is not the best vehicle for the protection of traditional knowledge, particularly if not adapted or used in conjunction with other mechanisms (DTI IKS Policy 2007: 5).

Furthermore, the issue dealing with trademarks and further protection of geographical indications originates in the Lisbon Agreement rather than the TRIPS agreement. In South Africa, the Trade Mark Act does not really provide for protection of geographical indicators. It refers to them only obscurely in Section 10 (2) as unregistrable.

I shall discuss critically the proposed amendments in detail in the next chapter. I will outline keys strengths and flaws. Before then I will however give an overview of current gazetted legislation in South Africa protecting aspects of indigenous knowledge.

5.6 Other relevant legislations

There are various pieces of legislation and the TRIPS Agreement that protect aspects of indigenous knowledge systems in South Africa:

1) The National Heritage Resources Act, No. 25 of 1999
2) The World Heritage Convention Act 1999 and
3) The National environment Management: Biodiversity Act No.10 of 2004)
4) Plant Variety Protection, Farmers' Rights and Farmers' Privileges
5) National Heritage Council Act, 1999
6) TRIPS Article 27.3(b)

5.6.1 The National Heritage Resources Act, No. 25 of 1999

The Preamble of the Act states that the main purpose of the Act is to: promote good management of the national estate, and to enable and encourage communities to nurture and conserve their legacy so that it may be bequeathed to future generations. Our heritage is unique and precious and it cannot be renewed. It helps us to define our cultural identity, therefore lies at the heart of our spiritual well-being, and has the power to build our nation. It has the potential to affirm our diverse cultures, and in so doing shape our national character (NHR Act 25 of 1999).

There are some similarities with NAGPRA in this Act, as we see in the aims of the Act below:

> Our heritage celebrates our achievements and contributes to redressing past inequities. It educates, it deepens our understanding of society and encourages us to empathise with the experience of others. It facilitates healing, material, and symbolic restitution and it promotes new and previously neglected research into our rich oral traditions and customs (Preamble NHR Act 25 of 1999).

The summary of the Act states that the Act aims:

To introduce an integrated and interactive system for the management of the national heritage resources; to promote good government at all levels, and empower civil society to nurture and conserve their heritage resources so that they may be bequeathed to future generations; to lay down general principles for governing heritage resources management throughout the Republic; to introduce an integrated system for the identification, assessment and management of the heritage resources of South Africa;

to establish the South African Heritage Resources Agency together with its Council to co-ordinate and promote the management of heritage resources at national level;

to set norms and maintain essential national standards for the management of heritage resources in the Republic and to protect heritage resources of national significance;

to control the export of nationally significant heritage objects and the import into the Republic of cultural property illegally exported from foreign countries;

to enable the provinces to establish heritage authorities which must adopt powers to protect and manage certain categories of heritage resources;

to provide for the protection and management of conservation-worthy places and areas by local authorities and to provide for matters connected therewith ((NHR Act 25 of 1999).

The other Act that deals with the protection of indigenous knowledge is on the World Heritage Convention Act no 49 of 1999.

5.6.2 World Heritage Convention Act No 49 of 1999

The Preamble of the Act recognises that:

the cultural heritage and the natural heritage are among the priceless and irreplaceable possessions, not only of the Republic, but also of humankind as a whole; acknowledging

> that the loss, through deterioration, disappearance or damage through inappropriate development of any of these most prized possessions, constitutes an impoverishment of the heritage of all the peoples of the world and, in particular, the people of South Africa (WHC Act No 49 of 1999).

The following are provided for in the summary:

> the incorporation of the World Heritage Convention into South African law;
> the enforcement and implementation of the World Heritage Convention in South Africa;
> the recognition and establishment of World Heritage Sites;
> the establishment of Authorities and the granting of additional powers to existing organs of state;
> the powers and duties of such Authorities, especially those safeguarding the integrity of World Heritage Sites;
> where appropriate, the establishment of Boards and Executive Staff Components of the Authorities;
> integrated management plans over World Heritage Sites;
> land matters in relation to World Heritage Sites;
> financial, auditing and reporting controls over the Authorities; and
> to provide for incidental matters (WHC Act No 49 of 1999).

5.6.3 National Environment Management: Biodiversity Act (no 10 of 2004)

The South Africa's Biodiversity Act was promulgated in 2004. The Act broadly covers all areas of biodiversity conservation, use and Access Benefit Sharing (ABS) (Wynberg 2004). The objectives of the Act in Section 2 (a) are to provide for:

> The management and conservation of biological diversity within the Republic and of the components of such biological diversity;
>
> The use of indigenous biological resources in a sustainable manner; and

> The fair and equitable sharing among stakeholders of benefits arising from bio prospecting involving indigenous biological resources.

A significant rationale for the Act is to resolve the disjointed nature of biodiversity-related legislation at provincial and national levels, and to consolidate different laws. A significant aspect is to realise the management policy of the *White Paper on Environmental Management*, which emphasises the role of co-operative governance in guaranteeing that the environmental rights in the Constitution are fulfilled and protected. As Wynberg notes: “The Act forms part of the implementation of the overarching National Environmental Management Act 107 of 1998 (NEMA), and is to be applied in furtherance of any applicable provisions (Section 6 (1)) and principles set out in NEMA (Section 7) (2004: 15)."

The sixth chapter of the Biodiversity Act entitled Bio prospecting, Access and Benefit-Sharing, sets out the framework for the regulation of ABS in South Africa. The purpose of this Section 80 (1) is:

> to regulate bio prospecting involving indigenous biological resources;
>
> to regulate the export from the Republic of indigenous biological resources for the purposes of bio prospecting or any other kind of research; and
>
> to provide for a fair and equitable sharing by stakeholders in benefits arising from bio prospecting involving indigenous biological resources.

In dealing with indigenous biological resources Wynberg notes that these are interpreted widely to include:

> derivatives, chemical compounds and products obtained through use of biotechnology. Material of human origin is excluded from the ambit of the law, as are exotic organisms and indigenous biological resources listed in terms of the [International Treaty on Plant Genetic Resources] ITPGRFA . The Act requires permits to be obtained for all bio prospecting projects, and for the export of any indigenous biological resource to be

> used for bio prospecting or any other kind of research. Those providing access to resources or knowledge, or whose 'traditional uses' form part of the bio prospecting, must be consulted and their prior consent obtained before a permit is issued. This should be based on all material information being disclosed (Wynberg 2004: 15).

The Act makes huge strides in terms of ABS regulation in South Africa, but it has some interesting nuances and notable omissions as Wynberg expands:

> Importantly, it makes no provision for a central focal point for bioprospecting;
> No provision is made for stakeholder involvement in decision-making with regard to applications;
> Permitting and procedural arrangements are unclear, including the role of issuing authorities for permits, and most of the detail is left to subsidiary legislation;
> Provisions which require 'benefit-sharing agreements' to be developed and approved by the Minister with all providers of resources and knowledge are confusing, as they fail to recognise the different steps and stakeholders in the process of developing a benefit-sharing agreement;
> Other than for export purposes, research is excluded from the purview of the law;
> A requirement for Ministerial approval for all Material Transfer Agreements may lead to lengthy delays, and may well be unnecessary, given that MTAs simply represent an agreement between parties to transfer specimens and to not commercialise them without first developing a benefit-sharing agreement (Wynberg 2004: 16-17).

5.6.4 Plant Variety Protection, Farmers' Rights and Farmers' Privileges

1. Current situation

The National Department of Agriculture (NDA) is responsible for plant breeders' rights, farmers' rights and farmers' privileges. South Africa became a signatory to the International Union for the Protection of New Varieties of Plants (UPOV) in 1977, an intergovernmental organization with headquarters in Geneva (Switzerland) and has acceded to the 1991 UPOV revisions, implemented in amending legislation promulgated in 1996 (Virchow 1999:85; Nnadozie 2003: 239).

The International Convention established UPOV specifically to deal with the Protection of New Varieties of Plants. The Convention was adopted in Paris in 1961 and it was revised in 1972, 1978 and 1991 (Wolson 2001: 4). The objective of the Convention is the protection of new varieties of plants by an intellectual property right. Current legislation in South Africa does take cognisance of the concepts of farmers' rights and farmers' privileges. As Wolson notes:

> Departmental policy, on the other hand, acknowledges that recognition of farmers' rights and farmers' privileges is important to promoting the conservation, management and sustainable use of plant genetic resources for food and agriculture. As yet, though, little progress has been made in giving substance to these principles in order to integrate them into the legislative framework (2004: 4).

Even in the Intellectual Property Laws Amendment Bill, 2007 Agricultural biodiversity is not catered for in the possible protection of traditional knowledge using the IP system:

> There is a need for the National Department of Agriculture to amend its legislation like the Plant Varieties Act to be in line with the CBD and Food and Agriculture Organisation (FAO) approaches. This means that TK associated with plant varieties should be protected using international treaties (e.g. UPOV). Equally, the Plant Varieties Act can be amended to complement both the Biodiversity Act and the Patents Amendment Act, 2005. This can be done without ratifying the ITPGR or UPOV 1991. (IKS A Policy Framework, 2008: 8).

2. Plant varieties development of policy – past and present

At the Department of Agriculture a National Workshop on Plant Genetic Resources in 1999, some of the important issues that were raised included:

1. The need for an international, harmonised, practicable system which South Africa would honour once in place.
2. The requirement for suitable strategies for collection and conservation of material to be developed, together with the use of databases to allow for actual and potential rights to be traced.

3. The necessity of promoting exploitation of conserved material, subject to rewarding farmers for material obtained from them which is further developed.
4. The importance of encouraging traditional healers to cultivate and not only harvest medicinal plants.
5. Caution against the impracticalities associated with centralised national and international funding mechanisms (Wolson 2004: 5).

The workshop intended that a working group of relevant stakeholders be convened to draw up a discussion document to serve as the basis for a draft Bill. Although it was hoped that this process would already be in motion, this has not happened, and the NDA is not willing to commit to a timeframe for this to materialise. It appears that potential members of the working group have been identified and contacted and that work is set to begin soon (Wolson 2004: 5).

5.6.5 National Heritage Council Act, 1999

The aims of the Act are stated in the Preamble:

> To establish a juristic person to be known as the National Heritage Council;
> To determine its objects, functions and method of work;
> To prescribe the manner in which it is to be managed and governed;
> To regulate its staff matters and financial affairs; and
> To provide for matters connected therewith.

Section 2 (ii) defines living heritage as the intangible aspects of inherited culture, and may include:

> cultural tradition:
> oral history;
> performance;
> ritual;
> popular memory;
> skills and techniques;

indigenous knowledge systems; and
the holistic approach to nature, society and social relationships;

The National Heritage Council is established as a juristic institution whose main objectives in Section 4 are:

To develop, promote, protect the national heritage for present and future generations.
Co-ordinate heritage management;
To protect, preserve and promote the content and heritage which reside in orature in order to make it accessible and dynamic;
To integrate living heritage with the functions and activities of the Council and all other heritage authorities and institutions at national, provincial and local level;
To promote and protect indigenous knowledge systems including but not limited to enterprise and industry, social upliftment, institutional framework and liberatory processes; and
To intensify support for the promotion of the history and culture of all our peoples and particularly to support research and publication on enslavement in South Africa.

5.6.6 Trips Article 27.3(b)

TRIPS Article 27.3(b) deals with whether plant and animal inventions should be covered by patents, and how to protect new plant varieties. The discussion has grown and the focus has widened: Paragraph 19 of the 2001 Doha Declaration says:

The TRIPS Council should also look at the relationship between the TRIPS Agreement and the UN Convention on Biological Diversity and at the protection of traditional knowledge and folklore. Most recently discussed are proposals on disclosing the source of biological material and associated traditional knowledge (TRIPS).

As a whole, Article 27 of the TRIPS Agreement defines:

> which inventions governments are obliged to make eligible for patenting, and what they can exclude from patenting. Inventions that can be patented include both products and processes, and should generally cover all fields of technology (TRIPS).

Looking at the article broadly then, part (b) of paragraph 3 (i.e. Article 27.3(b)):

> allows governments to exclude some kinds of inventions from patenting, i.e. plants, animals and 'essentially' biological processes (but micro-organisms, and non-biological and microbiological processes have to be eligible for patents). Nonetheless, plant varieties have to be eligible for protection either through patent protection or a system created specifically for the purpose ('*sui generis*'), or a combination of the two (www.wto.org/TRIPS).

Before Doha, the review of Article 27.3(b) was initiated in 1999 as per requirements of the TRIPS Agreement. The topics raised in the TRIPS Council's discussions included:

> how to apply the existing TRIPS provisions on whether or not to patent plants and animals, and whether they need to be modified;
>
> the meaning of effective protection for new plant varieties (i.e. alternatives to patenting such as the 1978 and 1991 versions of UPOV). This has included the flexibility that should be available, for example to allow traditional farmers to continue to save and exchange seeds that they have harvested;
>
> how to handle moral and ethical issues, e.g. to what extent invented life forms should be eligible for protection;
>
> how to deal with the commercial use of traditional knowledge and genetic material by those other than the communities or countries where these originate, especially when these are the subject of patent applications;

how to ensure that the TRIPS Agreement and the UN Convention on Biological Diversity (CBD) support each other (www.wto.org/TRIPS).

The 2001 Doha Declaration explicitly stated that work in the TRIPS Council under the reviews (Article 27.3(b) or the whole of the TRIPS Agreement under Article 71.1) and on outstanding implementation dealt with: "The relationship between the TRIPS Agreement and the UN Convention on Biological Diversity (CBD); the protection of traditional knowledge and folklore; and other relevant new developments that member governments raised in the review of the TRIPS Agreement" (www.wto.org/TRIPS). Furthermore, it added that the: "TRIPS Council's work on these topics was to be guided by the TRIPS Agreement's objectives (Article 7) and principles (Article 8), and must take full cognisance of development issues" (www.wto.org/TRIPS).

The discussion in the TRIPS Council has explored in considerable detail a number of ideas and proposals for dealing with these complicated matters. The present debate focuses on how the TRIPS Agreement relates to the Convention on Biological Diversity. As we stated earlier the ideas put forward included: disclosure as a TRIPS obligation; disclosure through WIPO; disclosure, but outside patent law and the use of national legislation, including contracts rather than a disclosure obligation (TRIPS) (www.wto.org/TRIPS).

In South Africa, issues relating to TRIPS fall under the Department of Trade and Industry. South Africa does not advocate the reopening of the negotiations on article 27.3(b), but is in the process of defining how the country's interests can best be promoted and protected, if the section were to be re-negotiated. Stakeholders, including, DTI, NDA, the Department of Environmental Affairs and Tourism (DEAT), civil society and the private sector ought to be consulted (Wolson 2004: 5).

5.7 In terms of the Acts and legislations – scope of protection

5.7.1 Patents Act 57 of 1978

Section 2 of Act 57 of 1978, was amended in 2005 to include certain definitions; and to require an applicant for a patent to furnish information relating to any role played by an indigenous biological

or genetic resource or traditional knowledge or use in an invention and also impose certain conditions such as co-ownership, compensation, benefit-sharing and other forms of controls before approval is granted (Section 4 (1), as I stated earlier. The significance of this amendment is that it protects and compensates the use of indigenous material being patented. This means that the CSIR and Liebenberg could not have successfully registered their patents with this amendment in place. So other applications using indigenous knowledge will have to disclose their source if it relates to indigenous knowledge systems and workout compensation for the relevant community. This is a step in the right direction. However, other than the above mentioned amendment, the Patents Act 57 of 1978, still exists in its original form. As we saw Section 25 (1) of the Act, states that a patent is granted for any new invention, which involves an inventive step and which is capable of being used or applied in trade or industry or agriculture. For indigenous knowledge patents the definition itself poses major challenges:

Section 25 (1)

'Patent is granted for any new invention'.

With indigenous knowledge, the knowledge has existed for a long time and cannot in some cases be classified as 'a new invention'. It is used by communities and was invented long time ago with regards to the specific needs and utilization as Rengecas and Harmelen (2008) expand: "[Indigenous] knowledge is something that develops incrementally over time, is informal and common knowledge to the community" (No pages numbers online version).

'Which involves an inventive step'

This requires that something new was created or an invention of some sort arose out of a process. For indigenous knowledge this is very complex and the inventive step firstly might have occurred many years ago and secondly, it was a step which addressed a particular need, to meet a task or a need within the community. If the patents office can accept the original step which might be traced to over a thousand years, patents arising from indigenous knowledge systems might qualify. But yet there are more conditions which form barriers for patents arising out of indigenous communities.

"Being used or applied in trade or industry or agriculture"

The use of patents arising out of indigenous communities go beyond the application or use defined in the Act, that is, applied in trade or industry or agriculture. The approach in indigenous knowledge is holistic as we saw in chapter 3 and some objects in the community have a spiritual and religious function as well. This factor can also be extended to patents. For instance, the African potato was only patented for its healing property in the 'Modu-Care' capsule but, as we have established, the African potato is capable of being used as a spiritual object as well. From the traditional healers we established that the African potato could: chase away bad/evil spirits, be mixed for removing bad luck, cure people suffering from mental depression and treat diseases associated with witchcraft. The registration of the patent in this way does limit the uses if one is to stretch the case of utility. Basically, the cultural understandings are not taken serious by people who misappropriated indigenous knowledge.

Section 25 (1) does not define the patent. It only gives definitions of what a patent is not. On a similar note the patent is also a negative right in that it does not allow other people to use it in any way or form without the permission of the inventor. This is a negative effect on the communal life and responsibility which indigenous cultures practice. It promotes individualistic tendency as we saw earlier (Kohler 1969: 128; Mostert 1987: 480; Dean 2001: 1-1), but indigenous communities usually deal with reality from a communal perspective. The fact that the granting of a patent is exclusive means that it might be the breakdown of what makes indigenous communities unique. The lived experiences or the contested culture is supposed to be communally lived. This gives meaning and value to indigenous knowledge systems.

This point is further highlighted in Section 27 which state that a patent can be applied for "by the inventor or by any other person acquiring from him the right to apply or by both such inventors." This, to a certain degree, excludes indigenous communities as they are not included in the definition. This presents problems as the knowledge is usually owned by a tribal community, for example as we saw in the case of the *Hoodia* and the African potato. For the *Hoodia*, a juristic person, the CSIR acquired the right and for the African potato, Liebenberg acquired the patent. The owners of the knowledge were shocked that this knowledge which belonged to them was now owned by these persons. As we saw earlier, patents can be owned by juristic persons which can

be a group of people or an individual. However, one has to be registered as a company of some sort to be able to enforce this type ownership. This becomes too difficult for indigenous communities. As Jiang expands:

> Furthermore, a major hurdle that protectors of traditional knowledge must overcome is the question of authorship. Because current standards of property are Western ideas, based upon individual ownership, it becomes difficult to fit traditional knowledge into international standards. Traditional knowledge, typically, is knowledge that has been in a community for generations. An 'owner' or 'inventor' cannot be determined, since Western standards of ownership do not necessarily conform to more community - oriented TK. Oftentimes knowledge is collectively shared and owned, and even more often knowledge is passed down orally, with no documentation of an original inventor. In addition, it is unclear if TK has a status as 'intellectual property' or whether it should be treated as a more general form of property, and should be compensated accordingly (2008: 5).

TRIPS and Section 46 of the Patent Act stipulates that, once granted, the protection of the patent will be for 20 years. This stipulation limits patents arising from indigenous communities as some of this knowledge has existed for a long time and if we introduce ownership with timeframes this will confuse many issues. As Janke noted, the ownership of patents should consider granting perpetual ownership to indigenous communities (1998: 195). Emphasising the same point, Rengecas and Harmelen state that: "Furthermore, the protection provided by traditional systems of intellectual property protection has limited time-frame, whereas [indigenous] knowledge is held in perpetuity" (2008).

The Act poses more challenges and predicaments than solutions to indigenous communities applying for patents in its present format. Section 25 (5) (6) brings some complications as well. The whole issue of prior art is very confusing for indigenous communities: Section 25 (5) An invention is new if it does not form part of the state of the art immediately before the priority date of that invention. Indigenous knowledge has existed before the priority of any future invention is linked to them. This subsection excludes patents from indigenous communities. Also, section 25 (6) states

that the state of the art comprise all matter (whether a product, a process, information about either, or anything else) which has been made available to the public (whether in the Republic or elsewhere) by written or oral description, by use or in any other way. This subsection totally disqualifies indigenous knowledge systems as the knowledge would have been made available to the public from one generation to the next through oral descriptions. As Jiang expands:

> Current lines of redress for TK holders wrongfully affected by lack of intellectual property protection are defensive measures that do not establish ownership of TK. Possessors of TK may file claims and lawsuits against western corporations that may have appropriated their knowledge without consent, compensation, or acknowledgement of any rights that the traditional knowledge holders may have had. However, in such cases, the plaintiff or plaintiffs must provide evidence of 'prior art', in most cases some sort of documentation that the knowledge existed prior to the patent holder's appropriation of it. Because traditions are often passed down orally, or are generally accepted within indigenous cultures as communal knowledge, it is often difficult to provide evidence that fits the exacting standards of the courtroom (2008: 7)

The point on oral description brings us to a further complication contained in Section 30 where the form of the patent application limits the applicants as it takes it for granted that all people in society are literate in the western form of knowledge transmission. Some members of indigenous communities depend on oral discourses and introducing the fact that patent application should be lodged in a written format may also further alienate indigenous communities from registering their knowledge.

The focus of a patent is only in the idea. This also presents complications as it is only the physical manifestation of the idea which is protected. As Rengecas and Harmelen state:

> Most forms of intellectual property protection such as copyright, trademark and patent law grant exclusive property rights to authors and artists in their creations. In the classic scheme of intellectual property, the granting of private rights provides incentive for creation and invention and thus promotes knowledge and culture. Hoffman also acknowledges

> the limits to the rights with respect to the idea, namely that these rights are invariably focused on the physical manifestation of the idea – there is no exclusive right to the mere abstract idea. (2008).

The intrinsic and extrinsic requirements found in section 25 (1) do not include the indigenous aspects and therefore totally excludes them. The same is also applicable to the extrinsic requirements as we saw above since issues of novelty, obviousness and application are not simple when dealing with indigenous communities as we highlighted earlier.

5.7.1.1 Patents Act 57 of 1978: Major gaps and areas of concern

Bearing in the mind the amendment of section 2 of 2005, there are major gaps and areas of concern which exist when dealing with the protection of indigenous knowledge systems using the current patent system:

The Patent Act 57 of 1978 does not present definitions of indigenous knowledge systems and indigenous communities. This is a definite gap which future amendments must include and the Patents amendment Act of 2005 only defined 'traditional knowledge' as the knowledge that an indigenous community has regarding the use of an indigenous biological or genetic resource; I found this definition too limiting as it cut out the spiritual aspect of an indigenous community. The Act does not even define what is meant by indigenous communities.

The Patents Act 57 of 1978 does not offer any hope for collective ownership as Section 27 (1) states that application for a patent maybe made by the inventor or: "any other person acquiring from him the right to apply, and by joint inventors: 'Only natural persons can be inventors but assignees may also be legal or juristic person such as companies" (Stern 2006: 95). In this case, for indigenous communities to qualify they have to register themselves as companies or other legal entities. Whilst the Patents Amendment Act does allude to indigenous communities ownership by stating that 'traditional use' is a way in which or the purpose for which an indigenous community

has used an indigenous biological or genetic resource. However, no definition of the nature of the entity and this leads to confusion.

The issue of time-frames with regards to ownership is a very big gap. Australia's proposed perpetual ownership of patents derived from indigenous communities. This is a very important point as this type of ownership conforms with the lived experiences of the indigenous communities. The Acts as we have stated are highly individualistic as they do not cater for communal ownership. There is a need to state who should benefit from the protection of indigenous knowledge. The Acts only cater for the person who applies for the patent. The new amendments should address issues dealing with who will be the beneficiaries with regard to the protection of indigenous knowledge. These amendments are necessary as they might foster perpetual communal rather than individual ownership. The definitions included in the Acts should be aptly applicable to indigenous communities and user friendly. The amended Acts will serve no purpose if they are totally alien and do not address basic needs of indigenous communities such as how to go about protecting the misappropriation of knowledge.

Finally a concern which is supposed to be raised in the legislation of indigenous knowledge is that proper retrospective sanctions should be included so that the indigenous communities can have legal recourse to claim some of the knowledge which has been taken away from them. The example of NAGPRA comes in handy as it show that states and Federal government can legislate to protect a minority of people, that is, the Native American. As Rengecas and Harmelen expand: "An alternative method is to find a *sui generic* form of protection. Tunisia, Panama, Philippines regional systems and the USA have adopted special intellectual property regimes to protect the collective rights of indigenous communities" (2008). In our case, the indigenous communities are the majority in the country. With due regard being paid to international treaties, South Africa can look at possible ways of legislating indigenous knowledge systems. The major concern which should be addressed is the fact that South Africa needs an indigenous legal solution which sorts out the problems in a culturally appropriate way and in turn empowers the indigenous communities in the process (Janke 1998).

5.7.2 Copyrights Acts

While the Copyright Act does not discriminate against indigenous knowledge systems they, however, fall outside the parameters of copyright as it is currently defined. The problems come in when indigenous knowledge systems and practice fail to meet the necessary requirement of copyright protection. I will look at the limitations in the following four categories: ownership of copyright; limited duration, originality and material form.

Ownership of copyright

Section 21 of the Copyright Act vests ownership of a copyright in the author and to re-emphasise Dean's point: "Copyright law serves to look after the interests of the authors and to define and regulate the scope and operation of his [her] qualified monopoly in relation to his work" (2001: 1-22). The aim of copyright is the encouragement and reward of individual creativity. The owner of the copyright has general rights to exploit his or her material and in turn be rewarded for the fruits of one's labour so to speak.

With regard to indigenous knowledge the priority is the interest of the community over those of the individual. Ownership of folklore in indigenous communities is a collective, as opposed to individual, type. The appreciation of local folkloric works is based on their aesthetic qualities and their ability to reflect the individual's culture and livelihood of the community. Tribal custodians own the folklore and folklore is shared amongst communities according to strict codes of conduct. The problem is further compounded with the designation of ownership, that the author is the work in the current intellectual property law. Folklore tends to be works which came about as result of a collective effort. The individual contributions are incremental in nature and are usually spread over a period of time. Therefore, no one individual can solely be identified as the author of the song, dance, design or any other forms of folklore.

Originality

Section 2 (1) of the Act provides that literary works; musical works; artistic works; cinematograph films; sound recordings; broadcasts; programme-carrying signals; published editions; and computer programs shall be eligible for copyright if they are original. Section (23) further provides

that a copyright shall be infringed if a person who is not the owner uses such a work without a license. Copyright law requires a work to be original, that is, it should have the distinctive individual creative style of the author. As most folkloric works tend to be inspired by the already pre-existing indigenous histories, narratives, and the successive patterns of limitation over time, it can then be said that in this case the specific condition of originality is not met. Originality ensures that other people do not infringe or exploit the author's work. The world-view of indigenous communities, however, makes such requirement irrelevant, especially because of the folklore is the property of the whole indigenous community in spite of the individual who created it.

Material form

The significant aspect of copyright is that the ideas are not protected. For a work to be protected under copyright, the idea must be fixed or reduced to material form. The consequence of this prerequisite is that the ideas, themes, styles and techniques embodied in a work are not protectable: Section 2 (2) of the Act provides that: a work, except a broadcast or programme-carrying signal, shall not be eligible for copyright unless the work has been written down, recorded, represented in digital data or signals or otherwise reduced to a material form.

The repercussion of the above proviso for indigenous works is very serious, since most folkloric works tend to be orally or visually represented. In most cases one finds that a large amount folkloric indigenous works are regarded as ideas rather than expressions of idea.

Duration

Section 3 (2) of the Copyright Act generally limits the duration of copyright in literary, musical or artistic works as to fifty years after the end of the year in which the author dies. The main reason for the restricted duration is to protect creators of works, so as to encourage them to produce such works and to ensure them a fair economic return, as we saw in the economic theory explained by Dean. Indigenous folkloric works tend to have more a prolonged existence thus protection under copyright law in the terms of protection would be insufficient. For example, if folklore were protected under a copyright system, once the protection expires these could end up in the hands of non-indigenous people. It is therefore inappropriate to apply the provisions of the Copyright Act to

the protection of indigenous works. It means, then, other people who are not entitled to these copyrights could actually benefit after the expiration date.

The Designs Act

The Designs Act also offers limited protection for indigenous communities. The main focus of the design protection is to enable commercial interests to gain a competitive edge. This is usually at the expense of indigenous communities. Similar to Patents and Copyright, the Designs Act offers a limited period of protection. Indigenous communities need rights that exist in perpetuity. If these amendments to the Act can achieve this status, this will be very appropriate for indigenous communities as we saw also in the other two Acts. Although protection under the Designs Act is afforded to a registered owner, it does not provide for community ownership. But many designs exist in indigenous communities where they belong and are used in the activities of the community. Removing this concept of 'belonging' will deny the community their association and expression of who they are.

Furthermore, the definitions of functional and aesthetic designs do not include indigenous aspects specifically. They are totally excluded. As we saw in the Patents Act with regard to novelty and originality, the same issues we pointed out with regards to indigenous communities are still valid, especially the fact that ownership in indigenous communities is communal and in most cases it is not assigned to a single person and the Designs Act does allow for tribal ownerships. Furthermore, development of these designs takes place over a long period of time.

5.7.3 Trade Marks Act

In most cases attention is paid to Patents and Copyright Acts. However, the trademark is also very important in South Africa. The current act is limiting as it does not cater for trademarks from indigenous communities. Definitions with an indigenous inclination are excluded to a certain degree; there is thus a need for definitions to include expressions of indigenous origin. These indigenous terms could be expressions used by indigenous communities, with indigenous origin and traditionally owned by indigenous communities.

The indigenous communities are also not described in the Act, so if a community tries to assert their right this might lead to problems. It is interesting to note that of all the four Acts we deal with in the thesis the Trade Marks Act is the only one which will cater for perpetual ownerships.
As said the trademark registration can be renewed indefinitely for further consecutive periods of ten years. The perpetual ownership can be exploited in the fact that subsection 31 (1) says the trademark can be renewed from time to time. Addressing another concern with regard to indigenous ownership, collective ownership is possible and is allowed under the Trade Mark Act. So joint ownership or collective ownership is possible provided the owners applying for the Trade Mark have contributed to the origination, adoption, acquisition and use of the mark, hence a joint venture. This addresses our concern with collective ownership, thereby addressing the communal aspect of the indigenous knowledge. However, it must be pointed that collective ownership and temporal duration are separate spheres of ownership. Hence, if collective ownership is recognised, the difficulty is that the temporal and communal component cannot be recognised as this aspect endures over generations. If the temporal and communal aspects are explicitly featured in the Act indigenous communities might be accommodated. Juristic persons allowed to own a trade mark are: individuals, partnerships, companies, close corporations and other legal persona, for example a trust (an indigenous community can register as a trust). For instance, indigenous peoples' artworks and products are becoming sought after products and there are many copycat products within the market. The indigenous can register some of these artworks as communities as Janke (1998b) states:

> The reputation of indigenous artists and communities might also be enhanced by trade mark registration by indigenous producer groups. A trade association or indigenous alliance made up of representatives of different indigenous communities selling similar products could register a collective trade mark that could be used by all member communities.

If this is done then the registered cultural material would have to be used in the course of trade, which might not be appropriate to the cultural significance or the traditional use of such material in certain cases. Lastly, the Trade Mark Act does also address retrospective cases where marks were used in an offensive manner. A new amendment should cater for the retribution so that past

injustices are amicably solved. As Janke (1998b) concludes: indigenous communities can use the limiting proviso in the Trade Marks Act to face up to culturally unlikeable trademarks which are disgraceful to indigenous customs.

5.7.4 Other developments

There have been discussions in trying the make nations protect indigenous knowledge systems. For instance, since 2001 the WIPO's Inter-Government Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folk Law has been trying to come up with some consensus with regard to the following issues:

1. Definition of TCEs/TK that should be protected.
2. Who should benefit/hold the rights to protectable TCEs/TK?
3. What objective for protection (economic, moral rights)?
4. What forms of behaviour considered unacceptable/illegal?
5. Any exceptions/limitations to rights attached to TCEs/TK?
6. For how long should protection be accorded?
7. What gaps in existing IP system exist and need to be filled?
8. What sanctions or penalties should apply?
9. Division between international and national regulation
10. Treatment of foreign rights holders/beneficiaries (Taubman 2008: 22)

The IGC has had several sittings addressing these issues, but we must point out that the committee has not reached a final consensual opinion satisfying the different governments and states involved. As Jiang further asserts the problems of protecting indigenous communities is because we are involved in the global village, as he says:

> Though the current problems facing the protection of traditional knowledge are mostly international ones, the solutions to these problems must begin in developing countries themselves. If poor countries had laws recognizing traditional knowledge, an international framework protecting IP in individual countries would be more politically

> viable. In addition to national legislation protecting traditional knowledge, which does exist in several developing countries, corresponding national infrastructure and legitimate enforcement mechanisms are needed. If developing countries must work within the TRIPS framework to recoup the losses created by biopiracy, they must start by building the capacity to protect IP rights at home (2008: 8)

From 1999 to 2004, South Africa enacted several legislations which protected aspects of indigenous knowledge systems. In these Acts the protection of the indigenous intellectual property still lacked. As stated earlier there is a huge vacuum in terms of trying to protect indigenous knowledge using the available legislations. The National Heritage Resources Act, No. 25 of 1999, emphasises cultural protection and embedded in this is indigenous knowledge but does not address the specific needs of indigenous communities. The World Heritage Convention Act No 49 of 1999, also entails the protection of our cultural heritage and sets up structures to manage world heritage sites in South Africa. The indigenous knowledge is also to be found in their sites and history as we saw earlier; however, in terms of intellectual property protection dealing with specific communities, the Act does not assist us a great deal.

The Plant Variety Protection, Farmers' Rights and Farmers' Privileges Act deals with the protection of new varieties of plants and all aspects of indigenous knowledge. It also falls short in this way. Furthermore, indigenous knowledge associated with plant varieties can be protected using international treaties like UPOV. The National Heritage Council Act, 1999, establishes a council which manages the issues such as cultural tradition, oral history, indigenous knowledge systems and the holistic approach to nature, society and social relationships. As with the above Acts, the limits are that protection of IKS is not catered for in this Act. The discussion under TRIPS Article 27.3(b), deals with whether plant and animal inventions should be covered by patents, and how to protect new plant varieties. Most recently discussed are proposals on disclosing the source of biological material and associated traditional knowledge. As was noted earlier, discussion in TRIPS have collapsed with developing nations proposing solutions which are not agreeable to the developed nations. In essence these Acts do not actually protect the intellectual property found in indigenous knowledge systems.

When dealing with the current intellectual property law, these questions are very important and we see the current laws fail dismally to address these issues fully. As we saw, South Africa set up some frameworks to start dealing with some of these issues when Cabinet approved the Indigenous Knowledge System policy in 2004. The policy identified four major drivers, as we saw:

The affirmation of African indigenous culture;
Practical measures for the development of services provided by IK holders and practitioners;
Underpinning the contribution of indigenous knowledge to the economy;
Interfaces with other knowledge systems (DST IKS Policy 2004:9).

The same year saw the enactment of the National Environmental Management: Biodiversity Act 10 of 2004, which clarified the Access to Benefit Sharing of indigenous resources. The Act is quite applicable in trying to protect aspects of our biodiversity and stipulates the ABS, when indigenous knowledge is used in a suitable manner. In terms of trying to protect indigenous knowledge the Act makes huge strides but it does specifically protect the intellectual property rights of indigenous communities.

The Patents Acts was further amended to include the acknowledgement of sources of the material to be patented and compensation. By the end of 2007, the status of protecting indigenous knowledge came in the form of the amendment of the intellectual property legislation to include indigenous knowledge in South Africa. As Rengecas and Harmelen expand:

> As a result the DTI has recently drafted a Policy and Bill on the protection of traditional knowledge systems using the intellectual property system. The policy and Bill was approved by the Parliamentary Portfolio Committee on Trade and Industry in December 2007 and published for comment on 5 May 2008. While it recognises that the intellectual property system may not be the ideal vehicle to protect traditional knowledge, it has proposed a number of amendments to intellectual property laws to do so (2008).

South Africa has been very progressive in trying to form new structures and frameworks in the development of national intellectual property law. If this is properly thought through and

implemented it could give impetus to other developing nations in the world. The question we ask ourselves is that: will the basic needs of indigenous communities be addressed in such proposed frameworks? There are some internal and external problems with regards to the 2007 suggestions. We earlier looked at orientalism and how the occident viewed the 'other' of the orient. The development of intellectual property could also be seen as a form of legal colonialism and enslavement of indigenous resources for the betterment of former colonizers as Jiang points out:

> At the intersection of the realms of traditional knowledge and intellectual property law, echoes of Western colonialism still disturbingly resound. Possessors of traditional knowledge are not seen as authors of that knowledge, but instead as passive guardians. But are they not productive inventors also? They have modified their products and given them meaning - traditional knowledge is not raw or passive knowledge. Legal scholars such as Madhavi Sunder and William Fisher instead describe it as something dynamic; it is knowledge that has been transformed by indigenous peoples and is still changing and evolving with continued interaction (2008: 10).

Lastly indigenous knowledge systems which have incidentally developed over centuries should also have an equal parallel platform with regard to protection like the western legal frameworks. The two systems of law can exist side by side with the proper acknowledgement and respect for each other. As Jiang concludes: "Possessors of traditional knowledge should have pro-active means by which to protect their interests instead of the existing defensive measures. Whether it is by defining traditional knowledge in a GI-like context, by strengthening and reinforcing the CBD, or by revising TRIPS itself, the international community should recognize the importance and value of traditional knowledge as intellectual property. In fact, recognizing the rights of poor and indigenous peoples would be a significant and crucial step forward in the economic development of the third world, where TK is a valuable natural resource" (2008: 10).

5.8. Conclusion

Although policy development on indigenous knowledge systems has not progressed as rapidly as many had hoped for, it is clear that the government and its departments are making rapid process

in tackling the issues related to it. The consultative and discussion processes followed are proving their worth – though they take a very long time in some cases. It is very encouraging to see that constructive criticism is taken into account in most cases to avoid introducing unworkable or unsuitable laws. The wide differences, which typify South African society, mean that many of the matters might conflict, and differences between South and North in the global arena are vigorously debated amongst diverse constituencies in South Africa. On the other hand, any policy mechanisms which fall short in taking into account the varying needs of the diverse sectors of South African society, will not achieve the policy objectives. Furthermore with due respect to the government's initiatives - the gap in terms of protecting indigenous knowledge systems remains an enormous challenge.

I shall now look at the government's proposed policy and the amendment of the intellectual property laws of South Africa.

CHAPTER SIX

THE PROTECTION OF INDIGENOUS KNOWLEDGE THROUGH THE INTELLECTUAL PROPERTY SYSTEM: POLICY AND BILL (2007)

6.1 Introduction

The aim of this chapter is to look at what has been done by the South African government to address the issue of protection of indigenous knowledge systems in South Africa. The chapter outline examine the Policy framework on the Protection of Indigenous Knowledge through the Intellectual Property System, which includes the Patents Amendment Act, 2005 and the Intellectual Property Laws Amendment Bill, 2007. These were published for comment on 5 May 2008. The framework asserts that indigenous knowledge can be protected by the existing intellectual property system in South Africa. The Bill is framed to conform to this view.

Indigenous knowledge is the tangible knowledge from indigenous communities regardless of whether it deals with food, medicine or science; this knowledge is possessed by a community. The knowledge may be expressed by the community in different forms such as art, ceremonies, dances, medicines, rituals, spiritual beliefs, heritage and traditions (Rengecas & Harmelen 2008). Mechanisms regulating benefit sharing, protecting biodiversity and compensation are found in the Patents Act 20 of 2005 and the National Environmental Management: Biodiversity Act 10 of 2004; these two Acts only protect aspects of indigenous knowledge. The Bill seeks to protect indigenous folklore and cultural expressions by amending the following Acts:

The Performers Protection Act 11 of 1967;
The Copyright Act 98 of 1978;
The Trade Marks Act 194 of 1993 and
The Design Act of 1993.

The Intellectual Property Amendment Bill is introducing new forms of intellectual property which collectively will be known as traditional intellectual property.

6.2. The Protection of Indigenous Knowledge through the Intellectual Property System: A Policy Framework (2007)

In outlining the use of our current intellectual property system to protect indigenous knowledge, the policy document notes that there are limitations. There are fundamentally two main concerns which arise with regard to the protection, promotion and commercialisation of traditional knowledge in South Africa using the intellectual property system:

> The current intellectual property system allows individuals to protect their inventions and intellectual property rights, but does not allow communities to collectively protect their knowledge in all areas; and in those areas where collective intellectual property registration is possible; communities are not exercising their rights (DTI IKS Policy 2007: 6).

So, nationally and internationally, South Africa and its peoples have not protected indigenous knowledge using the intellectual property system:

> The traditional knowledge holders are disadvantaged economically and socially without protection and the country is disadvantaged economically if no immediate protection is afforded. The pharmaceutical and agricultural industries are major contributors to the economy and if there is no protection of traditional knowledge, the locals and the country are the major losers. Whilst the largest threat in this regard is from foreign sources, unfortunately, 'poaching' of traditional knowledge also takes place at national level by local companies and research institutions (DTI IKS 2007: 6).

Furthermore, there has been huge international resistance from developed countries to the use of intellectual property to protect traditional knowledge. These countries are not in favour of using IP to protect indigenous knowledge mainly due to the fact that the multinational

pharmaceuticals originate in developed countries and these multinationals are the major poachers of indigenous knowledge from the developing countries. Hence, as stated earlier, many developed countries do not support treaties that will lead to the protection of indigenous knowledge at WTO and WIPO. Thus countries such as the United States are not members of the Convention on Biological Biodiversity (CBD) which fosters the protection of indigenous knowledge through the intellectual property system (DTI IKS Policy 2007: 6).

There would be benefits in using intellectual property systems to protect indigenous knowledge, and various sectors would share the benefits, if the intellectual property law were adapted to protect the local knowledge. As the DTI IKS Policy expands:

> [Intellectual property laws] could be used to protect traditional culture. The designs, which are unique to South Africa, for instance, may be protected using the design laws. The pharmaceutical and chemical sectors could work closely with genetic, chemical and biotechnological resources in formulating new inventions. Local communities must also be involved and benefit-sharing arrangements must be entered into in terms of the Patents Amendment Act, 2005. Agriculture is linked with biological diversity (2008: 7)

The policy continues by stating that when indigenous knowledge is used in securing patents, protection and benefiting of the local communities may take place under the Patents Law. (DTI IKS Policy 2007: 7). Geographical indications may be used to protect and commercialise names of plants and animals that are peculiar to geographic areas, for instance, the Nguni cattle. (DTI IKS Policy 2007: 7). In the medical and health sectors, when indigenous medicines are used as complementary medicines, the indigenous practitioners may use the "laws of trade secrets or patents to protect and commercialise this traditional knowledge. Benefit-sharing agreements would assist in this regard" (DTI IKS Policy 2007: 7). The problem, however, is how does one get a patent. As the Policy notes: "While this policy demonstrates the possibilities of protecting traditional knowledge using the IP [intellectual property] system, it does acknowledge that there are other systems that protect traditional knowledge very well, e.g. trade secret and *sui generis* laws that may be crafted under other departments" (DTI IKS Policy 2007: 8).

Indigenous knowledge should be protected so that holders and practitioners are assimilated into the mainstream economy and there is fair play among the relevant stakeholders (DTI IKS Policy 2007: 8).

6.3 Protection using the intellectual property system of South Africa

Intellectual property law can be used to protect indigenous knowledge but, in the past, intellectual property was used most often to usurp indigenous knowledge without benefiting the original owners. The policy gives the following advantages of protecting indigenous knowledge:

To improve the livelihoods of traditional knowledge holders and communities;
To benefit national economies;
To conserve the environment;
To prevent bio-piracy (DTI IKS Policy 2007: 8-9).

The policy goes on to state that various intellectual property tools could be used in the protection of traditional knowledge. The policy then examined each tool in the light of indigenous knowledge protection (DTI IKS Policy 2007: 8-9).

6.3.1 Patents

For an invention which uses local peoples' knowledge to be protected the policy states that the following must take place:

There must be a disclosure of the origin of indigenous genetic/biological resources;
There must be a disclosure of traditional knowledge;
There must be a prior informed consent of the indigenous peoples;
There must be benefit-sharing agreements; and
There must be co-ownership of the patents (where applicable) (DTI IKS Policy 2007: 10).

The Policy goes on to state that:

> Patents are one of the best IP tools for protecting traditional knowledge as the scope for ownership and commercial sharing is great. The only significant shortcoming is the limited time frame, which does not allow for perpetual benefits to the knowledge holders (DTI IKS Policy 2007: 10).

The above statement is problematic. One needs to consider the fundamental principle of patent systems, which is that of disclosure of an invention which is new and inventive. So the policy's assertion will cause problems for patents from indigenous communities because some products might not be considered as novel since they have been used by previous generations. Suffice to mention also that the patent system is not the right vehicle for protecting indigenous knowledge, as it only ensures that the owners of the indigenous knowledge are compensated if an invention is derived from such indigenous knowledge. This is seen is the legislation which was passed and dealt with the compensation of the indigenous knowledge through the Patents Amendment Act, 2005 which states that "an applicant for a patent (must) furnish information relating to any role played by an indigenous biological resource, a genetic resource or traditional knowledge of use in an invention…" The amendment caters for the compensation of indigenous knowledge.

Regardless of the current amendments now in force there is still a need to legislate in such a way that protection for the indigenous communities is the key driver. The period of protection should be extended beyond the twenty years stipulated by the Act. It might be extended in perpetuity so that protection is guaranteed (Janke 1998). What the amendment is trying to achieve is to substantially adapt an existing act to fit a particular circumstance. I would like to state that a new vehicle addressing the specific needs of indigenous communities would work better.

The issue of the publication or recording of such knowledge should also be amended and removed from the current Act. For an invention to be patented it must show that it was published or written elsewhere before. A step in the right direction would be to start patenting oral knowledge. This is fine in principle but how in practice does one do this? How does one judge the originality of oral knowledge? Whose oral knowledge counts when many in the community will have rather different oral knowledge? What about contested knowledge? Or when two communities hold similar

knowledge? Or when we are preparing educational material for schools that includes much oral knowledge, how many permissions and payments are then needed?

The new amended Bill tries to circumvent these situations by establishing a National database in Section 40 (c). The Bill states that all information regarding:

Traditional innovation;
Traditional copyright works;
Traditional terms and expressions;
Traditional designs and
Traditional performances

shall be recorded in the database in the appropriate sections.

The major drawback with this effort is that it will no longer allow secrecy of these processes. In this way, practitioners and communities will be forced to disclose details of remedies; and such remedies must be readily available for public consumption when the patent expires. This will threaten certain spheres not just of traditional healing but also secrecy in things such as oral knowledge related to initiation ceremonies and initiation songs. These are not meant to be published in databases. Furthermore, the Patents Act does not work for indigenous knowledge and it cannot plausibly be properly adapted without jeopardizing all new and existing patents.

In terms of the proprietary rights, the new Bill factors in issues dealing with 'prior informed consent' and disclosure of traditional knowledge before an application is lodged. The Act must, however, go beyond this and actually empower indigenous communities more fully by allowing indigenous peoples to have the right to negotiate the type of usage permitted and share in any economic benefits that might accrue. As Janke (1998: 135) observed:

> Avenues should be explored regarding the possibility of creating a new class of proprietary right for traditional knowledge or the creation of transfer agreements to ensure that: indigenous people are informed of patent applications or plant breeders rights applications that include indigenous material or relate to indigenous species; prior informed consent to use such material and species has been obtained from any relevant indigenous group or

> groups; indigenous people have a right to negotiate the types of use permitted and to share in any economic benefits that might accrue. Where possible, rights should be effected in written agreements.

The proposed amendments take it for granted that indigenous communities would like to share their secrets and open their wealth of information for public scrutiny. This is where the intellectual property systems fail the indigenous communities dismally. Indigenous knowledge needs an entirely different type of legislation, something more similar to NAGPRA, addressing the specific needs of indigenous communities.

6.3.2 Trademarks

Trademark law can be used beneficially to protect symbols and names. This can be appropriate as in some cases the life span of cultural names or symbols is perpetual in nature. The trademark law can accommodate this situation.

Certification marks (a form of trademark) can be used to certify that a product is made in a manner which has certain characteristics which are as a result of the efforts of an indigenous group, for example the process of growing and processing Rooibos tea. Collective marks are owned through associations or authorities that are mostly semi-government institutions and permission must be obtained to use such a mark. Collective marks are used effectively in the wine and spirits industries of South Africa, Chile, Peru and France: “A well known geographical indication is ‘champagne’ which is used to certify the sparkling wine made in the Champagne wine region” (Rengecas & Harmelen 2008). On the same point Rimmers notes that:

> However, it should be recognised that there has sometimes [been] conflict over the boundaries of geographical indications. Thus, in France, there are intense battles over the inclusion and exclusion over particular villages in Champagne. In Australia, there have been long-running disputes over the boundaries of the wine region, Coonawarra (2008: 5)

Other countries such as Greece and Bulgaria are using collective marks in other agricultural products. The South African government can encourage Rooibos and the African potato to be registered as collective trade marks so that the profits benefit local growers and indigenous communities. I must point out that since: "geographical indications can be protected as collective or certification marks and this is already provided for in the Trade Mark Act, it is unclear why an amendment is required at all" (Rengecas & Harmelen 2008). However, in trying to rectify past injustices Rimmer suggests that the Trade Mark Act could be amended appropriately as he explains:

> Arguably, the South African legislation needs to specifically provide the registrar with wider powers to deal with offensive and scandalous trade marks. Section 10 (12) of the Trade Marks Act 1993 (South Africa) could be amended to specify "likely to give offence to any class of persons (including indigenous communities)". That could be particularly important, given the provisions in the South African Constitution dealing with hate speech (2008).

The Intellectual Property Amendment Laws Bill, 2007, looks at amending the Trade Marks Act, 1993. The Bill amends certain definitions and inserts new definitions:

> to provide for further protection of geographical indications;
> to provide for the recognition of terms and expressions of indigenous origin and for the registration of such terms and expressions as trade marks;
> to provide for the recordal of traditional terms and expressions;

It is important to note that there has been no reference to geographical indicators in the Trade Mark Act so far. Also, the advantage with trademarks is that the registration can be renewed indefinitely subject to payment of the fee. This is exactly why the Trade Mark Act is appropriate for indigenous names and why the Patents Act is not appropriate. Furthermore, the Trade Marks Act provides no obstacles with regards to registration if there is prior use. This is very useful for indigenous names, sign and marks. The current proposed Bill considers the fact that indigenous and non-indigenous persons or companies should be able to obtain registration of marks

containing or incorporating indigenous designs, sounds, words or symbols but only with the prior informed consent of the particular indigenous communities and all the necessary conditions have to be met.

However, a provision should be allowed for an inquiry to be conducted into existing indigenous styles of art as trademarks because some of them might have been misappropriated in the past, for example, the Ndebele art, Khoisan rock art and the Mapungubwe gold rhino all of which can be registered as trademarks provided they meet the requirements of the Trade Mark as specified in the Act: It must be a mark; To be used; In the course of trade; In order to be distinguished; By a person.

This inquiry should consider:

the number of trade marks which make use of indigenous cultural material;
whether use is culturally appropriate;
whether trademarks are held by indigenous or non-indigenous entities and
whether consent has been obtained.

The register can then be corrected and the marks moved to the proposed National database (See Section 40 (c) of the proposed amendment Bill) for future protection and use. This will in effect prevent any future unnecessary duplication and at least the indigenous communities will benefit if there is misappropriation.

6.3.3 Industrial Designs

Policy states that indigenous designs could be protected using the design law. However, there are certain factors that should be taken into account if one is to proceed with this protection and commercialisation is to take place in a fair and equitable manner, as suggested below.

The policy then recommends that design legislation be adapted to protect indigenous knowledge with the following in mind:

> Traditional literary and artistic productions must be protected against unauthorised reproduction, adaptation, distribution and performance, including insulting derogating and/or culturally and spiritually offensive use;
> Handicrafts and other cultural goods should be protected using, for example, their "style" GI (Geographical Indicators), certification and collective marks can also be used). The recent UNESCO convention on the protection of cultural goods is illustrative of this point;
> Prevention of false and misleading claims as to the authenticity or originality and failure to acknowledge source;
> An Advisory Board or authority should be established to advise the Registrar regarding traditional names or symbols in order to prevent unauthorised registration. Traditional communities could seek representation in the Advisory Board, based on their area of expertise (DTI IKS Policy 2007: 14).

The Intellectual Property Amendment Laws Bill, 2007, looks at amending the Designs Act, 1993. The Bill amends certain definitions and inserts new definitions:

> to provide for the recognition and registration of traditional designs of indigenous origin;
> to create for this purpose a further part of the designs register;
> to provide for the recordal of traditional designs and to provide for matters incidental thereto.

An appropriate specific act to protect all indigenous cultural and intellectual property would have been more suitable than the many suggested amendments suggested by the Department of Trade and Industry. The ideal act should protect pre-existing and indigenous styles or designs in perpetuity. The Design Act limits the proprietor to the author who is a person. But section 25 allows for joint ownership for two or more owners; so collective ownership is not a problem under this Act.

6.3.4 Copyright

The policy states that copyright protects only the expression of an idea. If a community collectively owns the copyright, there is no limited lifespan of a copyright owner. Defensive protection, unfair

competition, and protection of confidential information may be used to protect the copyright of a local community. The holders would allow the right to make reproductions via licensing and as such could obtain continuous payment of royalties. Communities could establish collecting societies or trusts that would administer their collective rights and therefore negotiate and receive royalties for sharing.

The Bill amends certain definitions and inserts new definitions to provide for the recognition and protection of copyright works of a traditional character. In Section 1 the following new definitions are inserted:

> Traditional intellectual property means an intellectual property that has an indigenous origin and is owned or could be owned by an indigenous community as determined by the Registrar.
>
> Traditional work means a literary work, an artistic work or a musical work which is recognised by an indigenous community as a work having an indigenous origin and a traditional character.

Though this is a step in the right direction, I think the most appropriate way will be to introduce a new type of work owned jointly by the whole community. An indigenous cultural work defined as a work of cultural significance to indigenous communities should be considered where ownership of an indigenous cultural work is communal, as opposed to individual ownership. The indigenous owners should be given a right of attribution, a right of false attribution and the right of cultural integrity. However, this might only cover indigenous cultural works within the copyright period and will not refer to indigenous material currently considered to be in the public domain.

As stated earlier there is great need to redress shortfalls in the current South African legal system in providing the rights indigenous people require in relation to their heritage. It is also fundamental that any changes to the law or major policy initiatives should allow indigenous people self-determination at all levels.

The amended Copyright Act does recognise indigenous cultural ownership in indigenous visual arts, craft, literary, musical, dramatic works and indigenous knowledge, and provides rights in that it includes provisions that allow indigenous people the rights of prior consent and to negotiate rights for suitable use.

6.3.5 Performers' Protection Act, 1967

The Bill looks at amending the Performers' Protection Act, 1967. The Bill amends certain definitions and inserts new definitions:

> to provide for the recognition and protection of traditional performances having an indigenous origin and a traditional character.

Section 1 would be amended to include 'indigenous community'. Also, the definition of literary and artistic works was revised to include 'traditional work' as follows:

> 'literary, musical, [and] artistic and traditional works' [includes musical, dramatic and] respectively, have the meaning assigned to them in the Copyright Act, 1978 (Act No. 98 of 1978) insofar as such works are capable of being performed, and include dramatico-musical works and expressions of folklore;"

Furthermore, section 1 was amended to include "traditional performance which is a performance which is recognised by an indigenous community as a performance having an indigenous origin and a traditional character…".

6.3.6 The law of Trade Secrets

The law of Trade Secrets has been used for a very long time to protect indigenous knowledge and: "is in fact the traditional means of passing down secret knowledge. Trade secret is a practice which is kept secure within a business or similar entity in order to give an advantage over competition.

The recipe for popular products such as Coca-Cola are protected using trade secret" (DTI IKS Policy 2007: 16).

The major drawback in using trade secrets as a method of protection is that if a third party innocently and by chance discovers the knowledge and its uses, the secrecy is no longer in force. However, if an associate or an employee of a company that has a duty to keep the information secret reveals such confidential information, the trade secret is protected and the knowledge owner has legal recourse to follow (DTI IKS Policy 2007: 16).

The important point to stress is that trade secrets are perpetual if not discovered innocently and by chance by a third party and therefore can be the best method of protecting traditional knowledge under most circumstances. However, traditional knowledge holders should be encouraged to use the remedy of trade secrets with caution. Traditional healers use mainly trade secrets to protect their methods. Trade secrets laws have also been used to protect indigenous arts and cultural expression.

6.3.7 *Sui generis* Protection

What makes an intellectual property system *sui generis* is the modification of some of its features to properly accommodate the special characteristics of its subject matter (traditional knowledge) and the specific policy needs which led to the establishment of a distinct system (DTI IKS Policy 2007: 18).

In an effort to extend protection to indigenous knowledge, various countries have tailored their existing IP systems to the needs of indigenous knowledge holders through *sui generic.* These take various forms. For instance, the Chinese have a team of patent examiners specialising in indigenous Chinese medicine.

Several countries have adopted *sui generis* laws for indigenous knowledge protection. These include Portugal, Peru, Costa Rica and Thailand. When policy makers try to develop a *sui generis* system, the following key issues must be considered:

What is the policy objective of the protection?
What subject matter should be protected?
What criteria should the subject matter meet to be protected?
Who are the beneficiaries of the protection?
What are the rights?
How are the rights acquired?
How are the rights administered and enforced?
How are the rights lost or how do they expire?
(WIPO 2005a).

Whilst the DTI is striving to advance in the right direction, the suggested amendments are not the most appropriate way to proceed. The DTI tries to deal with these issues on a piecemeal basis and it only brings out confusion within the concerned indigenous communities as Rengecas and Harmelen expand: "The failure to deal with key issues such as collective ownership, the omission of a proper definition of traditional knowledge and the insertion of vague provisions may, in practice, make it hard for indigenous communities to protect their traditional knowledge and may negate the very purpose of the Act" (2008).

As I stated earlier, indigenous communities view life from a holistic perspective, therefore their knowledge and expressions form an integral part of their community and protection of their knowledge should encompass all their spheres of life and not dichotomise their reality. It becomes very problematic to separate the different parts of an indigenous community and fit these separate entities neatly into the different parts of the intellectual property laws. Such *modus operandi* will bring out tremendous confusions. The main problem is that the South African government is under enormous pressure to resolve this predicament and in the process important issues are disregarded (Rengecas & Harmelen 2008).

The fundamental ingredient in protecting indigenous knowledge systems is the fact that the new forms of intellectual property must have an indigenous origin and traditional character. The Bill does not define what is meant by such terms as 'indigenous origin' or 'traditional character' (Rengecas & Harmelen 2008). For instance, the Trade Mark Act introduces 'tradition term and

expression' which could be registered as a trademark. This is defined in Section 17 as: "a terms or expression which is recognised by an indigenous community as a term or expression having an indigenous origin and a traditional character and which is used to designate, describe or refer to goods or services". Similarly, as we saw earlier, a traditional work is a type of work that is recognized by the indigenous community in origin and character. The bottom line is that the two terms which are vitally important to the amendment, that is indigenous origin and traditional character, are not defined in the amendments (Rengecas & Harmelen 2008).

Section 18 of the Bill defines indigenous community as "any community of people currently living within the borders of the Republic, or which historically lived in the geographic area currently located within the borders of the Republic." This definition is very problematic as Rengecas and Harmelen expand: "The ordinary dictionary definition of 'community' is 'all the people living in a specific locality'. This definition is very broad and could include any kind of group of people. The term 'community' needs to be placed in a traditional context. The term 'indigenous' and 'traditional' also present problems" (Rengecas & Harmelen 2008). In some cases these two terms are used interchangeably as synonyms but at times a traditional community may not necessarily be an indigenous community, while an indigenous community may not be a traditional one. Traditional communities sometime include people living a traditional life style but are not necessarily indigenous to a country, for example the Amish of the United States (Rengecas & Harmelen 2008). The definition of indigenous community in the policy should be amended to be more inclusive as South Africa has different types of indigenous communities.

The definition of the indigenous people within the borders of South Africa is very fluid as people tend to move from neighbouring countries at a great pace. Confusion in terms of borders will arise with the following groups: amaSwazi (Swaziland), abaSotho (Lesotho), Tswana (Botswana), Shangaan Tsonga (Mozambique) and amaVenda (Zimbabwe). People and knowledge is constantly being exchanged amongst these people. This fluidity of indigenous communities further compounds the works defined in the Bill which have to be recognized by the indigenous community themselves as we saw earlier on as having an indigenous origin and a traditional character. This test is problematic as Rengecas and Harmelen expand: "The test is therefore a subjective one and a community can set its own criteria. The subject test will cause legal uncertainty, since it will not

be possible for third parties to ascertain what constitutes traditional intellectual property. Different communities may also apply different criteria. Objective criteria such as prior recordal on a database would ensure certainty as well as consistency" (2008). The influences from neighbouring countries might bring some confusions to the different indigenous communities.

As was stated in the previous chapter, only a legal person or entity (juristic person is the term we used) can apply and be granted intellectual property rights. No indigenous communities in South Africa are legal entities. This will present complications when registering for intellectual property rights if the Bill is to be enacted. As Rengecas and Harmelen state: "Moreover, it is unclear from the Bill how it will be determined who will be entitled to act on behalf of a community" (2008). The Bill also presents inconsistencies as to who will own the traditional intellectual property: "In terms of the Trade Marks Act and the Designs Act the traditional community is the owner of the traditional trade marks and designs while the fund own the copyright in traditional works. The fund is merely a bank account and cannot own anything. An expression of traditional knowledge, culture and beliefs may consist of various types of intellectual property, which may then be owned by different entities. The traditional community would not be able to protect, exploit or enforce its rights in the intellectual property it does not own" (Rengecas & Harmelen 2008). Rengecas and Harmelen go on to say that *sui generis* legislation is required for collective ownership: to determine what is an indigenous community; who will represent the indigenous community as a legal person and to set out criteria to determine what works are indigenous in nature and character (2008).

There are several amendments to individual statutes which are of concern in the Bill: in the Copyright Act, a traditional work is introduced as stated earlier: "A traditional work is therefore a sub-species of a literary, artistic or musical work. Consequently a work may be granted protection while it already classifies as a literary, artistic or musical work and therefore would already be protected. This will undoubtedly give rise to uncertainty" (Rengecas & Harmelen 2008). If there is a creation of a new literary, artistic or musical work they cannot immediately claim that this constitutes a traditional work: "Such work, while it may have an indigenous origin would also have to acquire the indigenous community's traditional character. In addition a derivative work may be based on an existing traditional work but could constitute a new literary, artistic or musical work. Since it would not qualify as a traditional work, no compensation would have to be paid" (Rengecas

& Harmelen 2008). The definition given in the amended Act is also limiting as it does address other spheres of the indigenous communities. As Rimmer observed: "I would recommend a more inclusive definition of 'traditional work' to include the subject matter of cinematographic films; sound recordings; broadcasts; programme-carrying signals; published editions; and computer programs. The experience of Australia is a salutary one…. There has been a significant amount of involvement of indigenous creators and communities in various forms of mass media" (2008).

I have highlighted the problems associated with amending the intellectual property law to cater for indigenous knowledge systems. The best solution is to have entirely new legislation specifically dealing with indigenous systems as Rengecas and Harmelen cogently conclude:

> "The proposed amendments to the various Acts are vague and are likely to cause uncertainty in practice. Much will be left to the courts to decide and this would surely negate the purpose of the Act. It would make it very hard and expensive for traditional communities to try to protect their traditional knowledge".

6.4 Conclusions

The Department of Trade and Industry's task team strongly recommended that South Africa implements the Protection of Traditional Knowledge through Intellectual Property Policy and review relevant legislation in order to protect its rich bio-diversity. If the proposed recommendations are implemented, growth and development will be spurred on in numerous areas and sectors, including: health, pharmaceuticals, biotechnology, chemical, agriculture, environment, cultural, research, development, and innovation.

There is a need for South Africa to be guided by foreign, regional and international best practices, but there is no need for us to wait for the evolution of these practices. The country must implement this Policy to use intellectual property to protect indigenous knowledge, including the review of relevant legislation without delay. This will be a step in the right direction; however, I have pointed out the shortfalls of this process especially in the Patent, Design, Trade Marks and Copyrights amendments. These might haunt South Africa in the future as this process may be considered as a

short-cut rather than it having addressed the problem comprehensively. The proposed amendments to the intellectual property laws do not fully address the dilemma faced by South Africa for a long period. Instead, they perpetuate some of the same legacy and they opt for the use of intellectual property to protect indigenous knowledge systems. It is not difficult to conclude that there are certain areas where the intellectual property system can best protect indigenous knowledge based innovations, but more legislation that is comprehensive is still needed.

CHAPTER SEVEN

WAY FORWARD

7.1 Introduction

This chapter will now look at a way forward in the relationship between indigenous knowledge systems and intellectual property laws in South Africa. Before I outline the way forward, I will briefly give a synopsis of what I have done so far: I explored the South African intellectual property law as it applies to indigenous people in South Africa. My specific objectives were to analyse critically the relationship between indigenous knowledge systems and intellectual property laws in South Africa; then examine legal developments in an international and comparative context and finally in this chapter propose new directions for law reform in South Africa.

As started earlier, to understand the historical and international context, and rationale and possibilities for reform, developments in Australia, the United States and international law were considered. In addition, informing the critique was a discussion of conventional legal theory (economic and natural law theories) and critical legal theories, which I argued, should be employed to respond more meaningfully to indigenous interests. The latter were 'post-colonial' and 'contested culture' theories. These theories are concerned with the interaction of power and dominance in intellectual property law and the lived experiences of indigenous communities in relation to externally imposed legal orders. Normative arguments for greater protection and, where appropriate, economic benefit from indigenous knowledge systems were raised (for example human rights considerations, economic well being of indigenous communities and others) to emphasise the need for legal reforms. Two case studies and interviews with traditional healers, herbalists, and *sangomas* were used to contextualise the analysis and provide examples grounded in the South African indigenous knowledge experience.

If the goal is to respond more effectively to the needs of indigenous communities in South Africa, this can only be accomplished by recognising the role of 'orientalism (colonial power relationships, Western domination over non-Western world) in shaping existing laws and giving equal consideration to human rights and lived experiences of indigenous peoples.

In this chapter, I shall firstly examine the theoretical underpinnings in the light of the central problem, that existing laws have a Western perspective which does not accord with indigenous knowledge systems.

Then I will look at possible solutions with regards to protection. The likely reaction to the current amendments of the intellectual property laws by practitioners, academics and relevant community organizations will be highlighted. The chapter will also situate the investigation within a wider framework of intellectual property regime by looking at the ways in which practitioners can prevent misappropriation and protect indigenous intellectual property.

The chapter will then examine the kinds of protection offered by existing international legislation (such as NAGPRA) and proposed (in the case of Australia) to consider what can be adapted from these that might be applicable to the South African situation.

The chapter will examine current and proposed South African legislation, suggesting a way forward in the protection of indigenous intellectual property. Finally, it will examine the differences between the South African and international community with the intention that the solution sought after in South Africa should essentially address the unique South African situation.

The chapter aptly applies post-colonial and contested culture theoretical frameworks to argue for inclusion of South African indigenous knowledge and protection priorities into South Africa's legislated intellectual property regime. The ethnographic study involving South African herbalists is highlighted to flesh key possible changes to domestic law and policy as they might apply to indigenous knowledge systems in South Africa.

7.2 The theories which informed this study

The theories which were chosen in this study: the postcolonial, contested culture, natural law (theory of personality rights; individualism versus communalism) and economic theory help us develop another perspective in understanding the interaction between indigenous knowledge systems and intellectual property laws in South Africa. In this thesis, orientalism as explained by Said, Bhabha and Spivak was used to understand the interaction. The encounter between the European and non-European is described as orientalism which was manifested in the relationship

of power dominance over the orient, which also included the Africans. I have equated the orient with indigenous knowledge systems in this study. I have established that in most cases this knowledge system was considered to be an extension of that of the West and was used and abused whenever necessary. The knowledge was deemed to be so low on the knowledge continuum that it was not protected by the intellectual property laws in South Africa. Yet the problem which persisted was the fact that the knowledge was in most cases misappropriated without proper cognisance of the holders of that knowledge. This was clearly exemplified in the cases of the *Hoodia* and the *Hypoxis rooperii*. The knowledge of these plants, which is well known among the indigenous communities in South Africa and other African countries in southern Africa, was taken up by individuals and organisations that had the resources and knowledge of western legal systems and patented aspects of the knowledge to their own advantage not acknowledging the source of the knowledge. In the case of the *Hoodia*, after appeal by the San community there was benefit sharing worked out with the holders of the knowledge. With regard to the *Hypoxis*, such as arrangement was never worked out as there are several indigenous communities who associate themselves with this knowledge and no one came forward to claim ownership.

The knowledge was probably treated in this way because the people in power in South Africa were generally insensitive to the well-being and interests of the holders of the knowledge systems and simply abused them for their own advantage. This brings us to a very interesting paradox: indigenous knowledge was treated as inferior yet it was happily drawn upon at times when a person in a position of power could gain from it. This has been a typical occurrence in South Africa.

This goes to prove an important aspect of Said's contention which highlights the fact that the West was very much affected by the orient as well. The process of interaction transformed the image of the West and the orient. However, the West tried by all means to promote its interest at the expense of the non-Europeans. In our case, the legal systems protected the Europeans in South Africa who used the systems to register patents at the cost of local indigenous communities. The process was grounded in the real life of the deprived communities whereby their lives were managed and controlled by the Europeans who could tap in and reap whatever they wanted without considering the community from which this knowledge came.

I must state however, that drawing on the work of Said may give rise to an impression that I have adopted a very fixed notion of an author-centered Western approach to intellectual property versus a traditional communal approach to indigenous knowledge systems. This notion can be clarified by considering the context in which South African identities were formed and laws promulgated. There is a large body of work that demonstrates that the definition of indigenous communities was 'primordial, fixed, and unchanging' and emerged from a colonialist, racist philosophy; applied during the Apartheid years (Davenport 2000 & de Gruchy 2005).

The notion of 'ancient and unchanging' fitted with early Western ideas about evolution, that Africans were trapped at different stages of evolution (Davenport 2000). This suited the ideals of the Nationalist government because by presenting Africans as technologically and ideologically primitive they could justify separate and unequal education. Further, by exaggerating difference they justified homelands. The National Government not only denied indigenous knowledge systems, they depicted it as 'primitive' so that many African's began to distance themselves from their traditional ways (Davenport 2000). Issues surrounding apartheid, separate development, authenticity, fluidity and temporal cultural forms have been discussed by numerous scholars, for example, Kopytoff (1989) and the Comaroffs (2009). In this thesis, I limit my discussion to Said's concept of the 'other' and how it can help us appreciate the lived experience of indigenous communities.

7.3 Protection of indigenous knowledge systems under current intellectual property laws

It has been suggested that indigenous knowledge systems could be protected under the current intellectual property laws; this solution as I have argued, presents more problems than it solves and it could suffocate the dynamic nature of indigenous knowledge systems. It also promotes the view that Europeans and /or people in position of power will continually mismanage indigenous communities because the protection of this knowledge will function in an alien milieu. For any protection of indigenous knowledge to be meaningful, the cultural background used by the legislation must be in keeping with that indigenous knowledge. Moreover, for the protection of indigenous knowledge, consideration of the lived experience of its holders is vital in determining the appropriate framework to protect this knowledge. As I indicated earlier, the interaction between

law and culture can bring forth new hegemonies and ideologies. In our case, considering seriously the input of indigenous knowledge into our legal frameworks can give rise to a new form of thinking and at the same time bring these knowledge systems into the mainstream of knowledge as a force to bargain and reckon with. The contested indigenous experience is an invaluable source of input for society as a whole. In this study, I highlighted the roles played by the *Hoodia* and the *Hypoxis* and in some instances, there was an inalienable relationship between the properties of these plants and their functions in society.

The western view of intellectual property law is based on the rewarding of individual efforts: "reap where (you have) sown" (Mostert 1987: 480). Proponents of the natural law theory, like Joseph Kohler, promoted this view and it has become one adopted by virtually all Western cultures. Furthermore, the association of intellectual rights with personality rights further strengthened the need for individual protection of intellectual property rights. This developed out of a social structure alien to most African cultures in which community and collective ownership are the key drivers. The development of this knowledge has been incremental in the sense that each generation modifies certain things to fit their situation and the knowledge is passed on from one generation to the next. This process makes it almost impossible for indigenous property rights to function within the Western individual-orientated legal frameworks. The *modus operandi* of these rights is totally different from Western rights which are protected by current intellectual property laws. We need a system which will fully and adequately cater for the needs of the kinds of collective ownership typical of African indigenous communities, taking into account their peculiar social needs and situation.

In using the *Hoodia* plant as an example of indigenous knowledge exploited for the benefit of an indigenous community, in this case the San people of South Africa, Botswana, Angola and Namibia, the patent granted to the CSIR was, through the efforts of the legal interventions of Mr Roger Chennells, used to benefit the San community. However, the rights of other possible claimants such as the Northern Sotho, Tswana and Venda-speaking groups, who had used the *Hoodia* for similar purposes, were overlooked, as I have pointed out.

In the case of the African potato (*Hypoxis rooperi*) there was no champion of any indigenous rights and R.W. Liebenberg was able to patent the indigenous intellectual property for his own benefit. My questionnaire of twenty-nine traditional healers, herbalists and *sangomas* revealed that, while a majority of the users of the African potato were from the Zulu-speaking community, Xhosa, Tswana, Pedi and Ndebele-speaking communities (Table 2), also use the plant similarly. These indigenous community interests must be taken into account when considering the ownership of the intellectual knowledge concerning the African potato. It is also necessary to establish who should be the spokespersons for such communities. Traditional leaders may not always be the most suitable individuals. Many of the interviewees in my questionnaire felt that Government should act in various ways to prevent the exploitation of the African potato by persons outside the indigenous communities.

7.3.1 The likely reaction to the current amendments of the intellectual property.

When the interviewees (Chapter 3) were asked whether government should do something about the protection of indigenous knowledge in the community, the responses indicated that this was necessary and very much needed by the communities. As stated earlier (see Tables 10, 13, and Graph 6), seven respondents clearly stated that government must help traditional healer's practises and facilities and eleven stated that the government must definitely assist. From this, I get a sense of what their reaction to the current amendments is likely to be. Some traditional healers know that the current form of intellectual property law might not really protect their knowledge, so if the current intellectual property laws are all that are available for their protection the situation is unlikely to be remedied because the interests of traditional communities will not form the core of the protection. The likely reaction to these amendments is echoed in sentiments like: government must help; must have laws; must stop the white people stealing their knowledge and that it must teach healers how better to protect their knowledge. Furthermore, the healers emphasized the fact that governments should also protect traditional medicine and help the healers in trying to resolve the protection problem. The other responses to the question all allude to the fact that government must assist the healers in one form or another as is shown clearly in the graph dealing with this response (Graph 6).

With regards to academics, lawyers and community organizations their reaction has been both positive and negative. Janke in dealing with the proposed Bill states that it “provide[s] for the recognition and protection of traditional performances having an Indigenous origin and a traditional character" (2008: 44). However, it is important to note that Janke goes on further to state that: “The Bill is being reviewed after submissions and public consultation revealed that the majority of stakeholders present thought that amending the current laws may be unworkable" (2008: 45). She also states in her footnote that on 13 June 2008, the South African government recommended that the Bill in its current form was supposed to be re-worked considerably before it was submitted to Parliament (2008). This highlights some of the difficulties which I have dealt with so far.

Rimmer commends the South African government for the initiative taken for developing such substantive legislation on the protection of indigenous knowledge systems. However, he points to a number of issues which need to be addressed: his main criticism hinges on the definition of 'traditional work' with regard to the various intellectual property laws to be amended. He states that the definition is very narrow and does not cater for wider implications. Rimmer also raises an interesting point which I highlighted earlier dealing with secrets and the national database: “Careful thought will need to be given to the interaction between a national database for the recordal of traditional intellectual property, and the protection of confidential information held by indigenous communities" (2008: 6). Though Rimmer commends the government for advancing the protection of indigenous knowledge, he raises numerous issues which indicate that in the present form of the Bill, it will be unlikely to be workable.

The Licensing Executives Society of South Africa (LES SA), also supported the development with regard to protection of intellectual property of indigenous communities. It was necessary to protect the indigenous resources in South Africa. But, as Janke and Rimmer stated, LES SA had its reservations when it stated that: “There are, however, aspects of the Framework and the Bill which LES SA considers potentially problematic, should it be passed into policy and law in its present form” (2008: 2).

LES SA states that the fundamental problem with the proposed Framework and the Bill is that it seeks to preserve and protect indigenous traditional knowledge and works already in existence,

whilst the intellectual property laws serve to promote the generation of new knowledge and works. As the LES SA states: “If the legislature had the objective of expanding the existing body of indigenous traditional knowledge with further innovation, rather than protecting the indigenous traditional heritage of our indigenous communities, there could be merit in adapting the existing Intellectual Property Laws” (2008: 3).

LES SA goes on to suggest that the best way to deal with protecting indigenous knowledge is through The Merchandise Marks Act, No 17 of 1941 (as amended) , a *sui generis* form of new legislation, as well as intellectual property laws. The submission states (2008): these will be comprehensive enough to protect all forms of innovation as indigenous intangible assets of the people of South Africa.

Having highlighted the likely reactions of practitioners, academics and a relevant community organization, their sentiments can be summarised by the conclusion of an article by two lawyers; Rengecas and Van Harmelen, when they state that: “the proposed amendments to the various Acts are vague and are likely to cause uncertainty in practice. Much will be left to the courts to decide and this would surely negate the purpose of the Act. It would make it very hard and expensive for traditional communities to try to protect their traditional knowledge" (2008).

7.4 Broader issues with regard to protection of indigenous knowledge systems

In looking at the ways in which practitioners can prevent misappropriation and protect indigenous intellectual property matters or issues, the local community, regional countries and an international dimension should be taken into account. This process is helpful as it streamlines procedures and eliminates unnecessary duplication. The fundamental consideration is the communal aspect - as stressed throughout the thesis, the communal aspect should play a key role, so in grappling with the protection of indigenous knowledge it is vital to look at the holistic view of the type of protection.

There is a need to look out for possible solutions to misappropriation and at the same time protect indigenous knowledge issues. A system utilizing the different dimensions of preventing misappropriation and protecting indigenous knowledge matters will yield better results for

indigenous communities. Furthermore, I must point out that I have highlighted some of these aspects of prevention and protection in one form or another in this thesis.

7.4.1 Preventing misappropriation of indigenous knowledge

In finding the ideal solution it is important to note that there is no one perfect solution. However, the solution, which is important, is one which will be very comprehensive and addresses the needs of communities, as it is a fact that the indigenous knowledge systems are systematically tied to cultural identities of the communities in South Africa. It thus not possible to look for one solution that fits all regions and countries, however it is possible to look for solutions peculiar to a region or country's problems. The important ingredient is to emphasise the role played by the community so as to empower their interests and ensure that there is a capacity to carry out the preventative measures and strategies. For instance, in the case of the African potato, a local committee could be set up to formulate regional laws to protect the medicinal values of the plant. So communal strategies could enforce and formulate protection by limiting the availability of knowledge on the plant and other relevant mixtures. In this way, the protection will be serving a small community, However, this could be expanded to a national and even an international level. Therefore, the way preventing misappropriation is defined will depend largely on the objectives the protection aims to serve. So if the protection is aiming to serve big parastatal companies at the expense of indigenous communities this will be very evident in the way the protection is articulated, hence protection of indigenous knowledge should not be taken as an end in itself but as a means to broader policy goals. The focus should also be on trying to capitalise on the local knowledge, looking at the real needs of the community, empowering people with the knowledge via monetary rewards and building of community trusts so that the funds are pumped back into the community. In other words, in most cases, the community must reap where it has sown in terms of the indigenous knowledge it possesses.

Since the solutions to avoid misappropriation may vary from community to community, the best way to protect this knowledge might be extending the intellectual property laws and formulating new stand-alone sui *generis* systems which will empower the community. With regards to the African potato, for example in KwaZulu-Natal, a specific law, say a *sui generic* system, which is

community based could be formulated so that the knowledge regarding the plant and other plants which enhances its potency are protected. Further, other aspects could be investigated as well such as using customary laws, indigenous rituals and performances and the law of civil liability. Such possibilities have been documented elsewhere by WIPO and the Centre for Research-Information-Action-in-Africa and Southern Africa Development and Consulting (CRIAA SADC).

7.4.1.1 Use of existing intellectual property laws as amended in South Africa

As we have seen in the previous chapters the policy debate about indigenous knowledge and intellectual property laws have highlighted the limitation of existing intellectual property laws in adequately protecting and meeting the needs of indigenous knowledge practitioners. It is, however, important to note that some current intellectual property laws in South Africa and elsewhere have successfully been used to protect misappropriation and misuse of indigenous knowledge through trademarks, geographical indications, patents, industrial design and trade secrets. Even though the modification and adaptation in South Africa are trying to make this work better there are fundamental drawbacks such as communal ownership. Indigenous knowledge spans many generations and so if intellectual property laws were used a much longer timeframe would be needed than the current duration of intellectual rights. There is also the financial factor to consider: it is very expensive for practitioners to use to current intellectual property laws because of the cost of legal action. This fact has been established by WIPO and other international and national organisations working with indigenous communities in Australia, Canada and the USA.

7.4.1.2 Adaptations of existing IP through *sui generis* measures

Some countries have adapted their existing intellectual property law systems to the needs and aspirations of indigenous knowledge practitioners through *sui generis* measures for indigenous protection. Such protection takes different forms: for instance, in the United States, a Database of Official Insignia of Native American Tribes precludes others from registering these insignia as trademarks; in New Zealand the trademarks laws have been amended to eliminate trademarks that may cause offence with regard to Maori symbols. India and South Africa have amended their

patent laws to elucidate the status of indigenous knowledge in patent law and in China patent experts specialize in traditional Chinese medicine (WIPO 2005a).

7.4.1.3 Use of *sui generis* exclusive rights

In some countries, some communities have felt strongly that protection of indigenous knowledge under the adapted existing intellectual property laws are also not adequate to cater for their unique and holistic needs. This has given rise to the protection of indigenous knowledge through *sui generis* rights. Examples of these are found in the Biodiversity Act in South Africa; the *sui generis* regime of Peru through Law No. 27, 811 of 2002; mainly dealing with benefit sharing of indigenous knowledge; the Biodiversity Law No. 7788 of Costa Rica which aims at regulating access to indigenous knowledge benefits arising from the use of indigenous knowledge; Portugal's *sui generis* Decree-Law No. 118, of April 20, 2002 which provides protection against the abuse of indigenous knowledge developed by communities either collectively or individually. The Act on Protection and Promotion of Traditional Thai Medicinal Intelligence, B. E. 2542 protects the traditional formulas of indigenous Thai drugs and the written texts on indigenous Thai medicine (WIPO 2005a). In dealing with *sui generis* systems for protecting indigenous knowledge, it requires policy makers to address the following issues: objective of the protection; the subject matter, criteria for the knowledge to be protected; the types of rights involved; with regards to the rights, how will they be acquired, administered and enforced and finally when or how will these rights be lost or expire?

7.4.2 Protecting indigenous intellectual property matters

Protecting indigenous intellectual property matters will involve taking steps to prevent third parties from acquiring invalid intellectual property rights over indigenous knowledge, for example, by publishing the traditional knowledge to gain copyright protection. This protection is valuable in blocking illicit exploitation of intellectual property rights but at the same time, it does not hinder others from exploiting or using indigenous knowledge. There is still a need for some form of protection – that is why it is vital to consider both preventing misappropriation and protecting indigenous intellectual property matters.

A major focal point of the protection system could be and in some cases has been evident in the patent system. By registering patents from indigenous communities the process makes certain that current indigenous knowledge is not patented by third parties. Ideally, this is done by checking that the applicable indigenous knowledge is taken into full cognizance when a patent is being examined for its inventiveness and novelty (for example, the Patent Amendment Act 2005). As I stated in chapter five, a claimed invention in a patent application is judged against 'prior art', so if the traditional knowledge has been published in a journal before the patent application the process will fail because then it would not be considered as an invention or even novel.

A landmark development in South Africa similar to this type of protection has been the Patents Amendment Act (2005) which states that a patent application should in some way disclose the indigenous or genetic resource used in the claimed invention or if there is any such relationship. Though this link has been catered for in many countries, on the international front WIPO is proposing further extension to these requirements and the creation of specific obligations with regards to indigenous knowledge. In this regard WIPO has developed the International Patent Classification (IPC) to take better account of indigenous knowledge and the Patents Cooperation Treaty (PCT) which provides for international examinations and searches (WIPO 2005a).

Bearing in mind the preventative and protective measures I have outlined above, I will now suggest a way of protection which is centred on the indigenous communities and their lived experiences in the following section.

7.5 Areas to be addressed in indigenous property right protection

In trying to find a potential solution to the dilemma, the following points must be addressed if we are to find a comprehensive solution that protects indigenous knowledge systems with regard to the four intellectual laws dealt with in this thesis:

In terms of existing Patent Law, the term *invention* should be substituted by another term so that the special needs of the indigenous communities are recognised. In the case of an item of traditional character, it is not possible to define a moment in time when it was 'invented' nor an

individual who invented it. Such concepts run counter to indigenous community ownership of intellectual property.

With regards to originality there are numerous problems as well since the works from the indigenous communities are usually inspired by existing histories, the knowledge is already part of the community.

The oral form of most of the rights to be protected posed more complication for copyright, the material form is very important if one is to protect the idea as it has to be reduced to a written form.

The duration of the protection is another problem I highlighted. The duration needs to be longer if one is to avoid a situation where, after the expiry of the protection, indigeonous property rights then fall into the public domain.

The intellectual property also assigns individual ownership to certain rights though collective ownership is possible in the Design Act and the Trademarks Act. The concept of individual ownership poses key challenges as this will be practically impossible to assign in an indigenous community since the knowledge belongs to everyone; it cannot only be owned by one single individual. The solutions to this problem must therefore address the following points fully:

Definition of what is an indigenous community
Definition of inventions relevant in the indigenous community (and not of an industrial or commercial application)
Originality and authorship
Collective ownerships
Protection of secret material
Designs and trademarks of a cultural significance and not related to trade
Duration of protection
Perpetual ownership
The material form in which this knowledge exists including the protection of oral indigenous cultural material.

It is essential that these points are addressed fully because they might highlight the fact that the law formulators have responded more effectively to the needs of indigenous communities in South Africa. It will also show that the role of 'orientalism', that is colonial power relationships, Western domination over the non-Western world, is a negative reality which could be dealt with positively to bring forth change. This might be the case if aspects like collective ownership, perpetual ownership, recognition of oral forms of evidence, appropriate definitions of indigenous communities and so forth became part of the protective regime protecting indigenous knowledge.

Further, the international examples cited in the thesis might assist as some of the concepts were used either in America (for example, collective ownership of funerary objects) or Australia (for example, perpetual ownership for most of the intellectual property laws, that is patents, design, copyright and trademarks). Therefore, if most of the above points are addressed the legal system might be on track to marry the current intellectual property laws infused with Greco-Roman culture and indigenous knowledge systems, which looks at reality from a holistic perspective. As indicated in the thesis there are many areas where there is potential for conflict and in some cases potential agreement. However, change must be informed by our theoretical perspective which is concerned with the interaction of power and dominance of intellectual property law and the lived experiences of indigenous communities in relation to externally imposed legal orders. The normative argument also emphasises greater protection and economic benefit where issues of human rights consideration and economic well-being of indigenous communities play a key role.

7.6 Input from some international legal systems

With regard to a system that addresses the special needs of a community, NAGPRA offers some solutions. NAGPRA was enacted to close the many loopholes in statutory laws which failed to protect the unmarked graves of Native Americans (Yalung *et al.* 1992: 419) and the funerary objects they contain. While pre-existing laws offered some protection in this regard, the cost of protecting indigenous intellectual property through the court system was expensive and invariably beyond the reach of the individuals and communities concerned.

Similarly, in South Africa there has been misappropriation of indigenous knowledge, of which the *Hoodia* and African potato are two prominent cases, which have formed a substantial part of the research in this thesis. We need a system which will deal with the South African situation specifically. Government should enact laws which address the current contradictions which surface in issues such as the form of the invention, originality, duration and so forth.

Important lessons can also be learnt from the Australian studies of intellectual property protection, especially the work of Terri Janke. However, although the recommendations were applied in certain legal cases, the Australian government has not applied the recommendations which were contained in this voluminous work. The NAGPRA and the Australian examples highlight the fact that our present body of intellectual property law cannot be tweaked to accommodate indigenous knowledge. South Africa needs separate legislation and urgently, if further abuse is to be prevented. The Amendment Bill is not going to fix anything as it fails to deal with the very deep and complex problems of protecting indigenous knowledge in our society.

It must be pointed out that the US and Australian examples have some inadequacies. For instance, in the USA the NAGPRA process has encountered a great deal of contradiction, inconsistencies and bureaucratic delays. The system does protect the Native American but it has some weaknesses as well. But, in spite of the problems, at least there is a system in place for protection of Native Americans heritage. The major weakness, from our perspective, is that, while it provides protection for human remains and funerary objects, it does not offer protection for other forms of intellectual property.

Though the Australian model proposes a new form of intellectual property rights, the greatest weakness is that it proposes that existing copyrights laws are amended so that the special needs of indigenous communities are included. The *Our Culture: Our Future* paper raises issues relevant to South Africa, for example, indigenous dances, songs, artworks, stories are included in the indigenous knowledge deemed worthy of protection, under the heading of Heritage Rights (Janke, 1998: 11). I would go further and suggest that a new comprehensive system of protecting indigenous knowledge is the approach that should be taken in South Africa.

7.7 Ways of protecting indigenous property

This system must include: indigenous-type of inventions, duration, originality, material form, perpetual ownership, collective ownership, communal property and ownership taking cognisance of spiritual importance of the cultural life of communities. Such a new system might not be able to speak to other international systems but I think, with time, these relationships can be ironed out to some extent. However, we must be aware of the increasing interest in bio-prospecting by pharmaceutical, agriculture, industrial and scientific research organizations (www.atsic.gov.au) and the importance of acceptance of any new indigenous property legislation, in time, within the TRIPS framework of the WTO.

This process of understanding and legislating indigenous knowledge can be carried out in such a way as to be informed by what this study has tried to highlight. The main point of departure has been that intellectual property law does not address the specific needs of indigenous communities. If legislation is passed based on the needs of communities as was the case with NAGPRA, indigenous community rights can be protected to a greater extent. The greatest challenge posed by indigenous knowledge then is the fact that it forces us to ask ourselves what the historically compliant intellectual property concept actually is. If indigenous knowledge or some forms of it are integrated into the current system, the limits of the current system will be tested. It is therefore necessary to develop a new legislation specifically for South Africa to try and resolve this predicament. If such a system of law is enacted I believe that we will see that the simplistic amendment of older intellectual property laws in South Africa would have been a disaster. From events in other parts of the world it is clear that protection of indigenous knowledge systems will be enacted in one form or another. I should emphasis that this protection should take place within a lived experience which stresses the aspects laid out in Table 21:

TABLE 21: Indigenous knowledge systems protection must take cognizance of the lived experience of indigenous communities.

Contested cultures as a theoretical underpinning informing the new world-view with regards to indigenous property protection. This position is further strengthened by understanding indigenous knowledge in a postcolonial environment



Specific IKS aspects to be included in the new legislation	Specific areas to be legislated			
	Patents	Copyright	Trademarks	Design
Indigenous community	✓	✓	✓	✓
Indigenous origin	✓	✓	✓	✓
Traditional character	✓	✓	✓	✓
Ownership by non-legal entities e.g. Tribe or clan	✓	✓	✓	✓
Indigenous-type of inventions e.g. inventions already in public domain and passed from one generation to the next. E.g. for one to register a patent it must be novel, inventive and industrial applicable. Indigenous knowledge develops over time, is informal and is common knowledge to the community	✓	✓	✓	✓
Protection of folklore already in the public domain as these expressions are usually refined and evolve over time	×	✓	✓	×
Collective ownership and communal property: The author or inventor might be a large and diffuse group of people and the same "work" or invention may have several versions and incarnations, e.g. Textile patterns, musical rhythms and dances	✓	✓	✓	✓

Protection of some material in indigenous knowledge systems which is unfit for protection by intellectual property in any form, e.g. spiritual beliefs, methods of governance, languages, human remains and biological and genetic resources in their natural state (without any knowledge concerning their medicinal use)	✓	✓	✓	✓
Perpetual ownership	✓	✓	✓	✓
Originality: Most folkloric works tend to be inspired by the already pre-existing indigenous histories, narratives, and the successive patterns of limitation over time,	✓	✓	✓	✓
Material form	✓	✓	✓	✓



International input from WIPO IGC; TRIPS; NAGPRA; Australia; New Zealand; Canada; Portugal; Panama & Philippines



The above will inform the new legislative process



New comprehensive intellectual property legislation protecting IKS from a holistic perspective





Specific legislation of IKS laws relevant to the South African situation
Taking cognizance of the contested cultural experience of the indigenous communities

This point has been re-iterated by many international organisations, governments, regional and local organisations in many countries: the call for protection of indigenous knowledge raises deep policy and practical challenges to all relevant parties. However, careful examination of possible remedies may actually strengthen certain communities and in turn empower future generations – the challenge is to ensure that the cultural and intellectual contribution of indigenous knowledge is recognised appropriately. The model I suggest at the end suggests that the needs and expectations of indigenous communities are put in the fore-front when dealing with their intellectual property rights. To end the discussion it is significant to use a statement from WIPO which states: "Traditional qualities and frequent close linkages with the natural environment mean that TK can form the basis of a sustainable and appropriate tool for locally-based development. It also provides a potential avenue for developing countries, particularly least developed countries to benefit from the knowledge economy" (WIPO 2005a: 31).

8. References

8.1 Acts

Copyright Act 98 of 1978.

Department of Trade and Industry 2008. Policy framework for the protection of indigenous traditional knowledge through the intellectual property system and the intellectual property laws amendment Bill. General notice No 31026.

Design Act 195 of 1993.

Intellectual Property Laws Amendment Bill, 2007.

National Heritage Council Act, 1999.

Patents Act 57 of 1978.

Plant Variety Protection, Farmers' Rights and Farmers' Privileges.

The National environment Management: Biodiversity Act No.10 of 2004)

The National Heritage Resources Act, No. 25 of 1999.

Department of Science and Technology (DST): Indigenous Knowledge Systems (IKS) Policy, November 2004.

Department of Trade and Industry (DTI): The Protection of Indigenous Knowledge through the Intellectual Property System: A Policy Framework. 2007.

The World Heritage Convention Act 1999 and

Trademark Act 194 of 1993.

TRIPS Article 27.3(b)

8.2 Books, articles and conference proceedings

Adams & Adams. 2010. "Trade mark infringement, passing off and unlawful competition proceedings". Http://www.adamsadams.com/index.php/expertise/trademarks/trade-mark-infringement/ (accessed 11 February, 2010).

Africa Centre for Biosafety (ACB), 2010. "Joy as Pelargonium patent revoked" http://www.biosafetyafrica.org.za/ (accessed 11 February 2010).

Akabogu, E. 2002. Indigenous knowledge systems, integrity of the commons and emerging regimes of intellectual property rights in a globalising world. Paper presented at the 9th Biennial conference of the IASCP, 17-21 June, Victoria Falls, Zimbabwe.

Amato, C.A. 2004. Using the Courts to Enforce Repatriation rights: A case study under NAGPRA. In: Richman, J.R & Forsyth, M.O. (eds.). 2004. *Legal perspective on cultural resources*: 232 433. Walnut Gross: Alta Mira Press.

Anderson, G. 2004. *Reinventing the museum: historical and contemporary perspectives on the paradigm shift.* Lanham, MD: Rowman Altamira.

Appendix II CITES. Http://www.cites.org/ (accessed 1 July 2009).

Aschroft, B., & Ahluwalia, P. 2001. *Edward Said*. London: Routledge.

Attwell, D. 1993. *J.M. Coetzee: South Africa and the politics of writing*. Berkeley: University of California Press.

Bainbridge, D. 2002. *Intellectual property*. London: Longman.

Battiste, M. 2000. *Protecting Indigenous knowledge and heritage: a global challenge.* Saskatoon: Purich.

Berges, R.R., Windeler, J., Trampisch, H. J., & Senge, T. 1995. Randomised placebo-controlled, double-blind clinical trial of B-sitosterol in patients with benign prostatic hyper plasmia. *Lancet* 345: 1529 1532.

Bhabha, H. 1992. Postcolonial Criticism. In: Greenblatt, S., & Gunn, G. (eds.). *Redrawing the boundaries: The transformation of Engish and American Studies*: 437 465. New York: MLA.

Bhana, D., & Stern, A. 2006. Copyright. In: Stern, A. 2006. Intellectual property Laws 523/5011, LLM Certificate course: 232 296. Johannesburg: School of Law, University of Witwatersrand, 2006.

Bhana, D., 2003. The terms of copyright protection: A critical analysis. Unpublished paper. Johannesburg: University of the Witwatersrand.

Bieder, R. 1992. The collecting of bones for Anthropological narratives. *American Indian Culture and Research Journal* 16(2): 21 35.

Blake, E. 2005. *North American Archaeology.* Cambridge: Blackwell Publishing.

Bouic, P.J., Clark, A., Brittle, W., Lamprecht, J.H., Freestone, M., & Liebenberg, R.W. 2001. Plant sterol/sterolin supplement use in a cohort of South African HIV-infected patients – effects on immunological and virological surrogate markers. *South African Medical Journal* 91: 848 850.

Bouic, P.J., Clark, A., Lamprecht, J., Freestone, M., Pool, E.J., Liebenberg, R.W,, Kotze D., & van Jaarsveld P.P. 1999. The effects of B-sitosterol (BSS) and B-sitosterol glucoside (BSSG) mixture

on selected immune parameters of marathon runners: inhibition of post marathon immune suppression and inflammation. *International Journal of Sports Medicine* 20: 258 262.

Bouic, P.J.D., Etsebeth, S., Liebenberg, R.W., Albrecht, C.F., Pegel, K., & Van Jaarsveld, P.P. 1996. Beta-sitosterol and beta-sitosterol glucoside stimulate human peripheral blood lymphocyte proliferation: implications for their use as an immunodulatory vitamin combination. *International Journal of Immunopharmacology* 18(12): 693-700.

Bray, T.L. 2001. American Archaeologists and Native Americans: A relationship under construction. In: Bray, T.L. (ed.). *The future of the past: Archaeologists, Native Americans, and repatriation*:1-8. New York & London: Garland Publishing Inc.

Brown, M.F. 2004. *Who owns culture?* Cambridge Massachusetts: Harvard University Press.

Burrell, T.1999. *Burrell's South African Patent and Design Law.* Durban: Butterworths.

Carrillo, J. 1998. *Readings in American Indian law: Recalling the rhythm of survival*. Philadelphia: Temple University Press.

Cawood, S. & Ehlers, L.2007. The feasibility of developing a regional indigenous knowledge (IK) database: A case study in knowledge management in South Africa. In: Remeny, D. (ed.) *Proceedings of the 4th International conference on intellectual capital, knowledge management and Organisational Learning – University of Stellenbosch Business School, South Africa, 15-16 October 2007*: 77- 86. Dublin: Ireland.

Chapter One: Intellectual Property and development. http://www.iprcommission.org/papers/text/ final_report/chapter1htmfinal.htm (accessed 14 February, 2009).

Chennells, R. 2007. San Hoodia Case. A Report for GenBenefit. Http://www.uclan.ac.uk/genbenefit (accessed 20 November 2008).

Clark, G. 1999. NAGPRA, science, and the demon-haunted World. *Skeptical Inquirer* May/June: 44 48.

Cole, D. 1985. *Captured Heritage: The Scramble for Northwest Coast Artifacts.* Seattle: University of Washington Press.

Comaroff, J., & Comaroff, J. 1995. *Of Revelation and Revolution: Christianity, Colonialism and Consciousnness in South Africa, Volume one.* Chicago: The University of Chicago Press.

Comaroff, J., & Comaroff, J. 2009. *Ethnicity, Inc*.. Chicago: The University of Chicago Press.

Commission on intellectual property rights: Integrated intellectual property rights and development policy. Http://www.iprcommission.org/ (accessed 15 July 2009).

Conklin, K.R. 2003. The NAGPRA Law, and the Kennewick Man Controversy. Http://www.angelfire.com/hi2/hawaiiansovereignty/nagprageneralkennewick.html (accessed 20 February 2009).

Convention on Biological diversity: Genomics Gateway. 2009. Http://www.cbd.int/decisions/ default.asp?m=cop-06&d=24 (accessed 10 February 2009).

Coombe, R. 1998. *The cultural life of intellectual properties: authorship, appropriation and the law*. Durham: Duke University Press.

Copeling, A.J.C.1968. *Copyright.* Durban: Butterworths.

Copeling, A.J.S. 1994. Copyright*. Law of South Africa,* Volume 5 Part 2. Durban: Butterworths.

Cornish, W.R. 1981. *Intellectual Property, Patents, Copyrights, Trademarks and Allied Rights*. London: Sweet and Maxwell.

D'Amato, A. 1997. *International Intellectual Property Law.* The Hague: Kluwer International

Davenport, R., & Saunders, C. 2000. *South Africa: A modern history*. London: Macmillan Press Ltd.

David, A. 1993. *J.M. Coetzee: South Africa and the Politics of Writing*. Berkeley: University of California Press.

Davis, M. 1997. Indigenous peoples and intellectual property rights. Unpublished research paper 20: 1996-1997, Parliament of Australia. Http://www.aph.gov.au/library/pubs/rp/1996-97/97rp20.htm (accessed 09 March 2008).

De Carvalho, N.P. 2005. *The TRIPS regime of Patents rights*. The Hague: Kluwer International.

De Gruchy, J., & de Gruchy, S. 2005. *The Church struggle in South Africa*. London: SCM Press.

Dean, O.H. 2001. *Handbook of South African Copyright Law*. Cape Town: Juta & Co.

Dellios, H. 1991. Town Fears Burial Mounds May Never Be The Same. *Chicago Tribune,* October 13: 1.

Deloria Jr., V. 1989. A simple question of humanity: The moral dimensions of the reburial issue. Native American rights fund: *Legal Review* 14(4): 1-17.

Deloria Jr., V. 1992 Secularism, Civil Religion, and the Religious Freedom of American Indians. *American Indian Culture and Research Journal* 16(2): 9–20.

Di Chiro, G. 2007. Indigenous peoples and biocolonialism: Defining the science of environmental justice in the century of the gene. In: Sandler, R., & Pezzullo, P.C. (eds.). *Environmental Justice and Environmentalism: The Social Justice Challenge to the Environmental Movement:* 251-283. Cambridge (MA): MIT Press.

Dongoske, K. 1996. The Native American Graves Protection and Repatriation Act: A new beginning, not the end, for Osteological analysis - A Hopi perspective. *The American Indian Quarterly* 20(2): 287-296.

Donner, I.H. 2007. *Patent prosecution law, practice and procedure*. Washington: BNA Books

Downer, A. S.1997. Archaeologists—Native American Relations. In: Swidler,N., Dongoske, K., Anyon, R., & Downer, A. (eds.).,*Native Americans and Archaeologists: stepping stones to common ground*: 23-34. Walnut Creek (CA): Altamira Press,

Dutfield, G. 2004. *Intellectual property, biogenetic and traditional knowledge*. London: Earthscan.

Duthu, B. 2008. *American Indians and the law*. New York: Penguin.

Echo-Hawk, R. 1999. Reflections on Repatriation: Images of Academic America in the Mirror of NAGPRA. *The Wyoming Archaeologist* 43(1): 44–49.

Echo-Hawk, W. 1992. Preface. *American Indian Culture and Research Journal* 16(2): 1–8.

Ferguson, T. 1996. Native Americans and the practice of Archaeology. *Annual Reviews in Anthropology* 25: 63-79.

Ferguson, T., Watkins, J., & Pullar, L.1997. Native Americans and Archaeologists: Commentary and personal perspectives. In: Swidler,N., Dongoske, K., Anyon, R., & Downer, A. (eds) *Native Americans and Archaeologists: Stepping stones to common ground*: 237-252. Walnut Creek (CA): Altamira Press,

Fine-Dare, K.S. 2002. *Grave Injustice: The American Indian repatriation movement and NAGPRA.* Lincoln: University of Nebraska Press.

Finger, M.J., & Schuler, P. 2003. *Poor people's knowledge: Promoting intellectual property in developing countries.* Washington: World Bank.

Fixico, D.L. 2003. *The American Indian mind in linear World: American Indian studies and traditional knowledge*. New York: Routledge.

Flint, M.T., & William, A. 1989. *Intellectual Property the new law*. London: Butterworths.

Foucault, M. 1978. *The history of sexuality* Vol.1: *An introduction*, trans Robert Hurley. New York: Pantheon.

Galloway, K.P. 2006. *Practicing ethnohistory: Mining archives, hearing testimony, constructing* narratives. Lincoln: University of Nebraska Press.

Garnet, K., Rayner, J., & Davies, G. (eds.) 1994. *Copinger and Skone James on Copyrights*. London: Sweet and Maxwell.

Genzuk, M. 1999. A synthesis of ethnographic research. A Web version of Genzuk, M. Tapping Into Community Funds of Knowledge. In: Effective Strategies for English Language Acquisition: A Curriculum Guide for the Development of Teachers, Grades Kindergarten through Eight. Los Angeles, CA: Los Angeles Annenberg Metropolitian Project/ARCO Foundation.

Gierke, O.V.F. 1895. *Deutsches Privatrecht, vol 1.* Leipzig: Duncker & Humblot.

Gierke, O.V.F. 1958. *Natural law and the theory of society: 1500 to 1800* (translated by Barker, E.). New Jersey: The Law Exchange Ltd.

Gillmer, M. & Symmonds, R. 1999. Seed collection and germination: Hypoxis hemerocallidea. *Plantlife* 21: 36-37.

GlaxoSmithKline, 2005. "The Convention on Biological Diversity". Global Public Policy Issues. Europe: GlaxoSmithKline Government Affairs. Http://www.gsk.com/policies/GSK-on-the-convention-on-biological-diversity.pdf (accessed 18 February 2010)

Gordon, Raymond G., Jr. (ed.). 2005. Ethnologue: Languages of the World, Fifteenth edition. Dallas, Tex.: SIL International Online version: http://www.ethnologue.com/ (accessed 6 April 2008).

Grenier, L. 1998. *Working with indigenous knowledge: A guide for researchers.* Ottawa: International Development Research Centre.

Gulliford, A.1996. Bones of contention: The repatriation of Native American human remains. *The Public Historian* 18(4): 119-143.

Hadfield, A. 2001. *The English renaissance, 1500-1620: 1500-1620*. Cambridge: Blackwell Publishing.

Halbert, J.D. 2005. *Resisting intellectual property*. New York: Routlegde.

Hall, T.R., & Wolfley, J. 2003. Working Together: A Survey of Tribal Perspectives on NAGPRA: Repatriation and Study of Human Remains. *The SAA Archaeological Record* 3(2): 27-32.

Hammersley, M. 1990. Reading ethnographic research: A critical guide. London: Longman.

Hanabusa, M. 1991. *An analysis of Japanese Patent Law*. Translated from the original treatise. Richmond: Brunswick Publishing.

Hansen, S.A., & Van Fleet, J.W. 2003. *Traditional knowledge and intellectual property: A handbook on issues and options for traditional knowledge holders in protecting their intellectual property and maintaining biological diversity*. New York: AAAS.

Heath, D.B. (ed.) 1963. *A Journal of the pilgrims at Plymouth: Mourt's relation*. New York: Corinth Books.

Hibbert, M.1998. Galileos or grave robbers? Science, the Native American Graves Protections and Repatriation Act, and the First Amendment. *American Indian Law Review* 23(21): 425-459.

Högdahl, E. 2006. Urban strategies and loopholes tactics: Claiming space in Cape Town and Malmö. In: Arvastson, G., & Butler, T. (eds.) *Multicultures and Cities*: 85-96. London: Museum Tusculanum Press.

Hountondji, P. 1997. *Endogenous Knowledge: Research trails*. Dakar: CODESRIA.

Hughes, J. 1998. Personality Interests of Artists and Inventors in Intellectual Property. In: *Yeshiva University Cardozo Arts & Entertainment Law Journal 81,* no. 16. Http:cyber.law.harvard. edu/property/respect/personality.html (accessed 18 February 2008).

Indigenous intellectual property. Http://www.atsic.gov.au/issues/Indigenous_Rights/intellectual_ property/ Default.asp. (Accessed: 15 October 2005).

Isaac, B. 2000. *Brand protection matters.* London: Sweet & Maxwell.

Jacob, R., & Alexander D. 1993. *A guide to intellectual property*. London: Sweet & Maxwell.

Janke, T. 1998. Don't give away your valuable cultural assets: Advice for indigenous peoples. In: *Indigenous Law Bulletin*. Http://www.austlii.edu.au/au/journals/ILB/1998/8.html (accessed 25 February 2009).

Janke, T. 1998. *Our culture, our future,* Report on Australian Indigenous cultural and intellectual property rights. Http://www.frankellawyers.com.au/media/report/culture.pdf (accessed 24 July 2006).

Janke, T. 2003. *Minding culture: Case studies on intellectual property and traditional cultural expressions*. Geneva: WIPO.

Janke, T. 2008. *Guarding ground: a vision for a national indigenous cultural authority*. Wentworth Lecture. Canberra: AIATSIS.

Jiang, F. 2008. The problems with Patents: Traditional knowledge and International IP Law. Harvard International Review. October.1-11. Http://www.allbusiness.com/medicine-health/diseases-disorders-cancer-leukemia/11715887-1.html (accessed 1 March 2009).

JM Watt, J.M., & Breyer-Brandwijk, M.G. 1962. *The medicinal and poisonous plants of Southern and Eastern Africa*. London: Livingstone.

Joubert, W.A., & Scott, T.J. 1981. *The Law of South Africa*. Durban: Butterworths.

Klopper, H.B., & Van der Spuy, P. 2002. *Intellektuele goedereereg*. Pretoria: University of Pretoria.

Kohler, J.1969. *Philosophy of Law* (Translated by Adalbert Albrecht). New York: Augustus M. Kelley Publishers.

Kopytoff, I. 1989. *The African frontier: The reproduction of traditional African societies*. Indianapolis: Indiana Univ. P.

Kosslak, R. M. 1999. The Native American Graves Protection and Repatriation Act: The death knell for scientific study? *American Indian Law Review* 24(1): 129-151.

Kreps, C. 2003. *Liberating Culture: Cross-cultural perspectives on Museums, curation, and heritage preservation (Museum Meanings).* New York: Routledge.

LaDuke, W. 2005. *Recovering the sacred: The power of naming and claiming*. Cambridge: South End Press.

Lee, R.B. 1976. Introduction. In: Lee, R.B. & DeVore, I. (eds.) *Kalahari Hunter-Gatherers: Studies of the !Kung San and Their Neighbours*: 1-12. Cambridge: Harvard University Press.

Lee, R.F. 1970. *The Antiquities Act of 1906*. Washingston DC: Office of History and Historic Architecture.

Licensing Executives Society of South Africa (LES South Africa). Http://www.licensing.co.za (accessed 15 July 2009).

Martin, R. F. 1950. Annotation, Corpse removal and reinterment*. Arizona Law Review* 21 L.R.2d: 472-476.

Mashelkar, R.A. 1998. *Intellectual property rights and the third world*. New Delhi, India: Council of Scientific and Industrial Research.

Masolo, D.A. 2003. Philosophy and indigenous knowledge: An African perspective. *Africa Today* 50(2): 21-38.

Massaquoi, J.G.M. No date. Indigenous technology for off-farm rural activities. Http://www.nuffic.nl/ciran/ikdm/1-3/articles/massaquoi.html (accessed 22 June 2004).

McDonnald, A. H. (ed.) 1965. *The Encyclopedia Americana.* Danbury, CT: The Grolier Society, Inc.

McGuire, R.1992. Archaeology and the First Americans. *American Anthropologist* 94(4): 816-836.

McManis, C.R. 2007. Biodiversity, Biotechnology and traditional knowledge protection: law, science and practice. In: Mc Manis, C.R. (ed.) *Biodiversity and the law: Intellectual property, biotechnology and traditional knowledge*: 1-26. London: Earthscan.

Meighan, C.1992. Another view on repatriation: Lost to the public, lost to History. *The Public Historian* 14(3): 39-45.

Mihesuah, D. A. 1996. American Indians, Anthropologists, pothunters, and repatriation: Ethical, religious and political differences. *The American Indian Quarterly* 20(2): 229-237.

Mills, E., Cooper, C., Seely, D., & Kanfer, I. 2005. “African herbal medicines in the treatment of HIV: *Hypoxis* and *Sutherlandia*. An overview of evidence and pharmacology”. *Nutrition Journal*; 4: 19 (Published online 2005 May 31). Http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1156943/ (accessed 25 February 2010).

Moore-Gilbert, B. J.1997. *Postcolonial theory: contexts, practices, politics*. New York: Verso.

Mostert, F. 1987. The development of the Natural-Law principle as one of the principles underlying the recognition of intellectual property. *South African Law Journal* 104: 480-495.

Moyer-Henry, K. 2008. *Biotechnology Law Report 27*(1):2-12.

Mqotsi, L. 2002. Science, Magic and Religion as Trajectories of the Psychology of Projection. In: Odora Hoppers, C. (ed.) *Indigenous knowledge and the integration of knowledge systems*: 158-172..Claremont: New Africa Book.

Mugabe, J. 1998. Intellectual property protection and traditional knowledge. Paper prepared for the World Intellectual Property Organisation (WIPO), Geneva, Switzerland, December.

Nafziger, J. A. R. and R. J. Dobkins 1999 The Native American Graves Protection and Repatriation Act in Its First Decade. *International Journal of Cultural Property 8*(1): 77–107.

NAGPRA summaries, inventories and notices. Http://www.nps.gov/history/nagpra/ TRAINING/Summaries_and_Inventories. (accessed 5 February 2009).

New York Times, 20 April 2001.

Nnadozie, K., Lettington, R., Bruch C., Bass, S.,& King, S. 2003. *African perspective on genetic resources: A handbook on laws, policies and institutions governing access and benefit-sharing.* Washington D.C.:,Environmental Law Institute.

Nwabueze, R.N. 2007. *Biotechnology and the challenge of property: property rights in dead bodies, body parts and genetic information*. Hampshire: Ashgate Publishing.

Odora Hoppers, C. 2002. Introduction. In: Odora Hoppers, C. (ed.) *Indigenous knowledge and the integration of knowledge systems*: 2-23. Claremont: New Africa Book.

Ouzman, S. 2007. Silencing and sharing southern African indigenous and embedded knowledge. In: Smith, C. & Wobst, H.M. (eds.) *Indigenous archaeologies: decolonising theory and practice*: 208-225. London: Routledge, One World Archaeology 47.

Pretty, J. 2003. Social Capital and the collective management of resources. *Science* 12 December, Vol. 302. no. 5652: 1912–1914.

Rengecas, T., & Harmelen, J.V. 2008. Protection of traditional knowledge systems in South Africa. In *De Rebus South Africa Attorneys' Journal* September & October. Http:// www.derebus.org.za (accessed 30 January 2009).

Reuvid, J & . Priestner, I.(eds.). 1997. *Doing business in South Africa.* Johannesburg: Kogan Page.

Richardson, B. Intellectual property rights of indigenous knowledge. http://www.mp.wa.gov.au/jscott/sow_seed/ss_smoke.html (accessed 24 July 2008).

Richman, J.R., & Forsyth, M. (eds.) 2004. *Legal perspectives on cultural resources*. Lanham: Rowman Altamira.

Rimmer, M. 2008. A personal submission in relation to the Intellectual Property Laws Amendment Bill 2008: South Africa: Canberra: Law Faculty, Australian National University. http://works.bepress.com/cgi/viewcontent.cgi?article=1062&context=matthew_rimmer (accessed 20 February 2009).

Rose, J.C., Green, T.J. & Green, V.D. 1996. NAGPRA is forever: Osteology and the repatriation of skeletons. *Annual Review of Anthropology* 25: 81-103.

Rosier, P.C. 2003. *Native American issues*. London: Greenwood Publishing Group.

Ruiz, M. 2003. The Andean community regimes on access to genetic resources, intellectual property, and the protection of indigenous peoples' knowledge. In: Bellmann, C., Dutfield, G., & Meléndez-Ortiz, R. (eds.) *Trading in knowledge development perspectives on TRIPS, Trade and sustainability*: 238-246. London: Earthscan.

Russell, M., & Russell M. 2009. *Afrikaners of the Kalahari: White Minority in a Black State*. London: Cambridge University Press.

Said, W.E. 1978. *Orientalism*. New York: Pantheon Books.

Said, W.E. 1994. *Culture and imperialism*. London: Vintage.

Said, W.E. 2003. Orientalism (25th edition). New York: Penguin.

Sauko, P. 2003. *Doing research in cultural studies: An introduction to classical and new methodological approaches*. London: SAGE Publications.

Schapera, I.1930. *The Khoisan Peoples of South Africa: Bushmen and Hottentots.* London: Routledge and Kegan Paul.

Serote, W. Initiative for protection of rights of holders of traditional knowledge, indigenous peoples and local communities. Unpublished paper presented at the WIPO Roundtable on intellectual Property and indigenous Peoples, Geneva, 23-24 July, 1998.

Shiva, V. 1998. *Biopiracy: The plunder of nature and knowledge*. Massachusetts: The South End Press.

Shiva, V. 2006. Biodiversity and traditional knowledge. In Sople, V.V. (ed.) *Managing intellectual property: The strategic imperative*: 188-206. New Delhi: PHI Learning Pvt. Ltd.

Sillitoe, P. (ed) 2006. *Local knowledge vs global science: approaches to indigenous knowledge in international development*. Oxford: Berghahnbooks.

Sinclair, A.G.M. 2010. "Archaeology and Contemporary Society: Issues in the Reburial of Human Remains". Http://pcwww.liv.ac.uk/~Sinclair/ALGY399_Site/reburial.html (accessed 25 February, 2010).

Singh, Y. 1999. Hypoxis: Yellow stars of horticulture, folk remedies and conventional medicine. *Veld & Flora* 85: 123-125.

Singh, Y. 2004. Hypoxis. Natal Herbarium, Durban.Http://www.plantzafrica. com/planthij/hypoxis.htm (accessed 24 May 2008).

Smit, B.J., Albrecht, C.F., Liebenberg, R.W., Kruger, P.B., Freestone, M. Gouws, L., Theron, E., Bouic, P.J., Etsebeth, S., & van Jaarsveld, P.P. 1995. A phase I trial of hypoxoside as an oral prodrug for cancer therapy – absence of toxicity. *South African Medical Journal* 85: 865-870.

Smith, L.T. 2005. *Decolonizing methodologies: Research and indigenous peoples.* London: Zed books.

Snijman, D.A., & Singh, Y. 2003. Hypoxidaceae. In: Germishuizen, G., & Meyer, N.L. Plants of southern Africa: an annotated checklist. *Strelitzia* 14: 1071-1074.

SA (South Africa) Retail Chemist, August 1, 1997. Http:// www.lind.org.zw/people/herbs/hypoxis.htm (accessed 16 July 2005).

Spivak, G.C. 2005. Foreword: Upon reading the companion to post-colonial studies. In: Schwarz, H., & Ray, S. *A companion to post-colonial studies*: x-xxii. Oxford: Blackwell.

Sterling, J. A. L., & Hart. G.E. 1981. *Copyright Law in Australia and the rights of performers, authors and composers in the Pacific region*. Sydney: Legal books.

Stern, A. 2006. Intellectual property Laws 523/5011, LLM Certificate course. Johannesburg: School of Law, University of Witwatersrand, 2006.

Sullivan, T. J., Abraham, M.& Griffin D. J. G. 2000. NAGPRA: Effective repatriation programs and cultural change in Museums. *Curator* 43(3): 231-260.

Taubman, A. 2008. WIPO inter-regional forum on the role of intellectual property in the innovative economy. Http://www.ficci.com/media-room/speeches-presentations/2008/nov/ Theme4/ MrTaubman.ppt (accessed 3 March 2009).

Thomas, D. H. 2000. *Skull Wars: Kennewick Man, archaeology and the battle for Native American identity.* New York: Basic Books.

Thornton, R. 1987. *American Indian holocaust and survival: A population history since 1492*. Norman: University of Oklahoma Press.

Trade Related aspects of Intellectual Property Rights (TRIPS). 2009. http://www.wto.org/english/tratop_e/trips_e/trips_e.htm (accessed 08 March 2009).

Trope, J.F., & Echo-Hawk, W.R. 2000. The Native American Graves Protection and Repatriation Act: background and legislation. In: Mihesuah, D.A. (ed.) *Repatriation reader: Who owns American Indian remains?*: 123-168. Lincoln NE: University of Nebraska Press.

Tweedie, A.T. 2002. *Drawing back culture: The Makah struggle for repatriation.* Washingston: University of Washington Press.

United Nations Environment Programme (UNEP), "Indigenous knowledge in Africa: What is Indigenous Knowledge?" Http://www.unep.org/ik/Pages.asp?id=Home (accessed 13 February 2010).

YOU Magazine 10 July 1997.

YOU Magazine 10 August 1997.

Van Wyk, B.E., & Gericke, N. 2000. *People's plants: A guide to useful p*lants *of Southern Africa.* Pretoria: Briza.

Vaver, D. 2005. *Intellectual property rights: Critical concepts in law*. London: Taylor and Francis.

Virchow, D. 1999. *Conservation of genetic resources: Costs and implications for a sustainable utilisation of plant genetic resources for food and agriculture*. New York: Springer.

Visser, P. J. 1991. Copyright Law. Tydskrif vir die Hedendaagse Romeins Hollandse Reg (THRHR) 813.

Von Lewinski, S., Von Hahn, A., & Hassemer, M. (eds.) 2003. *Indigenous heritage and intellectual property: Genetic resources*. London: Kluwer Law International

Waters, A. (ed.) 2003. *American Indian thought: Philosophical essays.* Oxford: Blackwell Publishing.

Watkins, J. 1999. Ethics and Value Conflicts: An Examination of Archaeologists' Responses to Questionnaire Scenarios. *Plains Anthropologist* 44(170): 95–106.

Watkins, J. 2001. *Indigenous archaeology: American Indian values and scientific practice*. Walnut Creek, California: Altamira Press.

Watkins, J. 2005. Representing and repatriating the past. In: Blake, E. & Knapp, A.B. (eds). *Archaeology of Mediterranean prehistory*: 337-358. Cambridge: Blackwell Publishing.

Watt, R. 2000. *Copyright and economic theory: Friends or foes?* London: E. Elgar.

Weimer, R.D. 2005. Native American Grave Protection and Repatriation Act (NAGPRA) Legal and Legislative developments. CRS Report for Congress. Congressional Research Service. https://www.policyarchive.org/bitstream/ handle/10207/2529/ RL33031_20050810.pdf?sequence=1 (accessed 18 February 2009).

Westerlund, L. 2002. *Biotech patents: Equivalence and exclusions under European and US Patent Law.* The Hague: Kluwer International.

Wheeler, H. 1961. *Natural law and modern society.* New York: The World Publishing Company.

WIMSA Annual report - April 2001 to March 2002. Windhoek: WIMSA

WIMSA Report on Activities -April 2003 to March 2004.Windhoek: WIMSA.

WIMSA Report on Activities - April 2003 to March 2004. Windhoek: WIMSA

WIMSA – Working group of indigenous minority of Southern Africa. Http://www.wimsanet.org (accessed 15 July 2009).

WIPO, 1998. Roundtable on intellectual Property and Indigenous People. Geneva, 23-24 July. Global Intellectual Property Issues Division, Geneva.

Wolson, R. 2004. South Africa. In: Erbisch, F.H., & Maredia, K. (eds.) *Intellectual property rights in Agricultural Biotechnology*: 135-158. Cambridge: CABI Publishing.

Wolson, R.A. 2001. Towards TRIPS compliance: South Africa's experience and legislative reforms. Intellectual Property Manager, University of Cape Town. Http://www.ictsd.org/dlogue/2001-07-30/Wolson.pdf (accessed 30 September, 2007).

Woodmansee, M., & Jaszi, P. (eds) 1994. *The construction of authorship: Textual appropriation in law and literature*. Durham, NC: Duke University Press.

Working Group for Indigenous Minorities in South Africa (WIMSA). Http://san.org.za/wimsa/ home.htm (accessed 13 February 2006).

Working Together: A Survey of Tribal Perspectives on NAGPRA: Repatriation and Study of Human Remains. 2003. The *SAA Archaeological Record* 3(2):27-32.Http://www.saa.org/publications /thesaaarchrec/mar03.pdf (accessed 15 February 2009).

World Bank, 2000. IK notes: Indigenous knowledge and intellectual property rights. No. 19, April. Http://www.worldbank.org/afr/ik/default.htm (accessed 1 July 2009).

World Bank, 2006. IK notes: Cultural Heritage and Collective Intellectual Property Rights. No. 95. Http://www.worldbank.org/afr/ik/default.htm (accessed 1 July 2009).

World Intellectual Property Organization. 2001*. Intellectual property needs and expectations of traditional knowledge.* Geneva: WIPO.

World Intellectual Property Organisation. 2005a. *Intellectual Property and Traditional Knowledge*. Booklet no.2 dealing with intellectual property and genetic resources, traditional knowledge and traditional cultural expressions/folklore. Geneva: WIPO.

World Intellectual Property Organisation. 2005b. "The protection of traditional knowledge: Revised objectives and principles". Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore. 8th session June 6 to 10, Geneva: WIPO.

Wynberg, R. 2003. Biodiversity prospecting and benefit sharing in South Africa. In: *Developing access benefit sharing legislation in South Africa*: 56-81. Gland, Switzerland & Cambridge, UK: IUCN.

Wynberg, R. 2004. Bioprospecting access and benefit-sharing in South Africa: Towards a strategic assessment. A paper prepared for the National Botanical Institute as a contribution towards the Southern African Biodiversity support programme and National Biodiversity strategy and action plan. Cape Town: UCT. Http://www.eeu.uct.ac.za/thematic-areas/biodiversity-commercialisation-trade-and-social-justice/developing-regulations-relating-to-bioprospecting (accessed 30 November 2009).

Wynberg, R., & Burgener, M. 2003. Submission of comments on the Biodiversity Bill by the IUCN to the Parliamentary Portfolio Committee on Environmental Affairs and Tourism. A critical review of provisions relating to Bioprospecting, Access and Benefit-Sharing. Http://www.biowatch.org.za (accessed 15 February 2009).

Yalung, C.B. & Wala,L.1992.Statutory survey of state repatriation and burial protection Statutes. *Arizona State Law Journal* 24 (1): 419-433.

Young, R. 2004. *White mythologies: Writing history and the West.* New York: Routledge.

Zimmerman, L. 1992. Archaeology, Reburial, and the Tactics of a Discipline's Self-Delusion. *American Indian Culture and Research Journal* 16(2): 37–56.

Zimmerman, L. 1997. Anthropology and Responses to the Reburial Issue. In: Biolsi T., & Zimmerman, L. (ed.) *Indians and Anthropologists*. Tuscon: University of Arizona Press.

9. Appendix

A. Sample of questionnaire

Questionnaire on IKS and IPL in South Africa.
A. Background information 1. Name 2. Profession 3. Age 4. Tribal Affiliation 5. Location of interview
B. Products 1. What products do you sell? 2. Which products sell the most? 3. Have any products you know been converted to a pill / tablet / capsule sold in the pharmacies? 4. What do you know about the African potato? 5. Any other medicines you know about which have been converted?
C. Protection 1. Which community does it come from? 2. Does it (the African potato or any other plants identified above) have any ancient use in the communities? 3. Are the communities benefiting economically from the medical plants which have been converted to pill / tablet / capsule? 4. If they are not do you think the government should do something about it? 5. Are there any laws in your community protecting the knowledge of these plants? 6. Are there any rules\laws when planting or harvesting the above mentioned plants? 7. Are there any rituals\ceremonies associated with the harvesting of the plants? 8. If there are rituals/ceremonies and people do not adhere to them what are the negative effects of the plants? 9. Which plants are endangered? 10. How can we prevent them from becoming extinct? 11. How can you ensure that plants are available for users in your community?
D. Preparation and administration 1. How do you label your plants? 2. How do you prepare your plants for consumption? 3. How are these plants administered to clients? 4. Who are your main clients? 5. Any other information you would like to share with us?

A. Misappropriation

ARTICLE 1

PROTECTION AGAINST MISAPPROPRIATION

1. Traditional knowledge shall be protected against misappropriation.

2. Any acquisition, appropriation or utilization of traditional knowledge by unfair or illicit means constitutes an act of misappropriation. Misappropriation may also include deriving commercial benefit from the acquisition, appropriation or utilization of traditional knowledge when the person using that knowledge knows, or is negligent in failing to know, that it was acquired or appropriated by unfair means; and other commercial activities contrary to honest practices that gain inequitable benefit from traditional knowledge.

3. In particular, legal means should be provided to prevent:

(i) acquisition of traditional knowledge by theft, bribery, coercion, fraud, trespass, breach or inducement of breach of contract, breach or inducement of breach of confidence or confidentiality, breach of fiduciary obligations or other relations of trust, deception, misrepresentation, the provision of misleading information when obtaining prior informed consent for access to traditional knowledge, or other unfair or dishonest means;

(ii) acquisition of traditional knowledge or exercising control over it in violation of legal measures that require prior informed consent as a condition of access to the knowledge, and use of traditional knowledge that violates terms that were mutually agreed as a condition of prior informed consent concerning access to that knowledge;

(iii) false claims or assertions of ownership or control over traditional knowledge, including acquiring, claiming or asserting intellectual property rights over traditional knowledge-related subject matter when those intellectual property rights are not validly held in the light of that traditional knowledge and any conditions relating to its access;

(iv) if traditional knowledge has been accessed, commercial or industrial use of traditional knowledge without just and appropriate compensation to the recognized holders of the knowledge, when such use has gainful intent and confers a technological or commercial advantage on its user, and when compensation would be consistent with fairness and equity in relation to the holders of the knowledge in view of the circumstances in which the user acquired the knowledge; and

(v) willful offensive use of traditional knowledge of particular moral or spiritual value to its holders by third parties outside the customary context, when such use clearly constitutes a mutilation, distortion or derogatory modification of that knowledge and is contrary to ordre public or morality.

4. Traditional knowledge holders should also be effectively protected against other acts of unfair competition, including acts specified in Article 10bis of the Paris Convention. This includes

false or misleading representations that a product or service is produced or provided with the involvement or endorsement of traditional knowledge holders, or that the commercial exploitation of products or services benefits holders of traditional knowledge. It also includes acts of such a nature as to create confusion with a product or service of traditional knowledge holders; and false allegations in the course of trade which discredit the products or services of traditional knowledge holders.

5. The application, interpretation and enforcement of protection against misappropriation of traditional knowledge, including determination of equitable sharing and distribution of benefits, should be guided, as far as possible and appropriate, by respect for the customary practices, norms, laws and understandings of the holder of the knowledge, including the spiritual, sacred or ceremonial characteristics of the traditional origin of the knowledge. (WIPO 2005b).