

**THE PROTECTION OF INDIGENOUS
KNOWLEDGE WITHIN THE CURRENT
INTELLECTUAL PROPERTY RIGHTS
REGIME:**

**A Critical Assessment focusing upon the
*Masakhane Pelargonium Case***

**A thesis submitted in fulfilment of the requirements for the degree of
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LIST OF ABBREVIATIONS

ABS	Access and Benefit Sharing
ANC	African National Congress
AIDS	Acquired Immune Deficiency Syndrome
BSA	Benefit Sharing Agreement
BABS	Bio-prospecting, Access and Benefit Sharing Regulations
CBD	Convention on Biological Diversity
CPA	Communal Property Association
CSIR	Council for Scientific and Industrial Research
EPC	European Patent Convention
IDPs	Integrated Development Plans
IFRC	International Federation of Red Cross and Red Crescent Societies
IK	Indigenous Knowledge
IPM	Indigenous Peoples Movements
IPR	Intellectual Property Rights
MCPA	Masakhane Communal Property Association
NGO	Non-Governmental Organisation
NEMBA	National Environmental Management: Biodiversity Act
PIC	Prior Informed Consent
TBGRI	Tropical Botanical Garden and Research Institute
TLC	Traditional Local Councils
UN	United Nations
TRIPS	Agreement on Trade-Related Aspects of Intellectual Property Rights
US	United States
WIMSA	Working Group of Indigenous Minorities in Southern Africa
WIPO	World Intellectual Property Rights Organisation
WTO	World Trade Organization

DEDICATION

This thesis is dedicated to all the people who made the completion of this thesis possible. To my Dad, Duncan Sibusiso Msomi: thank you for your steadfast strength and the principles you imbued in me that allowed me to get thus far. I truly appreciate what you have invested in my future, and hope to make you proud. To my sister, Magcina Sinesipho Msomi, my brother Zama Ian Msomi, and my aunt, Thenjiwe Msomi: your unwavering support and belief in me have been invaluable.

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ABSTRACT

The use of indigenous knowledge (IK) and indigenous bio-resources by pharmaceutical and herbal industries has led to concerns about the need to protect IK in order to prevent bio-piracy and the misappropriation of indigenous knowledge and resources. While some commentators believe that intellectual property rights (IPR) law can effectively protect IK, others are more sceptical. In order to contribute to the growing debate on this issue, this study uses the relatively new and as yet largely critically unanalysed Masakhane Pelargonium case to address the question of whether or not IPR law can be used to effectively protect IK. It is argued here that discussion about the protection of IK is a matter that must be located within broader discussions about North-South relations and the continued struggle for economic and political freedom by indigenous people and their states. The Masakhane case suggests that IPR law in its current form cannot provide sufficient protection of IK on its own.

Incompatibilities between IPR law and IK necessitate that certain factors, most important of which are land, organised representation, and what are referred as 'confidence and network resources', be present in order for IPR law to be used with any degree of success. The study also reveals various factors that undermine the possibility of using IPR law to protect IK. In particular, the study highlights the way in which local political tensions can undermine the ability of communities to effectively use IPR law to protect their knowledge. The thesis concludes with several recommendations that will enable indigenous communities and their states to benefit more substantially from the commercialisation of their bio-resources and associated IK.

Chapter One:

Introduction

1.1 Introducing the Study

This study explores the question of whether or not intellectual property rights (IPR) law can successfully be used to protect indigenous knowledge (IK). Indigenous peoples and their knowledge were historically sidelined and undermined by the European states that colonised the territories in which they lived (Maweu, 2011: 37; Purcell, 1998: 261). The United Nations' (UN) recognition of the principle of self-determination and decolonisation contributed to the long fight for freedom by both colonised states and indigenous peoples (Barsh, 1994: 35). The principle pertained to the rights of all geographically separate and ethnically and/or culturally distinct nations to rule themselves (Barsh, 1994: 35). Indigenous people invoked this to claim and attain recognition as distinct societies with special collective rights in national and international decision making (Barsh, 1994: 34-36). The recognition of these rights was emphasised in the study of discrimination against indigenous populations in 1971 under UN Resolution 1589, the recognition of the right to self-government in the UNs Working Group on Indigenous Populations (replaced by the Expert Mechanism on the Rights of Indigenous Peoples in 2008) (doCip, 2008) and the International Labour Organisation's Indigenous and Tribal Peoples Convention, No. 169 (ILO Convention 169) in the 1980s, the right to environmental security at the Rio de Janeiro Earth Summit, ultimately culminating in the creation of a permanent forum for indigenous peoples in the UN system (Barsh, 1994: 33-34).

Initially, this fight for indigenous peoples' rights was led by indigenous peoples from North America (Barsh, 1994: 34). The efforts led by these communities meant that the definition of 'indigenous person' was primarily informed by the experience of North American indigenous peoples who were the first peoples to settle in pre-colonial areas. This definition was also easily applicable to Australian Aborigines (Bowen, 2000; Kuper, 2003). When previously colonised states gained their freedom and joined the UN, the definition of 'indigenous person' was broadened to include indigenous communities from Asia and Africa. The fight for the recognition of indigenous peoples' rights would lead to

increased interest and recognition of indigenous peoples' rights in international forums and organisations such as the UN (Barsh, 1994). This also mirrored increased interest in indigenous ways of knowing and understanding the world in fields such as Environmentalism and Development Studies which popularised its use in other fields in the 1980s (Agrawal, 2002; Dove *et al.*, 2007; Purcell, 1998: 258; Sillitoe, 2000). The term 'indigenous knowledge' (IK) gradually came to refer not only to the knowledge that was held by indigenous communities but also to ways of thinking about and understanding the world which challenged the hegemonic western development paradigm (Dove *et al.*, 2007: 129). The prolific use of IK in this manner has been noted by Horsthemke (2004: 31) when he states that IK has become a 'buzz phrase' that has had a profound effect on fields such as education, educational curricula, anti-racist, anti-sexist and post-colonial discourse.

Despite the increased interest in IK, there is as yet no agreed upon definition for the term (Bowen, 2000; Kuper, 2003; Cocks, 2006: 188). This is because there is still considerable debate and contention about what qualifies a person as indigenous and what amounts to knowledge (Agrawal, 1995, 2002; Bowen, 2000; Horsthemke, 2004, 2008). Regarding the first issue, there has been growing recognition that indigenous communities have not all had the same colonial experience and thus are not a homogenous group (Bowen, 2000; Kuper, 2003). In Africa and Asia, for example, there are often several groups of indigenous peoples within the borders of a single state (Bowen, 2000:3; Purcell, 1998). And, with regard to 'knowledge', it appears that concepts which would not traditionally be thought to fall under the definition of 'knowledge', such as beliefs and religion, are sometimes considered to be part of IK (Horsthemke, 2004: 32-33). The difficulty in arriving at a single definition of IK is thus an issue that must be dealt with by all who have an interest in the field of IK. It is also worth noting here, that indigenous communities do not all share the same knowledge, nor do they all wish to trade their IK as different types of knowledge may be held by different individuals for the benefit of the community. Indigenous communities may choose to trade particular types of knowledge whilst being more protective of others. This can however result in intra-communal tensions as some community members may pursue their own interests as noted in reviews of the San case which is discussed in Chapter Four (see Vermeylen, 2007; Wynberg *et al.*, 2009 for further discussion). In addition, there might be tension between the interests of indigenous

communities and the states in which they reside. Of particular concern is the recognition of indigenous as 'first peoples' with their own special collective rights which might clash with domestic laws as discussed in Article 24-29 of Expert Mechanism on the Rights of Indigenous Peoples, 2009. While being aware of these various tensions and the lack of homogeneity of indigenous communities and their attitudes to the commercialisation of IK, for the purposes of answering the research question, the thesis focuses on communities that have chosen to trade their IK. It also draws on widely recognised characteristics used to describe IK (discussed in Chapter Two).

The increased recognition and popularity of IK in the 1980s led to concerns about its protection. There was growing evidence that this knowledge was being widely used and appropriated without the permission of the communities that held the knowledge and without ensuring that such communities benefited from the use of their knowledge (Agrawal, 2002; Odora Hoppers, 2002a: 2-3; Purcell, 1998; Vermeyleen, 2007: 423). Related to these concerns were concerns that the world's bio-diversity and the knowledge pertaining to it were fast disappearing due to the spread of modernisation (Oguamanam, 2006). International agencies such as the World Bank and the World Trade Organisation (WTO) encourage the use of intellectual property rights (IPR) law to protect IK and the world's biodiversity, and point to international agreements such as the Trade Related Aspects of Intellectual Property Rights (TRIPS) of 1995 and the Convention on Biological Diversity (CBD) of 1993 as potential tools to be used to protect IK (Oguamanam, 2006). The use of IPR law to protect IK, however, is highly debated and hotly contested by all those who have an interest in the use of IK (Odora Hoppers, 2002a, 200b; Muzaka, 2011; Oguamanam, 2006). While opinions and arguments vary in their nuances, the general argument on the side of the proponents of the IPR regime is that IPR law is the strongest means to protect all intellectual property and that it helps to foster creativity and ingenuity within societies (Bird and Jain, 2008: 3; Ramcharan, 2013: 2-15). Those who argue against the use of IPR law claim that the IPR regime and IK relate to different forms of property ownership and are thus incompatible (Shiva, 1997; Thomas and Nyamnjoh, 2007: 13-14). These arguments are further complicated by the fact that the passing of TRIPS occurred in the World Trade Organisation (WTO) where the most powerful nations held sway rather than in the more equitable World Intellectual Property Organisation (WIPO) (Drahos and Braithwaite, 2004). Heavy political organising and negotiating behind the

scenes and beyond the control and knowledge of developing nations created suspicion of TRIPS on the part of poorer nations. This gave rise to accusations that TRIPS served economically and technologically advanced nations to the detriment of developing nations (Drahos and Braithwaite, 2004). However, the fact that several indigenous communities such as the San in South Africa and the Kani in India (both of which are discussed later in this thesis) managed to use IPR law to protect their IK suggests that it is possible to some extent to use IPR law in the interests of indigenous communities.

One such community is the Masakhane community in the Eastern Cape Province of South Africa. In 2010, this community successfully challenged patents that were held by the German company, Schwabe Pharmaceuticals, which pertained to the use of *Pelargonium sidoides* and *Pelargonium reniforme* (ACB, 2008a). The first patent that was challenged related to the method of producing extracts of the *Pelargonium sidoides* and/or *Pelargonium reniforme* using an aqueous-ethanol solvent (10-92% ethanol). Put more simply, Schwabe Pharmaceuticals patented the process of using a water and alcohol solution to extract the active ingredients in the *Pelargonium* root. The second patent related to the use of *Pelargonium* root extracts for treating AIDS and AIDS-related diseases including 'a vast number of bacterial, viral, and parasitic infections and inflammations; including TB, all respiratory tract infections, sexually transmitted diseases, etc...[It] preclude[d] everyone in the European Union and contracting states to the EPC (European Patent Convention) from using the two species of *Pelargonium* for AIDS and opportunistic disease' (ACB, 2008a).

The Masakhane community alleged that the patents held by Schwabe Pharmaceuticals were based on their IK which the company had appropriated without attaining Prior Informed Consent and without negotiating of a Benefit Sharing Agreement with the community. The attaining of Prior Informed Consent and the negotiating of a Benefit Sharing Agreement is required by the CBD of 1993 (CBD) and the South African National Environmental Biodiversity Act (NEMBA) of 2004 when an indigenous community's knowledge and/or bio-resource(s) are used (ACB, 2008a, 2008b). While the community was particularly concerned about the failure of Schwabe Pharmaceuticals to share the benefits that the company gained through its use of *Pelargonium*, the case which was eventually heard by the European Patent Office did not focus on these issues, but rather,

by employing patent law, ruled that Schwabe Pharmaceuticals had failed to satisfy the requirement of novelty for a patent (ACB, 2008a, 2008b). The community won the first case (relating to Schwabe's patenting of the extraction method), the result of which was that the patent was revoked. Following this, Schwabe Pharmaceuticals withdrew the second patent together with other patents pertaining to the use of the *Pelargonium* to treat AIDS and associated infections before the court case could run its full course. However, while the European Patent Office's decision resulted in the withdrawal of these patents, it did not require Schwabe Pharmaceuticals to create a Benefit Sharing Agreement with the Masakhane community, something which the community had hoped for (Interviews in 2011 with Nokhululekile Binda, Nosakhumzi Binda, Funeka Nkqayi, Zameka Nxakala). The case, nevertheless, is still heralded as a successful example of an indigenous community using IPR law to protect their IK because of the withdrawal and revocation of the *Pelargonium* patents (ACB, 2010b; Spicy IP, 2008; Spicy IP, 2010; *The Sunday Independent*, 1 May 2010; *The Cape Times*, 28 January 2010; Third World Network, 2010).

1.2 Goals of the Research

The aim of this study is to determine whether IPR law can be used successfully to protect IK. In order to explore this question, the thesis reflects critically on an instance where IPR law appears to have been used successfully by an indigenous community (*The Cape Times*, 28 January 2010; *The Sunday Independent*, 1 May 2010). Using the Masakhane *Pelargonium* case, the thesis seeks draw some general conclusions from the experience of the Masakhane community in order to determine the extent to which laws protecting intellectual property can be used to protect IK. This case is of considerable interest as it is a recent case, the implications of which have not yet been fully explored in the literature. It is also one of very few cases where a South African indigenous community has used IPR law to protect its interests. This case, therefore, presents a unique opportunity to explore the usefulness of and the possibilities presented by IPR law in the protection of IK.

1.3 Justification and Limitations of the Research

Indigenous peoples have been fighting for their rights and for recognition of their way of life since the end of World War II (Barsh, 1994: 33-35; Bowen, 2000: 12). While they have succeeded to some extent in that bodies such as the UN now provide special rights for indigenous communities (such as the recognition of self government and recognition as distinct societies in the states in which indigenous people reside) and that there are international bodies and organisations (such as the UNs Expert Mechanism on the Rights of Indigenous Peoples) geared towards further recognition of indigenous peoples' rights (Brash, 1994); the fight for freedom is on-going as indigenous communities continue to find themselves on the socio-economic margins of society while outside parties make use of their knowledge (van Niekerk and Wynberg, 2012). While this knowledge was either undermined or ignored in the past (Maweu, 2011: 37), the concern now is to try to ensure that this knowledge is not used without adequate recognition of its origins (Mazonde and Thomas, 2007; Odora Hoppers, 2002b). So, the question of whether or not IPR law can be used to protect IK and the interests of indigenous communities is partly about ensuring that the struggle for indigenous peoples' rights continues. If IPR law does protect IK then it should be used more extensively to improve the position of indigenous communities. On the other hand, if IPR law does not protect IK, then new ways of protecting indigenous communities' knowledge will have to be formulated as more and more people and companies use IK.

Answering this thesis question is also important because it holds implications for the relations between developing and developed states. Developing states are concerned that their indigenous bio-resources and IK are flowing out of their countries as a result of their commercialisation (Shiva, 1997a). Although developing states contain more than half the world's biodiversity and there has been an increase in the value and commercialisation of IK and indigenous bio-resources, developing states are as yet to benefit significantly from this commercialisation (Mshana, 2002; Shiva, 1997a). Rather, many argue that bio-resources and IK are traded for the benefit of the developed states with no discernible gain (monetary or non-monetary) for the developing world (Mshana, 2002; Shiva, 1997a, 1997b). Yet, if IPR law does provide a way to protect IK then benefits should flow to developing states as a result of the commercialisation of their indigenous peoples' IK and

bio-resources. For these reasons, the question of whether or not IPR law can be used to effectively protect IK is an important and pressing one.

Some of the limitations of the thesis include some difficulties in accessing important information during the course of the fieldwork. The community concerned is located in a fairly remote area in the Eastern Cape and communication with the various parties involved was not always smooth. Furthermore, the information obtained from different parties on certain matters, such as land ownership, was sometimes contradictory or unclear. This created some problems for the researcher but these issues were resolved sufficiently to enable the project to continue. These two limitations are discussed at more length in the Methodology section. It is also worth noting that there are very few academic texts which analyse the success of the Masakhane *Pelargonium* case because the case is so recent. Thus, the researcher had to rely on limited secondary sources and information gathered from fieldwork.

In addition, it is worth noting that the project, like many others, does face the shortcomings of the qualitative research method used (discussed below) such as difficulty in comparing and analysing answers provided by interviewees (Arthur and Nazroo, 2003: 111-112; Greef, 2005: 297). However, the advantages of this research method (discussed below) suit the purposes for which fieldwork research was undertaken, which was to primarily gather further information about the *Pelargonium* case, and give a voice to the Masakhane community. This was necessary because of the limited availability of academic texts on the case as has already been mentioned. The effect of the shortcomings to the goal of the thesis is thus limited.

1.4 Methodology

While this research project relies extensively on literature relating to the use of IPR law to protect IK and relating to the Masakhane community in particular, it is also partly based on fieldwork within the Masakhane community. A qualitative research approach was used through the conducting of semi-structured interviews with people with some connection to the use of *Pelargonium* in the area. Semi-structured interviews are premised on the assumption that interviewees hold a stock of knowledge (Flick, 2002: 80, 84) which the

semi-structured interview process can access and reveal more openly than a standardized interview or a questionnaire (Flick, 2002: 74). This is because ‘the theoretical background of the method is the interest in subjective viewpoints’ (Flick, 2002: 88) thus allowing a combination of different approaches (observational strategies and field research, for example) and question types (for example, descriptive and structural questions) to be used to reveal the knowledge or facts held by an interviewee (Arksey and Knight, 1999: 6-7; Flick, 2002: 74-92).

Three short fieldwork visits were made in 2011 to Alice, a town in the Eastern Cape Province of South Africa, close to where the Masakhane community is located. The initial exploratory visit resulted in the identification of suitable people to interview but, due to time constraints, the interviews could only be set for a later date. This visit also allowed the researcher to gauge how many people knew about the Masakhane case and to attain a better understanding of how the dual recognition of both democratic and traditional authorities divided rural community members. During the second and third fieldwork trips, several community members were interviewed. Where possible, these interviews were recorded and transcribed. In addition to the semi-structured interviews, conversations that were held with people to identify the Masakhane community and to identify people who could be interviewed also proved to be helpful. Since the primary aim of the fieldwork was to identify the Masakhane community and people within the community to interview, this meant that these conversations were not recorded. Field notes, however, were taken during the course of these conversations and were drawn on during the course of writing the thesis. The use of fieldwork notes as a reliable source of information and data collection has been noted in Arthur and Nazroo (2003: 132-133), De Vos (2005: 333) and Flick (2002: 168-170).

Interviewees were chosen on the basis of their knowledge and experience in relation to the protection of IK. This way of selecting participants can be described as ‘purposive sampling’ (see Ritchie *et al.*, 2003:78-80) in that the interviewees were selected on the basis of their characteristics and experience in relation to the use of *Pelargonium* in the area and their knowledge of the case against Schwabe. Participants include elderly Masakhane community members who have been using *Pelargonium* to treat respiratory infections since they were young, community members who had been harvesting and

selling *Pelargonium* from Masakhane land, a Masakhane Communal Property Association (MCPA) member and representative, an University of Fort Hare Botany professor who has conducted research pertaining to the sustainability and use of *Pelargonium* around Masakhane, and lastly, the owner of Gower Enterprises, which is the local harvesting company that collects *Pelargonium* plants for Schwabe Pharmaceuticals in the Eastern Cape. Several other informative but unrecorded conversations were held with people who reside in and around Alice in the researcher's pursuit to locate the Masakhane community and in finding the contacts that had a direct stake in the results of the Masakhane *Pelargonium* case. These conversations were critical in providing contextual information such as the number of villages that surround Alice and how to best approach the Masakhane community, as well as in informing the researcher about the tense relations that exist between the local democratic bodies and the local traditional authority led by Chieftainess Tyali. The fieldwork also provided a voice for the marginalised Masakhane community in a matter that affected them directly. An example of this marginalisation is apparent in the fact that the Masakhane community was not accurately identified in the media. Rather, the community was broadly referred to as an indigenous community near Alice or in the Eastern Cape thus giving inadequate attention to the unique nature of the case and this specific community's interests and its plight (see *Mail and Guardian*, 22 January 2010; *The Sunday Independent*, 1 May 2010).

All interviewees were asked several general questions to gauge how much each person knew about the Masakhane *Pelargonium* case and what their views on the case were. Specific follow up questions were then asked in relation to the information and perspectives they presented. Since all the people that were interviewed were related to the case in different ways, the researcher wished to get each interviewee's personal views and opinions. The general questions were thus used to start the conversation and to determine each person's involvement and knowledge of the case. Thereafter, a conversational approach was used so that each person could air their opinions and lead the conversation. The researcher asked probative questions in order to clarify a matter or point raised by the interviewee or to refocus the conversation on the *Pelargonium* case. Some of the interviews were conducted in English; others in Zulu and Xhosa. A Xhosa translator was used where the researcher's grasp of Xhosa was insufficient.

The fieldwork presented some difficulties which ought to be noted here. In the first instance, although the Masakhane *Pelargonium* case was covered by the media, there was insufficient information in the media to identify the exact community concerned and attempts to acquire this knowledge through the Non-Governmental Organisation (NGO), African Centre for Bio-safety, which had worked with the Masakhane to challenge the Schwabe Pharmaceuticals patents were, unsuccessful. Not knowing the name of the community meant it was difficult to identify the community out of roughly 40 other rural community villages that surround Alice, which is the closest town to the Masakhane community. In addition, local traditional structures prevented the researcher from making direct contact with Chieftainess Tyali who is the traditional leader for the area. A conversation was eventually arranged with a spokesperson of Chieftainess Tyali which served to enlighten the researcher as to the role that local politics and, in particular, the tensions between traditional and other authorities, played in the case. However, traditional authorities and their representatives were not always willing to talk to the researcher or to share relevant information.

Another difficulty that the researcher encountered was that the information given on certain matters, such as the success of the Masakhane community's land claim (discussed in Chapter Five) and the amounts that are paid to harvesters of *Pelargonium* were inconclusive or contradictory. Despite these difficulties, the two fieldwork sessions provided adequate information for the research to proceed. Indeed, the contradictory information assisted the researcher at times to identify pressing issues and tensions which affected the outcome of the Masakhane *Pelargonium* case, such as the tensions within the community and between the community and surrounding communities.

Interviews with community members are referenced throughout the thesis by providing the name and surname of the interviewees. It should be noted that several family members who shared the same surname were interviewed. Where they are cited, their first names are given to distinguish between them. All the interviews were conducted in 2011 and all interviewees were aware of the purposes for which the interviews were being conducted and gave their informed consent to be interviewed.

1.5 Organisation of the Thesis

The chapters in the thesis are arranged as follows: Chapter One introduces the thesis question and the goals of the research. Chapter Two provides critical background information as to how the idea of IK arose and the relevant IPR law. Most importantly, however, the chapter considers why there is no agreement as to the definition of IK and presents the definition that is used for the purposes of the thesis. Chapter Three reviews existing debates in literature relating to the use of IPR law to protect IK. The purpose of this chapter is to clearly set out the theoretical arguments pertaining to this debate. Chapter Four briefly reviews cases where indigenous communities have used IPR law to protect their IK in order to gauge the factors that can either hinder or aid the outcome of case. The identified factors are helpful in analysing and exploring the issues raised by the Masakhane *Pelargonium* case in relation to relation to the protection of IK. Chapter Five introduces the Masakhane *Pelargonium* case whilst Chapter Six brings out some general points relating to the protection of IK which the Masakhane case highlights. The final chapter summarises the research findings made in the thesis, enabling the researcher to ultimately answer the research question of whether or not IPR law can used to protect IK.

Chapter Two:

Indigenous Knowledge: Issues of Definition and Commercialisation

2.1 Issues of Definition

Indigenous knowledge (IK) has gained increasing recognition and value in the global knowledge economy (Drahos and Braithwaite, 2004). This is evident not only in the fact that it has become the basis of a multi-billion dollar industry but also in the ways in which it is being used in various fields. Its use has been assigned importance, for example, in the field of development (Sillitoe, 2000), in environmental campaigns (Brosius, 1997), and in academia (Semali and Kincheloe, 1999; Horsethemke, 2004: 31). While IK has attracted increasing recognition and value, there is much dispute about what it is and exactly how it should be defined (Bowen, 2000; Kuper, 2003). Historically, the term 'indigenous' was used to refer loosely to all 'seemingly culturally homogenous non-Caucasian groups encountered by Europeans as they expanded into the so called non-[w]estern world' (Purcell, 1998: 259). The knowledge held by such indigenous people was typically dismissed in the past, but today it is perceived more positively and used more extensively (Vermeulen, 2007: 423; Sillitoe, 2000: 4). Consequently, it is hoped by some that its commercialisation, if carefully done, may contribute to improving the historically disadvantaged position of indigenous peoples and their knowledge (Bird and Jain, 2008: 3; Diaz, 2005: 10; Ramcharan, 2013: 2-15).

The term 'IK' is most often used to refer to the commonly held, informal knowledge of indigenous people in societies that are dominated by the descendants of settlers, but IK is also used to refer to the commonly held knowledge of other historically marginalised peoples (Bowen, 2000: 13; Purcell, 1998: 259-260; The United Nations Declaration on the Rights of Indigenous Peoples, 2008: 4). While the term first gained prominence when it was used to refer to the knowledge of indigenous groups like Native Americans in North America and Aborigines in Australia, other groups which do not necessarily share the same colonial experience, but have either been historically marginalised or are currently being marginalised and have knowledge which is held in common and that has been passed down from generation to generation, have also recently had their knowledge recognised as IK (see Cocks, 2006; Moran, 1998, 2000 for examples). Several countries in

Africa and Asia have a number of indigenous groups who hold IK despite the fact that these groups have quite a different colonial experience to those of the Native Americans and Aborigines (Moran, 1998, 2000; Bowen, 2000: 12-13).

2.1.1 The Rise of the Idea of Indigenous Knowledge

Knowledge held by indigenous people, like the people themselves, was historically treated with contempt by outsiders and was either largely dismissed or actively undermined as part of the colonial project (Maweu, 2011: 37; Purcell, 1998: 261). The end of World War II, the creation of the UN and the growing recognition of the right to self-determination provided the space for indigenous peoples to begin to claim their human rights and right to self-determination (Barsh, 1994; Bowen, 2000: 12). Previously, the privileging of the Westphalian state system by European states meant that there was little space for self-representation and the assertion of universal human rights in international relations (Elias and Sutch, 2007: 21-29). It was the state, as a historically European construct, which was prioritised above people's rights. The interests of the people were linked to the interests of the state and, therefore, state interests were privileged above the interests of specific groups within the state. The interests and rights of indigenous minorities, however, had even less space than other groups within the Westphalian state system due to the imperialist pursuits of western states.

The end of World War II, however, saw a general shift away from the privileging of the state as referent towards a greater concern for human and collective rights and the right to self-determination (Barsh, 1994: 33-35; Bowen, 2000: 12). Using Article I of the UN Charter, which deals with the right to self-determination, indigenous peoples began struggling for the recognition of their unqualified right to self-determination and the protection of their way of life (Barsh, 1994: 35). The attention that indigenous peoples and their ways of knowing receive today is the result of at least five decades of political mobilisation in the pursuit of equal recognition as legal subjects in international law (Barsh, 1994). Of particular interest here is the work done by Indigenous Peoples' Movements (IPM) from North America and Australia which accounts for the initial association in the UN of the term 'indigenous peoples' with Native American and Aboriginal Australians.

The increased recognition of indigenous peoples' rights and their interests in international arenas such as the UN eventually created the space for indigenous peoples' understanding of the world to be given greater consideration. Out of this context, IK would not only become defined as knowledge commonly held by historically marginalised groups, but also as a means to critique the dominant western development paradigm (Purcell, 1998: 264). Because it began to be used to as a method of critique, it was later taken up and made popular within the fields of Environmental and Development Studies (Agrawal, 2002: 1; Dove *et al.*, 2007: 129). Agrawal (2002: 1) states, for example, that 'the contemporary attention to IK is in no small measure a result of its successfully posited connection with development and environmental conservation'. Although made popular by these two fields, IK today is used in various ways by various actors, each with different interests which make a precise and agreed upon definition a contentious issue (Semali and Kincheloe, 1999).

2.1.2 Different Interests, Different Definitions

The popularity of IK, specifically the fact that there are so many interests and various ways of using the term, means that there is a great deal of controversy about how it is defined. The controversy is widely recognised by writers in the field (see for example Brush, 1996; Bowen, 2000; Semali and Kincheloe, 1999; Kuper, 2003; Shrikantaiah, 2008: 14-16). It is, as Semali and Kincheloe (1999: 3) argue, 'a term that is useful for a variety of purposes in a plethora of contexts'. Despite the different definitions and different uses of the term there is a general consensus that it refers to uncodified knowledge that is held in common by historically marginalised peoples and that has been passed down from generation to generation (Brush, 1996: 4-5; Sillitoe, 1998: 188-189). The various ways of defining IK also carry with them an implicit recognition of the historically asymmetrical power relations between the developed and developing world and the way that these have affected how various types of knowledge are valued (Purcell, 1998: 258; Shiva, 1997). So called 'western' or 'scientific' knowledge has historically been recognised and promoted while other, 'non-western' ways of knowing and understanding the world have been largely undermined or excluded. As the dominance of 'western' knowledge began to be criticised in fields such as Development Studies in the

1980s, the popularity of IK increased (Agrawal, 2002: 1; Dove *et al.*, 2007: 129). The increased popularity of the term, however, did not make attempts to clearly define it easier.

The two sections that follow focus on some of the issues that make arriving at one definition of IK difficult. Specifically, the section to follow is concerned with the difficulties that exist with regard to how narrowly the terms ‘indigenous’ and ‘knowledge’ should be defined. In the first instance, while the term ‘indigenous’ has most often been used to refer to those groups that share a particular colonial history, such as the Native Americans and Aborigines, it is not clear to what extent it can be broadened to include other marginalised groups. Regarding the second issue, what types of knowledge are being referred to when we use the term ‘knowledge’? Can everything that is a product of the human mind be considered knowledge and, if not, what must be excluded?

2.1.3 Who is an Indigenous Group?

Due to the historical context out of which IK arose, specifically the activism of indigenous peoples from North America (Barsh, 1994: 34), the term became narrowly associated with knowledge that is held by groups with a particular colonial history – namely groups descended from the original inhabitants of a particular area who were violently dispossessed by settlers and, resultantly, dominated by them. The term, therefore, is commonly associated with groups like the Native Americans or the Australian Aborigines who were associated with the initial struggles for the recognition of indigenous people’s rights in international arenas such as the UN. International institutions such as the UN, therefore, popularised a narrow definition of the term ‘indigenous’ associated with the latter indigenous groups (Bowen, 2000). If the ‘indigenous’ part of IK is defined in this narrow way then it is applicable only to inhabitants living in states where indigenous people are a minority group with experiences of oppression at the hands of settlers. However, states which do not have a settler history and colonial experience, are also likely to be home to marginalised and exploited groups, although these groups need not always be minority ethnic groups. It has been recognised that there are groups in other parts of the world, such as Asia and Africa, whose people do not share the same colonial experience as the Native Americans or Australian Aborigines, but who have had their knowledge

marginalised in a similar way (Purcell, 1998: 259-260) (see Chapter Four for examples of such groups). As Purcell (1998: 259-260) points out, the definition and use of the term varies around the world according to the state and the people using the term.

Whether one uses a narrow definition (associated with groups that have a particular colonial history like the Native Americans and the Australian Aborigines) or a broader one (where those classified as indigenous peoples are not necessarily minority ethnic groups oppressed by a non-indigenous majority), there are conceptual issues that have yet to be conclusively resolved (see Bowen, 2000; Cocks, 2006, and Kuper, 2003 for further discussion). When a narrow definition is used, one that insists that IK applies only to the knowledge of minority indigenous groups oppressed by white settlers or, at least, to minority indigenous groups who are oppressed by a non-indigenous majority, a particular colonial history is privileged and the definition becomes too narrow to apply to other groups. Broad definitions, on the other hand, are criticised for being too inclusive, thus opening the possibility of peculiar applications up as it becomes difficult to see who should and should not be included in these definitions (Kuper, 2003: 389).

2.1.4 What Do We Mean by Knowledge?

The term 'knowledge' is often understood very broadly in discussions of IK. It has been used to refer to a wide range of topics, inclusive enough to cover beliefs, practices, customs, worldviews and perceptions, and has included both theoretical and factual knowledge (Horsthemke, 2004: 32-33; Maweu, 2011). It is often used in a way that includes concepts or areas that would not be considered by all to correctly fall under the category of 'knowledge' such as beliefs, customs and worldviews (Argawal, 1995; Maweu, 2011). Distinctions are also sometimes made between different types of knowledge, including, for example, technical knowledge (see Sillitoe, 1998), medicinal knowledge (see Dold and Cocks, 2002) and environmental knowledge (see Maweu, 2011; Mazzocchi, 2006: 463-464).

Aside from these issues, the greatest issue around defining 'knowledge' in the term 'IK' is that some commentators describe it as differing greatly from what is referred as 'western' or 'scientific' knowledge. Part of the appeal of IK is that, unlike 'western' knowledge, it is

considered not to be based on a divisive and alienating methodology, which calls for the observer or knower to be placed outside of the opinions, influences and histories of the researcher and society (Semali and Kincheloe, 1999). Rather, what characterises IK, and what made it popular in the first place, is its apparently holistic approach to understanding and viewing the world (Maweu, 2011: 35-36).

The differences between 'indigenous' and 'western' knowledge, however, are often overstated. Several writers have written about the alleged differences between the two knowledge systems. Authors such as Agrawal (1995, 2002), Horsthemke (2004, 2008), Semali and Kincheloe (1999) and Oguamanam, (2006) all discuss the alleged differences between western knowledge and IK. Although some differences between the two systems do exist (Maweu, 2011: 35-36), it has been argued by authors such as Agrawal (1995) and Horsthemke (2004), that the alleged differences have been exaggerated to serve particular interests and that there are, in fact, few significant differences between these kinds of knowledge. Part of the construction of the dichotomy between so called 'western' knowledge and IK is the implication that the two are separate and fixed in time and space (Agrawal, 1995: 422; Semali and Kincheloe, 1999). However, there is evidence to suggest that there has been intimate interaction between knowledge classified as 'western' and knowledge that is considered to be 'indigenous' (Agrawal, 1995: 422). One of the reasons why differences may be overstated is because IK is seen by some to provide a challenge to the dominant western paradigm of knowledge and that it offers alternative ways of seeing and understanding the world (Semali and Kincheloe, 1999). Instead of seeing the world from the removed objective position advocated by 'western' science, which is considered by some to be divisive and destructive, the approach of IK is argued to present a more holistic knowledge system and, therefore, to be more compatible with a sustainable development paradigm (Semali and Kincheloe, 1999; Dove *et al.*, 2007). However, viewing IK in this way can result in an oversimplification and exaggeration of the differences between IK and other kinds of knowledge.

Although it is necessary to guard against a simplified and exaggerated distinction between so-called 'western' knowledge and IK, it is also necessary, when talking about IK, to define 'knowledge' in a somewhat more flexible and broad manner than it is defined in other contexts. Authors such as Semali and Kincheloe (1999), Brush (1996) and Odora

Hoppers (2002a), acknowledge that the differences between ‘western’ and IK have often been overstated, but argue that some distinction between the two knowledge systems is appropriate. IK, for example, often includes aspects that would not usually qualify as objective knowledge in the west. Its holistic approach includes belief systems and ideas about spirituality (Semali and Kincheloe, 1999). This is part of what makes it useful to provide an alternative way of seeing the world. As mentioned earlier, the term ‘knowledge’ when used in the context of IK is used broadly to refer to different types of knowledge, including musical, environmental and medicinal knowledge and the like. Indigenous medicinal knowledge is of particular interest in this thesis and refers to the technical knowledge that indigenous communities hold of the healing properties of plants and other natural resources that they have used and developed over generations as an integral part of their healthcare (Bodeker, 2003: 785-786).

2.1.5 How Is Indigenous Knowledge Defined in the Thesis?

In the thesis, the term ‘IK’ refers to holistic, communally held knowledge which has been produced and passed down over several generations by a marginalised indigenous community. Such knowledge is typically not codified as it has been passed down orally from generation to generation, and there is no single identifiable owner of such knowledge due to the manner in which it has been produced. A ‘marginalised indigenous community’ is understood as any indigenous community that is locked out of or is on the fringes of the social, economic and/ or political processes of the state within which they live and, therefore, is vulnerable to exploitation. The term ‘indigenous’ is not used here in a way that privileges a particular colonial experience thus making the term applicable only to indigenous minorities like the Native Americans of North America and the Aborigines of Australia. Rather, because of the impracticalities of a narrow definition and the fact that a broader definition of indigenesness that is currently being used has been accepted by various bodies of the UN, the term ‘indigenous’ here refers to a much broader category. This thesis adopts the view that in order for a group to qualify as a producer of such knowledge it must be both indigenous and marginalised, but it need not necessarily be an indigenous minority living in a society dominated by non-indigenous inhabitants.

This definition is mindful of the historically unequal power relations between former colonial and colonised states, but also of the fact that such knowledge is held by vulnerable groups that do not necessarily share the same colonial experience. It recognises not only how indigenous peoples and their knowledge have been historically marginalised and discriminated against, but also that this history continues to affect both them and other groups by virtue of their colonial past. In other words, colonialism excluded certain ways of knowing and certain people's knowledge from the dominant narrative. This exclusion continues to affect many communities. A definition of IK similar to the one used in the thesis is used in South African policy documents. In such documents the terms 'traditional knowledge' and 'indigenous knowledge' are used interchangeably to refer to knowledge held by the marginalised indigenous groups (see for example Department of Trade and Industry, 2008; Department of Trade and Industry Briefing, 2011).

As was mentioned previously, the focus of this thesis is on the Masakhane community, a marginalised Xhosa community in Alice in the Eastern Cape. The community concerned is considered to be largely vulnerable; however, because they are not a minority ethnic group in the area, they are not the kind of group typically associated with having IK. In South Africa, several ethnic groups settled in the area which is now South Africa before the arrival of white colonisers. The colonisers never achieved numerical majority although they dominated politically and economically for centuries. Furthermore, while the Xhosa, as a broader ethnic group, are not isolated or excluded from political and social processes today as they were in the past (and as groups such as the Native Americans and Australian Aborigines might still be), the Masakhane community members are a relatively powerless community. This means that a narrow definition of IK cannot be used here. Rather it is more fitting to use a broad definition which focuses upon marginalisation. In other words, while the community concerned belongs to a larger Xhosa community which is not marginalised, the Xhosa community in Alice is considered to be vulnerable and, therefore, susceptible to exploitation (ACB, 2008b, van Niekerk and Wynberg, 2012). The knowledge held by this community also has features in common with the kinds of knowledge that are typically considered part of IK; that is, it is held in common, has been passed down generationally and has not been formally codified. Furthermore, the Masakhane community's knowledge has been recognised as IK by NGOs such as the African Centre for Bio-safety and the Berne Declaration which recently used this

definition of IK in their defence of the Masakhane community's IPR (ACB, 2008a, 2008b). Furthermore, their knowledge has also been described as IK by several authors who have written about the Masakhane community's attempt to protect its IK (see Mayet, 2010; and Myburgh, 2010; van Niekerk and Wynberg, 2012).

2.2 The Commercialisation of Indigenous Knowledge

Many communities depend on the knowledge of the healing properties of plants and other natural resources that they have used and developed over generations as an alternative source of health care in a world where accessibility and affordability of formal health care systems are limited (Unnikrishnam and Sunetha, 2012: 16). Statistics on healthcare and local communities in developing states show that over 80% of indigenous communities still depend on indigenous medicinal knowledge for their healthcare (Elujobah *et al.*, 2005). Other uses for indigenous medicinal knowledge, which are not however the focus of this thesis, pertain to its use to protect oneself from evil spirits as well as the need to ensure good health (Cocks and Møller, 2002; Ngubane, 1977). The uses of indigenous medicinal knowledge for the protection against evil and to ensure good health are aspects of healthcare that cannot be addressed in western medicine. Thus the commercialisation of this knowledge is a matter of grave concern in terms of the effects that it has on these communities. The annual market value of pharmaceutical products that have been developed by using IK is very large and continues to grow. For example, pharmaceutical products derived from tropical rainforest-based medicinal plants that are used by indigenous communities are estimated to be worth US\$43 billion (Oguamanam, 2006: 5). Research also indicates that at least 25% of American prescription drugs are based on active ingredients that were identified using IK (Oguamanam, 2006: 5). These statistics point to the increasing growth and worth of IK in the pharmaceutical and commercial herbal industries.

The increasing commercialisation of IK has, however, also given rise to growing concerns about the protection of IK from exploitation and misappropriation. Increasingly, IPR law is being used to protect IK, but the use of such law to protect IK, as well as the broader issue of the commercialisation of IK are both contentious issues. Opinions vary with some arguing that IK should not be commercialised at all (as discussed by Shiva, 1997a, 1997b),

others promoting the commercialisation of IK (as discussed by Abrell, 2009; Shiva 1997a, 1997b) , and others arguing that IK ought to be commercialised but that IPR law is not appropriate for the protection of IK (Wynberg, 2004, 2009; Wynberg et al, 2009). These contending arguments will be discussed at greater length in the next chapter.

2.2.1 What is Intellectual Property?

This thesis focuses particularly on the usefulness of protecting IK through IPR law. It is necessary at the outset, therefore, to outline what IPR law is and how it came to be used in the protection of IK. Intellectual property is a legal concept that refers to various kinds of intangible property (Fisher, 1999: 1). IPR law confers exclusive rights of ownership and economic value in intangible property to inventors or innovators. In essence, anything that is the product of intellectual creativity can be considered intellectual property. Intellectual property can be held in various forms – an invention, a piece of music, a work of art, even a word or a phrase can be considered intellectual property (World Intellectual Property Organisation, 2008). Some of the most common intellectual property includes patents, copyrights, trademarks and industrial design rights and trade secrets (World Intellectual Property Organisation, 2008). Although the idea of intellectual property is several centuries old, there is still a great deal of controversy around it (Sell and May, 2001: 468). Mostly this is because it confers ownership and economic value on things that are not traditionally considered possible to be owned because of their intangible nature. Placing ownership and commercial value on ideas and creativity rather than on tangible property such as land, for example, is considered to break from traditional Lockean principles of property ownership (Long, 1991; Shiva 1997a).

The most important thing to grasp here, which distinguishes intellectual property from the traditional Lockean concept of property, is the separation between knowledge and techniques on the one hand, and the actual product or craft produced as a result of that knowledge or techniques, on the other. In traditional ideas of ownership, the product and the techniques or knowledge necessary for its production were not valued separately in the sense that they are in today (Fisher, 1999; Sell and May, 2001). Although the idea of trade secrets and guilds did exist in ancient societies and, therefore, there was some recognition of the difference between craft techniques and the actual product or craft produced, they

were not separately valued as property with economic value. Under the current, internationally standardised IPR regime, not only is there a clear distinction between the two, but the craft techniques and processes are seen as property and endowed with commercial value in their own right (Long, 1991: 858). Intellectual property deals specifically with the ownership and commercialisation of the intangible aspect of craft production: the craft techniques, processes or knowledge rather than the actual product or craft produced.

There are therefore two elements to intellectual property. Firstly, the explicit separation of tangible from intangible aspects of a work, and secondly, the notion that the intangible products can be owned and have commercial value (Long, 1991: 858). In more modern concepts of intellectual property, not only is there a distinction between the tangible and the intangible, but the intangible is recognised as a separate thing, capable of being owned and sold on its own without any connection to a tangible product (Long, 1991).

The significance of intellectual property lies not only in its recognition of intangibles but also in the rights that it bestows upon the owner of such knowledge, namely the exclusive rights of use, sale and trade of that knowledge for a specific period of time (Long, 1991). In contemporary commercial or economic terms, this confers upon the person exclusive control of a commodity or service in a particular market. This control or privilege makes it possible to manipulate the market because the person with the intellectual property is the only seller. Thus, the value of intellectual property lies in the rights of exclusivity that are granted to the owner of intellectual property thus essentially allowing them to profit from their control and exclusive rights.

2.2.2 Formalisation of International Intellectual Property Rights Law

Contemporary IPR law grew out of ideas of intellectual property that arose in Europe. Although other regions and societies had ideas about IPR, it is the European understanding of intellectual property that shaped the development of contemporary IPR law (Prager, 1944; Sherman and Bentley, 1999). With the start of colonialism, these ways of understandings property were spread to other lands and were gradually perceived as being valid forms of ownership by the former colonies.

The first formal and general law of intellectual property was the Statute of Anne, the long title of which was 'An Act for the Encouragement of Learning, by Vesting the Copies of Printed Books in the Authors or Purchasers of such Copies, during the Times therein mentioned', which is considered to be the first copyright act (Sherman and Bentley, 1997). It was passed in 1710 in England. The statute would be the first to formally settle and codify many of the ideas about intangible property. It codified, for instance, the recognition of the separation between tangible and intangible property (Sherman and Bentley, 1999: 41).

Although individual states each developed their own ideas about intellectual property, D'Amato and Long (1997) demonstrate how the Industrial Revolution in Europe played a role in the development of international standards of IPR law. The technological developments that transpired during the Industrial Revolution provided an increasingly global market place for products that were protected by domestic law. The increasingly international nature of the market for such products in turn gave rise to growing concerns over the differing levels of protection that were awarded to such products. Initially, states came to bilateral and multi-lateral agreements with regard to IPR. However, the increasing global market and the desire to trade internationally made it necessary to create a much wider and 'user-friendly' IPR framework.

The first recognised attempt to harmonise IPR law internationally is the Paris Convention for the Protection of Industrial Property created in 1883 in France (D'Amato and Long, 1997). The treaty resulted in the standardisation of some of the principles relating to patents, trademarks and industrial designs in Europe (D'Amato and Long, 1997: 8). The treaty forces states to respect each other's IPR law. It was initially administered by the United International Bureaux for the Protection of Intellectual Property, also known as BRIPI (*Bureaux Internationaux Réunis pour la Protection de la Propriété Intellectuelle*). The bureaux was created to administer both this treaty and the second important international agreement, the Berne Convention for the Protection of Literary and Artistic Works (1886), which was the first international agreement on copyright law (D'Amato and Long, 1997). The bureau was replaced by the World Intellectual Property

Organisation (WIPO) in 1970 and continues to administer intellectual property agreements to this day.

The third important international agreement is the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) created in 1995. It is considered to be the most important agreement on intellectual property of the 20th century (Blackney, 1997; Drahos and Braithwaite, 2004: 2). The agreement's importance lies in the fact that all World Trade Organisation (WTO) members are obliged to sign it and, since it is difficult to trade internationally outside of the WTO, there is pressure on most states to accept standardised minimum requirements in all intellectual property (Blackney, 1997). Led by the most powerful and technologically advanced nations in the world, namely the United States (US), Japan and the United Kingdom (UK), the agreement was successfully passed in January 1995 after much political lobbying and negotiations (Drahos and Braithwaite, 2004). The passing of TRIPS was highly contested not only because it spread a specific IPR system that was created and developed out of a specific (European) historical and social context throughout the world, but also because of the political lobbying which characterised the negotiation process involved. TRIPS was passed through the WTO where developed nations are generally seen to have considerable political clout rather than through WIPO where all nations have relatively equal power (Drahos and Braithwaite, 2004). Thus, it has been argued that the agreement only principally serves developed nations' interests (see Drahos and Braithwaite, 2004 for further discussion).

The fourth important international agreement is the UN Convention on Biological Diversity (CBD). Created in 1993, it has been signed by 168 countries to date (Convention on Biological Diversity Website, 1993). Although the CBD is concerned primarily with the protection and preservation of biological diversity, it indirectly deals with intellectual property due to its instructions to the users of a state's genetic resources to take steps to protect and respect indigenous peoples' knowledge. All states that wish to be seen as champions of bio-diversity have to ratify the CBD. Together, this and the TRIPS agreement are seen as the most important agreements in the protection of IK because of the way in which they standardised IPR law and recognise indigenous peoples' knowledge. The thesis, therefore, will focus on these two agreements.

It is worth noting here that the CBD refers specifically to genetic resources, meaning any genetic material of any plants, animal, microbial or other origin which has actual or potential value (Article 2, Article 15 of The Convention on Biological Diversity, 1993). Some states, like South Africa, have chosen to use a much broader definition which includes all biological resources (Wynberg, 2009: 136). This term not only refers to genetic material but also all 'organisms or parts thereof, populations, or any other biotic component of ecosystems' (Article 2 of The Convention on Biological Diversity, 1993). Using the example of indigenous medicinal plants, this means that South Africa not only protects the genetic material within plants but also the use of the plant as a whole. Given that the thesis deals specifically with a South African case study, the term 'biological resources' or 'bio-resources' (as its referred to in the thesis) is preferred as it is inclusive enough to cover both genetic and biological resources. The next section discusses those sections in the TRIPS and the CBD agreements, and South African law, which relates to the protection of IK.

2.2.3 International Intellectual Property Rights Law and Indigenous Knowledge

IK is a product of the human mind, and therefore, can potentially be protected by IPR law. While TRIPS does not make specific reference to IK, the fact that it is applicable to a wide range of intellectual property such as copyright, trademarks and geographical indications makes it applicable to IK. Article 27 of the TRIPS agreement makes the closest reference to IK through its standardisation of patents and inventions (Oguamanam, 2006: 168). Article 27 (1) pertains to the granting of patents for 'any invention whether products or processes in all fields of technology provided they are new, involve an inventive step and are capable of industrial application'. It is its applicability to all products and processes that makes it applicable to IK. Article 27 (2)-(3) deals with the use and protection of plant varieties, either by patents or effective *sui generis* systems or a combination thereof. Read together, these sections do not only instruct states to pass laws that recognise patents and inventions, but also provide states with a choice as to how to give effect to it. In the case of developing nations, it has been argued that, since they may have developed social, economic and political public policies that are different from those of developed nations (Diaz, 2005) they have the choice of passing *sui generis* laws to give effect to the principles of TRIPS; that is, laws which have been developed specifically out of a

particular context and, therefore, are specific to the context out which they have been developed. The only type of *sui generis* laws that are accepted, however, are those which are in line with the principles of TRIPS; in other words, they cannot vary a great deal from the principles and guidelines encapsulated in TRIPS which effectively means that that there is no real alternative outside of European IPR law (Oguamanam, 2006). The requirements of IPR law, such as the requirements relating to novelty and to the identification of a single inventor, are problematic, however, for the effective protection of IK. This is because IK is developed over several generations and is held in common. The implication of this tension is discussed at length in Chapter Three which explores the debates regarding the use of IPR law to protect IK.

Another example of the contradictions in the TRIPS agreement is Article 27(3) (b), which provides states with a choice on whether or not they wish to grant patents pertaining to plants and animals. However, the article also stipulates that there are no exceptions on micro-organisms and certain biotechnological processes (Diaz, 2005: 12). The result is that plants and animals are therefore effectively patentable (Diaz, 2005: 12-13). As is apparent, TRIPS is surrounded by controversy, not only because its international standardisation of IPR law limits the choices available to developing states but also because there appears to be contradictions within the agreement. It is also worth noting that this provision led to the concern that TRIPS and the CBD conflict when it comes to the protection of IK (Diaz, 2005: 48). Whilst the CBD recognises the sovereignty of states and their choice to patent their resources, TRIPS places certain limitations on that choice.

Whereas TRIPS is viewed as problematic for the protection of IK and indigenous peoples' interests, the CBD has been heralded not only for its direct recognition of IK but also for the steps that it provides to ensure the protection of indigenous peoples' interests. Article 8 (j) of the convention requires parties to

respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of holders of such knowledge, innovations and practices (cited in Oguamanam, 2006: 5).

Although the general objective of the convention is the conservation of biological diversity and the governing of access to bio-resources, Article 8 (j) renders the CBD the most authoritative international instrument that recognises IK and its importance beyond its epistemic and geographical contexts (Oguamanam, 2006: 5). With regard to ensuring that indigenous peoples benefit from the commercialisation of IK, Article 15 of the agreement calls for parties to attain Prior Informed Consent (PIC) for either the bio-resources and the knowledge or both from the knowledge holders. This means that the community must first be approached and permission must be granted to use their knowledge, the bio-resources or both, with full disclosure as to the purpose of its use. Secondly, a fair and equitable Benefit Sharing Agreement (BSA) must be negotiated with the community on mutually agreeable terms. An agreement will not be deemed fair and equitable unless it is judged to be so by all the stakeholders. Mutual respect and an understanding is key to reaching an agreement on mutually agreed upon terms (Vermeulen, 2009: 425). In October 2010, the CBD adopted the Nagoya Protocol. This is a legally binding instrument which expands on the articles of the CBD with regard to access to bio-resources and the fair and equitable sharing of benefits which may arise from their utilisation (Myburgh, 2011: 844). This legally binding instrument serves as an addendum to the CBD by providing additional guidelines for the equitable sharing of benefits derived from the use of bio-resources and IK.

2.2.4 South Africa's National Legislation Pertaining to Indigenous Knowledge

In order for these international agreements to have any effect within a state's borders they must be signed and ratified by the state concerned (Dugard, 2005: 60). Appropriate domestic law also has to be drawn up. In this way, highly contested international agreements such as TRIPS become part of domestic law, and thus not only affect relations between different states but also between states and their peoples and between different local communities. Several types of legislation relating to Benefit Sharing Agreements have been created in different states with varying levels of success (see Moran, 2003). In the case of South Africa, in 2004 the government passed the National Environmental Management: Biodiversity Act (NEMBA) and, in 2008, the Bio-prospecting, Access and Benefit Sharing Regulations (BABS). In accordance with the terms of the CBD, NEMBA

instructs any party wishing to use an indigenous community's knowledge to negotiate an Access and Benefit Sharing Agreement with the community concerned. South Africa vests all ownership of its bio-resources and IK within its borders to its indigenous communities rather than the state due to concerns relating to infringements upon the private property clause (Wynberg, 2009: 129). The recognition of traditional authorities in rural areas of South Africa, where many indigenous communities and their bio-resources are located, means that traditional authorities act as representatives for indigenous people (Van Niekerk and Wynberg, 2012). The CBD and NEMBA requirements are very similar although they employ different terms. The CBD, for example, refers to Prior Informed Consent and Benefit Sharing Agreements while NEMBA refers to Access and Benefit Sharing Agreements. NEMBA also allows communities to receive assistance from the Department of Environmental Affairs in the negotiation of Access and Benefit Sharing Agreements (Wynberg, 2009: 134).

Functioning alongside the NEMBA Act is BABS which regulates the harvesting of South Africa's indigenous bio-resources. A party wishing to harvest indigenous bio-resources must apply to the Department of Environmental Affairs for a harvesting permit. One of the requirements of an application involves the drawing up of a Benefit Sharing Agreement. The failure to satisfy this requirement of the application process may result in a permit not being granted. This permitting system attempts to give effect to the CBD's aim to preserve biodiversity by regulating the harvesting of South African indigenous bio-resources. The Department of Environmental Affairs also provides other guidelines and regulations with regard to the harvesting and use of particular bio-resources. For example, a Biodiversity Management Plan for *Pelargonium sidoides*, which is the subject of the Masakhane community's intellectual property case, is currently in the pipelines. This will serve to regulate the use of *Pelargonium sidoides* (Department of Environmental Affairs, 2011).

Other relevant national legislation which deals with the commercialisation of indigenous bio-resources includes Section 30 of the Patents Act of 1978, which was later amended by the Patents Amendment Act of 2005. This Act requires parties applying for a patent to provide information on the use of indigenous bio-resources or IK in their invention (Wynberg, 2009: 131).

The more general policy framework behind the state's approach to IK is outlined in the Indigenous Knowledge Systems Policy of 2004. As this document shows, South Africa has two main aims in the protection of IK: firstly, to ensure that IK is not misappropriated and, secondly, to capture the economic benefits that may flow from the commercialisation of IK and/or bio-resources. As the economic powerhouse of Africa, South Africa is interested in attracting Foreign Direct Investment and furthering technological and economic development in the country (Sebati, 2011). It is popularly argued that strong IPR laws foster growth, development and innovation. Thus, the country has chosen to protect IK under the IPR legal framework rather than create separate *sui generis* law to protect it (Daniels, 2012). In order to give effect to this policy framework, the South African government recently passed the Intellectual Property Laws Amendment Bill in 2011. This Bill amends the Copyright Act of 1978, the Designs Act of 1993, the Trademarks Act of 1993 and the Performers' Protection Act of 1967 in order to address IK within the framework of broader IPR law. While the Bill makes provision for greater protection of IK and recognises the need for special legislation for IK, it has been criticised for not doing enough to protect IK, with several critics displaying scepticism about the likelihood of it having any significant impact on the protection of IK (see Daniels, 2012; Dean, 2011; Forster, 2012).

There are several other pieces of legislation that deal indirectly with the protection of South Africa's indigenous bio-resources. These include the National Environmental Act of 1998, the National Forests Act of 1998, the National Environmental Management Biodiversity Act of 2004, as well as the Threatened or Protected Species Regulations and several provincial Acts and Ordinances that deal with nature conservation. However, the focus of this thesis is on the CBD and TRIPS internationally, and on NEMBA and BABS nationally, as these are the key pieces of legislation which relate to the protection of IK by IPR law.

2.2.5 Conclusion

It has already been mentioned that it is hard to arrive at a concise and agreed upon definition of IK. The lack of agreement upon the meanings of the terms 'indigenous' and 'knowledge' is partly related to the benefits or interests that are at stake for the various

actors who use the terms. Every definition, whether broad or narrow, serves a particular interest. The definition chosen here is one that recognises that IK can be held by any indigenous group that is or has historically been marginalised from the political, economic and social processes of the states they reside in and has knowledge that has been passed down from generation to generation. This definition is cognisant of the most common and recent uses of the term. Other terms, like 'traditional knowledge' or 'local knowledge', are also sometimes used to refer to such knowledge (Oguamanam, 2006: 20). However, it is argued that the term 'IK' has a much deeper connection to the nuanced experiences of marginalisation and exclusion than other similar terms. It carries with it a particular history of a struggle for inclusion and a better life by a group of people who have been historically marginalised, socially, politically and economically, both at the national and international levels. IK then refers to unwritten knowledge passed down from generation to generation and held by communities who are excluded or marginalised from the economic and political process of the states they reside in. Although the definition of IK is a fluid and highly contested issue, it is necessary to provide a working definition of IK for this project.

A detailed exploration of national and international law reveals several agreements and laws that apply to IK, directly or indirectly. The existence of several pieces of legislation dealing with IK makes the position of communities who holds IK more complex and renders the debate around the effectiveness of using IPR laws to protect IK in our specific case study more complicated. These complexities will be examined in the chapters that follow.

While this chapter has dealt specifically with the contestation around the definition of IK, and the creation and spread of an IPR legal framework with a particular European history, this only touches upon a much larger issue. For the issues dealt with here not only relate to the question of who qualifies as an indigenous person and what qualifies as knowledge, but also to the struggle between cultures: indigenous peoples and the developing states within which they reside versus developed states and their inhabitants (Mukuka, 2010). The struggle can be broadly understood as a struggle between the South (developing states and their people) and the North (developed states and their peoples). The historical struggle between the North and the South, which was primarily a struggle for self-

determination, continues but on a new site, that is, in relation to the question of whether or not IPR law can be used effectively to protect IK (Gosh, 2003b: 497). The debate in the next chapter reviews the various positions in the debate and reveals how the struggle between the North and South plays itself out in complex ways on the question of whether or not IPR law should be used to protect IK.

Chapter Three:
Debates around the Application of Intellectual Property Rights Law to
Indigenous Knowledge

3.1 Introduction

The use of intellectual property rights (IPR) law to protect indigenous knowledge (IK) is a new site of old contentions between the developing and developed world as historically marginalised peoples and the states within which they reside fight for the recognition of their rights and interests (Gosh, 2003b: 497). Whilst writers in the field focus on different aspects of this struggle, whether it be law (Whitt, 1998, 2009), the economy (Drahos and Braithwaite, 2004) or politics (Muzaka, 2011), what is apparent in the IPR and IK debate is that the historically asymmetrical power relations between developed and developing states, which were drawn during colonialism, continue to inform and characterise relations between developed and developing states and their respective peoples (Gosh, 2003b:497). It is evident that the question of whether or not IPR law should be used to protect IK is a political question which is framed and understood within the broader relations of the North and South debate (Gosh, 2003b:497).

For ease of discussion, it is helpful to identify two main positions in the debate about whether IPR law can be used effectively to protect IK. On the one hand are those who support the use of IPR law to protect IK and, on the other, are those that think IPR law, for a variety of reasons, is unsuitable for the protection of IK. Each side generally speaks from a different theoretical approach and background. Those who support the use of the IPR legal framework, such as Myburgh (2010, 2011) and Crouch *et al.* (2008), come from either a legal or science background. These writers are concerned with making sure that IPR law is legally strong enough to protect the interests of all those who are involved in the field of bio-prospecting; from the companies that use IK to the communities which have commercialised their knowledge. Critics of the IPR regime, on the other hand, such as Hountondji (1997, 2002), Mshana (2002), Shiva (1997a), and Whitt (1998, 2009), are typically informed by post-colonial or post-development theory. Post-colonial and post-development theory are critical of western development models, which some argue are

supported by IPR law, and wish to critically engage and question the legacy of colonialism and imperialism. From the perspectives of both post-colonial and post-development theory, indigenous peoples rights and views have been ignored for too long (see Ashcroft *et al.*, 1995, 1998; Chambers, 1996; and Ghandi, 1998 for discussions on post-colonialism, and see Rahnema, and Bawtree, 1997; Escobar, 1995, and Sachs, 1992a, 1992b for discussions on post-development). The different theoretical frameworks influencing the different participants in this debate obviously influence their position regarding the appropriateness of the use of IPR law to protect IK. The aim of this chapter is to outline and briefly explore the debate in preparation for a critical engagement with the literature in Chapter Six.

3.2 Arguments in Favour of Using Intellectual Property Rights Law

Those in favour of the use of IPR law to protect IK argue that it is the strongest means to protect intellectual property because it can grant the holder of the knowledge exclusive control over the knowledge concerned (Kiggundu, 2007: 26; Long, 1991). It is this exclusivity which is central to the IPR regime: intellectual property rights prohibit anyone else from using an invention or innovation without the holder's permission. The logic of the IPR regime is thus exclusive control over a product, giving the holder the power to choose what to do with a product. For example, Kiggundu (2007: 26) notes this mechanism of the IPR legal framework when he argues that the general aim of IPR law is to protect the ownership of an innovator's creative ideas by giving the registered owner the right to stop others from copying and/or selling his invention or piece of work. When exclusive rights are combined with the neo-liberal economic context, that is the product fits a niche market (i.e indigenous knowledge which is wanted in the knowledge economy but held by a few people); the right holder can gain significant economic benefits. It is this mechanism of exclusion and control combined with the market economy within IPR law that is referred to when the protection of IK is discussed. Thus the term IPR law does not only refer to traditional IPR law like patents, copy rights et cetera but also to the mechanisms that are invoked in the CBD's (Convention on Biological Diversity) provisions for the protection of IK.

As was noted earlier, the CBD is particularly significant with regard to the protection of IK. Although the agreement does not deal with traditional IPR law such as patents and copyright for example, it does give proprietary rights, or exclusive control rights, over bio-resources and the knowledge pertaining to them to those who control a particular habitat (United Nations' Convention on Biological Diversity, 1993). From those proprietary rights, the holders are able to gain economic benefits from those resources because they have a level of control on their use (Oguamanam, 2006: 7). It can thus be argued that the CBD potentially places developing states and indigenous communities in a strong legal and economic position. The agreement, furthermore, enforces this position by instructing all parties who wish to use indigenous bio-resources and the IK pertaining to such resources to attain Prior Informed Consent and negotiate a Benefit Sharing Agreement with the state or community which owns these resources and the knowledge connected to it (Article 8(j); Article 15 of the United Nations' Convention on Biological Diversity, 1993).

The exclusive control aspect of IPR law is also expected to provide indigenous communities with the means to enrich and empower themselves through the sale of their knowledge (Oguamanam, 2006). Because indigenous communities live in the most biologically diverse areas in the world, and they tend to be knowledgeable about what can be referred to as 'niche market' products. It is argued that the mechanism of exclusion should thus provide indigenous communities with a means to enrich and empower themselves (Oguamanam, 2006). Traditional IPR law, like patents, copyright, and trademarks, for example, should enable indigenous communities to be part of the market economy and, therefore, to move away from the margins of society in the event that their knowledge satisfies the requirements of traditional IPR law. Thus, the protection of IK by IPR law (referring broadly to the mechanism of control and exclusion), should be useful in the upliftment and betterment of indigenous communities and the states that they inhabit (Oguamanam, 2006).

However, some advocates of the use of IPR law to protect IK suggest that special policy agreements should be created to ensure that indigenous communities are given special consideration and recognition (Myburg, 2010; Myburg 2011). There appears, therefore, to be some recognition that the existing mechanisms within IPR (referred to above) might not

automatically deliver benefits to indigenous communities, and that other steps may have to be taken to ensure that this happens. Some IPR frameworks, such as the CBD, do make special provisions for indigenous communities, but other legal frameworks, most notably TRIPS (Trade Related Aspects of Intellectual Property Rights), make no special provisions for IK, allowing indigenous communities to benefit only in so far as their knowledge meets the general requirements of traditional IPR law encapsulated in TRIPS.

The IPR regime does seem to place the holder of any intellectual property (in this case IK) in a potentially strong legal and economic position. Even writers such as Kiggundu (2007), who does not fully support the use of IPR law to protect IK, concede that the IPR regime is currently the strongest means to protect intellectual property. However, it is also clear that there are instances where IK is not in fact protected despite this regime. Also, IPR law has not yet been used extensively to protect IK. For supporters of the IPR regime, any failing of this regime to adequately protect IK and indigenous communities' interests is seen as a result of flawed or ineffective legislation, or ineffective enforcement of legislation, rather than as a result of the inherent inappropriateness of using IPR law to protect IK. Myburg (2011: 848), for example, insists that IPR law can be successfully used to protect IK and that any inability to do so in practice is an issue of access to justice, or the result of a state failing to take active steps to protect a country's IK (Myburg, 2010: 5), rather than the result of flaws in the system itself or incompatibilities between IK and IPR law. For other writers, such as Crouch *et al.* (2008), the issue lies with the state passing ineffective or excessively restrictive legislation which has a negative effect on the commercialisation of IK. For each of these writers, the problem lies not with the nature of IPR regime *per se*, but rather with those factors limiting its effective application.

Furthermore, advocates of the use of IPR law argue that it is valuable in that it encourages people to be more creative and inventive, and thus allows for greater proliferation of ideas and inventions in society (Mukuka, 2010: 19). Put differently, with the backing of IPR law, people will have an incentive to create because they will be rewarded with exclusive rights and the monetary value attached to them. As IPRs are only granted for a limited amount of time (20 years for patents in South Africa), once the right of exclusive use expires the invention or innovation falls into the public domain and is available for all to use. In the long run, therefore, it enriches the entire society (Mukuka, 2010: 19, 138-139).

Finally, some defenders of IPR law accuse those who oppose the use of the IPR law of having a too broad and simplistic understanding of IPR and IK (Davis, 1999: 18). Indigenous communities do not all hold the same type of IK nor do all of them hold knowledge in common. In as much as IPR law is accused of not being pluralistic enough, those who are against the use of the IPR system are accused of using the same broad brush strokes when speaking about IK and the communities that hold it. This point of view is succinctly summarised in Davis' (1999: 18) review of the various positions of the IK-IPR debate. He states that the:

[t]he notion that [I]ndigenous [K]nowledge cannot be protected by IPR is based on certain presuppositions about the characteristics of [I]ndigenous [K]nowledge systems. It assumes a generalised, universal model of indigenous systems of innovation and knowledge management that renders these inherently unsuitable for protection under conventional IPR systems. The basis for this is the belief that there is a dichotomy between IPR and the public domain.

This generalised and universal model of IK and IPR implies that neither system is capable of change or adaptation. However, as has been demonstrated by Long (1991), the IPR system has changed and developed as the needs of the relevant societies changed. The current IPR system, therefore, is capable of change and is not as fixed and unchanging as most critics of the IPR system understand it to be. Assuming that there are cases where it cannot adequately protect IK, it could be argued that it has the ability to adapt to the changing perceptions of property and ownership in practice.

In brief, the arguments for the use of IPR law to protect IK are that IPR law is the strongest means to protect all products of the mind that have potential economic value by granting exclusive control over the product. And, since IK is a product of the mind with potential economic value, IPR law can thus be used to protect IK. The exclusive control combined with the existence of a niche market, will not only enable indigenous communities to benefit from the commercialisation of IK, and thus further empower themselves, but it will also foster creativity and further development in society as a whole. Given the strength of exclusive control granted by IPR law, any failure to create these

benefits is seen by advocates of IPR law to be a result of inefficient IPR law or a lack of intellectual creativity in the society or state.

3.3 Arguments Against the Use of Intellectual Property Rights Law

There are various arguments against the use of IPR law to protect IK. The majority of the arguments stress that current IPR law is only one type of intellectual property and one way of protecting it (Abrell, 2009). Yet, through the passing of agreements such as TRIPS, it is recognised and supported as if it is the only type of intellectual property protection in the world (Shiva, 1997a). Critics argue that the dominance of current IPR law results in the marginalisation of other ways of understanding and protecting intellectual property to the detriment of IK and indigenous communities' interests (McGovern, 2000: 524). There are, it is claimed, many different ways of being creative and innovative (McGovern, 2000: 524), but that current IPR law only recognises one kind of intellectual property: the type that supports private property, the individual and profit (Abrell, 2009: 08; Shiva, 1997a).

Critics argue, therefore, that IPR law places emphasis on privately held intellectual property and, thereby, marginalises knowledge held in common (Hountondji, 1997, 2002; Mshana, 2002; Shiva, 1997a; Abrell, 2009). TRIPS, for example, is widely understood as recognising IPR only as private rights. This means that all other kinds of knowledge, ideas and innovations that take place in, what Shiva (1997a) calls, the 'intellectual commons' are excluded. Abrell (2009) and Shiva (1997a) furthermore argue that most indigenous societies create, hold and use their knowledge for the benefit of the entire community. This knowledge is developed and held in common. Although different knowledge can be held by different people in the community, IK is viewed as something that exists for the benefit of an entire community rather than a single individual (Abrell, 2009). The difficulty is apparent. The idea of any form of individual or private ownership is contrary to the ideas of ownership in many indigenous communities (Abrell, 2009; Riley, 2000). Since IPR law, and particularly TRIPS, supports private property and the idea of a single owner of this knowledge the critics mentioned above argue that IK cannot be adequately protected by such law. They claim that when IPR law is used to 'protect' IK, not only is that knowledge isolated and disassociated from its people in the way that it is defined and understood by outsiders, but, argues Riley (2000: 197-202), the capitalist market system,

which is compatible with IPR law, further isolates and fragments this knowledge. This tears it away from the community. What was collective property becomes private property (Shiva, 1997a: 15). The use of IPR law thus results in a clash between private and collective ownership and promotes a fragmentary approach to the world rather than the more holistic approach which critics like Abrell (2009), Riley (2000) and Shiva (1997a) believe is embraced by many holders of IK.

For some writers, the recognition of private over communal rights harks is reminiscent of periods in history where the recognition of private property ownership was used to justify the appropriation of communally held land in the English commons, and later, to colonise indigenous lands (Dutfield, 1999; Shiva, 1997b). Anything that was held in common was deemed not to be owned by anyone and, therefore, free for the taking (Dutfield, 1999). It was 'empty land' or *res nullius* that could be claimed when one mixed one's labour with the land. Any other construction of property and ownership was denied. A similar process is said to be at work today in relation to intellectual property (Dutfield, 1999: 4-5; Shiva, 1997b). The recognition of intellectual property only as private rights means that knowledge held in common is considered to be in the public domain and thus free to be used and taken (Dutfield, 1999). In this way, argues Shiva (1997a: 7-8), the Papal Bull and the Columbus Charter granted by monarchs to claim lands and people are now replaced by TRIPS and other similar treaties. The use of IPR law combined with the capitalist market economy means that the 'principle of effective occupation by Christian princes has been replaced by the effective occupation by the transnational corporations supported by modern day rulers' (Shiva, 1997a: 8). Therefore, a new form of colonisation – of the mind rather than of the land – is at work.

Part of the reason that IPR law is considered by its critics to be so dangerous and similar to colonial legal processes is because it appears to be objective and neutral. Whitt (1998, 2009) is particularly vocal about this danger and notes that, although the law appears to be objective, it plays a key role in legitimating and supporting particular ideas and actions. In particular, she notes how in the colonial period, the rule of law was identified with the scientific method and the pursuit of the natural world which became a part of statecraft and a means of extending empire for the west (Whitt, 1998: 211). It is argued that current IPR law now plays a similar role: it appears to objectively pursue the protection of all

intellectual property, yet it favours certain kinds of intellectual property and certain forms of ownership while denying others (Shiva, 1997a; Whitt 1998). On an international scale, Whitt (1998, 2009) argues that the combination of the support of private property, apparently innocuous looking IPR legislation and the neo-liberal market economy, results in forms of appropriation which are remarkably similar to those which occurred during the period of colonisation and the nineteenth century partitioning of the English commons. Thus, critics like Shiva (1997a) and Whitt (1998) claim that IPR law, with regard to IK, signifies yet another manifestation of imperialism and the continued plundering of developing nations' resources.

The precedence that is placed on private property and the individual in IPR law is also deemed problematic in its application to IK (see Riley, 2000). Most intellectual property requires proof of originality or novelty in order to be protected (Folkins, 2004: 346-347; Long, 1991). In other words, a 'piece' of knowledge only becomes intellectual property if nobody else owns that knowledge. Because IK typically develops over several generations, it is impossible to prove novelty. The knowledge is typically not 'known' and developed by one person, or by a very specific group of people, as is most appropriate when using IPR law. Since one of the key requirements of IPR law cannot be satisfied it means that IK does not fall within the IPR framework and, therefore, cannot easily and appropriately be protected by IPR law. Despite his support of the use of the IPR system, the difficulty of this situation is even recognised by Myburg (2011: 845) when he states that:

an item of traditional knowledge will typically not meet the novelty requirements for patents and design, just as traditional work of an indigenous community ... will not meet the originality requirements of copyright. The subject matter simply does not fit into intellectual property law systems.

This failure to satisfy IPR law requirements is also relied upon heavily by Riley (2000) to support her arguments against the use of IPR law.

Another consequence of only recognising one type of IPR protection is that rights are only awarded when knowledge and innovation generate profit, not when they are for social

needs (Abrell, 2009; Shiva, 1997a: 16). The current logic of the IPR legal framework is to reward the innovator for his or her creativity, and this reward has generally been understood only in terms of financial rewards (Abrell, 2009). When one looks at the history and development of the IPR regime, intellectual property rights have usually been granted to protect the financial interests of the innovator (Long, 1991: 880-882; Recht, 2008: 286). Legal precedent in the early development of IPR law did not recognise the need to protect IPR other than for financial rewards, notes Recht (2008: 286-287). Innovation, therefore, only amounts to intellectual property if is capable of generating financial rewards of some kind. All other production and innovation are thus ignored and cannot be protected (Abrell, 2009). This once again excludes a large portion of knowledge held by indigenous people and the developing states which they inhabit – ‘it is a denial of the role of innovation in traditional cultures and in the public domain’ (Shiva, 1997a: 17). Creativity and innovation do not only emerge as a result of the possibility of financial reward (Abrell, 2009). It is conceivable that people create and innovate for reasons that have nothing to do with profit. Such forms of creativity and innovation are unlikely to be encouraged by the promise of financial reward. Rather, there is evidence to suggest that when IPR law is combined with capitalism, it fosters secrecy and distrust rather than collaboration, and encourages research and development in particular areas over others which, argues Shiva (1997a), will most likely result in monocultures of knowledge rather than plurality.

This point raises the question of whether creativity or ideas should be viewed as property at all. For Shiva (1997a) and Abrell (2009), the very idea of isolating and commercialising intangible products of the mind is questionable. Their concern does not centre on the question of whether or not IPR should be used to protect IK, but rather relates to the broader question of whether any ideas and knowledge should be commercial property. As Abrell (2009) points out, some communities might not perceive their ideas and innovations as being property in the conventional sense at all, nor might they desire to sell such knowledge (see Abrell, 2009 for further discussion).

Detractors of IPR law also take issue with those who believe that indigenous people and the nations which they inhabit will benefit substantially from the commercialisation of IK and use of IPR law as is implied in the CBD (Oguamanam, 2006; Mshana, 2002). These

critics are sceptical that the use of IPR law will provide indigenous communities with a way to access the global economy and move away from the margins of society (Mshana, 2002). Advocates' belief that IPR law can help indigenous communities successfully commercialise their IK rests on the assumption that IPR law can effectively protect IK which critics doubt (Mshana, 2002; Shiva, 1997a). In an attempt to answer the question of whether protection of IK by IPR law automatically results in the upliftment of indigenous communities, Bodeker (2003) reviews several cases where IPR law was used to both protect IK and indigenous communities' interests. After reviewing several well-known international cases, he states that 'there is no adequate mechanism to date ... that is capable of safeguarding the rights and interests of local communities' (Bodeker, 2003: 793). The IPR logic, his article suggests, does not appear to adequately protect IK and certainly does not seem to guarantee the upliftment of the communities in question, although it may achieve some success in certain instances. Mshana (2002) in turn argues that IPR law is not only unlikely to deliver benefits to indigenous communities, but its application to IK is also likely to result in the misappropriation of IK. According to him, this is not due to an aberration of IPR law but it is rather an intrinsic aspect of the IPR framework (Mshana, 2002: 24).

Other critics like Shiva (1997a) and Drahos and Braithwaite (2004) argue that supporters of the use of IPR law imply that poverty and underdevelopment are partly the result of a developing countries' lack of creativity or poor IPR law. According to this argument, IPR law allows innovators or inventors, and the nations to which they belong to protect their intellectual property. Where there is no intellectual property or where IPR law is too weak to protect intellectual property it furthers poverty and underdevelopment as it limits states' ability to partake in the global market economy. The implication, therefore, is that it is developing nations' fault that they are locked out of the global economy either because they do not have the necessary intellectual resources or because they have not created the institutions to protect their interests (Shiva, 1997a). Shiva (1997a) claims that this argument merely detracts from the real cause of marginalisation and underdevelopment – namely, the structural inequality of the international system. This argument is further supported by the discussion undertaken by Drahos and Braithwaite (2004) when they scrutinise the political organising behind the TRIPS agreement in the WTO by pharmaceutical companies and developed nations. Most developing states were against the

passing of TRIPS but were forced to accept it due to political and economic pressures from developed states (Drahos and Braithwaite, 2004). In the end it was unequal power relations and structural inequality that placed developing nations and their peoples at a disadvantage rather than a lack of creativity or inefficient law (Drahos and Braithwaite, 2004).

It is worth noting here that the question of whether or not IPR law can be used to protect IK is viewed by some writers, specifically Gosh (2003b), as part of the continuing struggle between the developed and developing world. While debates around IPR law and IK are not simply repetitions of earlier debates about dispossession in the developing world by the developed world, they are evidence of new sites of contestation in a continuously divided world. According to Gosh (2003b), the question of whether IPR law can be used effectively to protect IK is a highly controversial one because it is the site of an old struggle. Mukuka (2010) makes a similar observation when he applies Coombe's (1998) idea of contested cultures to the issue of applying IPR law to IK. For Mukuka (2010), the issue is also about contestations, especially in terms of the ways that these contestations play out at the local level between different parties (see Mukuka, 2010 for further discussion).

To summarise, critics of IPR law argue that IPR law is only one type of intellectual property protection: the type that recognises private property, individuality and novelty. This is not only incompatible with IK, which is both held and developed in common, but it also undermines indigenous communities' interests by reducing their knowledge to common knowledge which can be used by anyone without giving any recognition, monetary or otherwise. Thus, any use of IPR law to protect is IK is not only the reflection of the continued contestation between the developed and developing world, but it is also the new site of an old struggle.

The previous two sections have discussed the two main positions of the IPR-IK debate. However, a review of the literature reveals a third position which is neither completely for nor against the use of IPR law to protect IK. Rather, this position notes the arguments raised both for and against the use of IPR law to protect IK and settles for a position somewhere in the middle. This position is discussed in the section that follows.

3.4 A Third Position: The Development of a *Sui Generis* System

There is a third position that can be outlined in relation to the IPR law debate. This position is neither totally against nor completely supportive of the application of IPR to IK. This is because it recognises the limitations of the IPR regime yet appears to intimate that a much reformed IPR legal framework could successfully protect IK. Such a position is held by Kiggundu (2007) and Paterson and Karjala (2003).

Kiggundu (2007) provides a review of IPR law in relation to IK protection. In it, he only finds two aspects of IPR laws that he considers likely to be useful in the protection of IK: geographical indications and appellations of origin. In general, argues Kiggundu (2007), IK is not appropriately accommodated under the IPR framework because of the requirements of authorship, originality and industrial application. The same requirements are acknowledged as being the cause of unsuitability and limited applicability by Paterson and Karjala (2003) and Weeraworawit (2003). This unsuitability is hardly surprising, notes Kiggundu (2007), since IPR was not created for the protection of IK (Kiggundu, 2007: 26-27). Current IPR law emerged out of a particular historical context in Europe, and would later be imported to former colonial states in order to protect any intellectual property that colonial nationals brought and developed in colonised territories (Kiggundu, 2007: 26-27; Segobye, 2007: 80). The history and conditions out of which IPR law was created simply did not take other intellectual property into account. IPR law still does not deal with situations where more than one community in more than one country hold the same knowledge as is the case with the *Hoodia* plant, the knowledge of which is held by the San in South Africa, Namibia and Botswana (see Wynberg, 2004; Myburgh, 2011).

IK might be recognised as valuable now, and there is a general international trend towards recognising the need to protect IK but, argues Kiggundu (2007), current IPR law is limited in its protection of IK. The reason for this is that it was neither created for IK protection nor in the interest of indigenous communities. Recognising the limited use of current IPR law, authors such as Paterson and Karjala (2003) and Weeraworawit (2003) suggest that the most fitting way to protect IK is to use those aspects of IPR law that are suitable to this pursuit, but to also seek other ways of protecting indigenous communities' knowledge. In

other words, such authors regard IPR law as inadequate for the protection of IK, but acknowledge the usefulness of at least some IPR legislation within the broader IPR regime.

One way to provide more suitable protection for IK is through the development of *sui generis* law to work in conjunction with those IPR laws that are useful to IK (Kiggundu, 2007). There are two ways to do this: either through the adaptation of those less useful IPR laws to suit IK or the creation of entirely separate *sui generis* law (IP Kenya, 2011). TRIPS allows states to develop their own *sui generis* systems provided that they are in line with the current IPR system (Oguamanam, 2006). The current IPR regime, however, is at issue and cannot be said to grant much latitude to create a *sui generis* system for IK. As discussed above, the current IPR system has several shortcomings that make using it to protect IK difficult: the identification of an individual author or innovator, originality, the support of private over communal ownership, and the idea of creativity for profit. Any *sui generis* system, whether it is the adaptation of current IPR law or the creation of separate *sui generis* law, has to adequately deal with these aspects of IPR law. While Kiggundu's suggestion is to continue to use those aspects of IPR laws that work in favour of IK and to develop a separate *sui generis* system (Kiggundu, 2007), another option is to use those aspects of IPR law that work by further developing them to suit IK needs where circumstances necessitate this (IP Kenya, 2011). Davis (1999) holds a similar position to Kiggundu (2007), but his concern is that discussions on the protection of IK are insufficiently cognisant of how IK is connected to other indigenous rights and interests (Davis, 1999: 6-7). For him, any system of protection must approach and perceive IK in the same way that indigenous communities do. This includes subject matter and property that would not necessarily be included under IPR law.

In summary, the third position notes the limitations of current IPR law, yet also takes the usefulness of some IPR law into account. Writers advancing this position thus argue for the continued use of IPR laws where they are useful to the protection of IK as well as either adapting less useful IPR law or creating separate *sui generis* law which work in conjunction with IPR laws that are considered useful.

3.5 Conclusion

The debate on the IPR-IK issue is ongoing. Although TRIPS and the WTO have standardised and spread the application of the current IPR regime, there is still a great deal of discussion both within and outside of the field of IK about the most suitable way to protect IK. Interest in the issue indicates that this is a global issue with several actors and vested interests (Muzaka, 2011). While some argue that the IPR regime is the most effective method to protect IK and that only technical obstacles are currently preventing it from adequately protecting IK, others argue that it is the very nature of the IPR system that makes it unsuitable for the protection of IK and that the only reason that such a highly contested and inappropriate legal regime persists is because of continued imperialism. The next question then is: how have developing nations and their peoples fared using a system of protection that some consider to work against their interests? For despite many of the misgivings against IPR law, there are a few cases where communities have apparently successfully used IPR law to protect their interests (Bodeker, 2003). The chapter that follows reviews some of the most well-known IPR-IK cases to further explore the arguments that were explored above. If there are indeed cases where IPR law was successfully used to protect IK, there may be credence to the argument that IPR law can be used to protect IK at least to some degree. If some communities can use IPR law to protect their knowledge then perhaps IPR law can be adapted to suit different contexts.

Chapter Four:

An Overview of Cases where Intellectual Property Rights Law was Used to Protect to Indigenous Knowledge

4.1 Introduction

In an effort to answer the much debated question of whether IPR (intellectual property rights) law can be used to protect IK (indigenous knowledge), several well known cases are often cited in the literature (see Bodeker, 2003; Gosh, 2003a; Jayawardane, 2011; Vermeylen, 2007; Wynberg *et al.*, 2009; Wynberg, 2004). The purpose of this chapter is to explore some of the most frequently cited cases to determine what the enabling factors in the protection of these communities' interests were. The three cases that are discussed in the chapter all share some similarities with the Masakhane *Pelargonium* case which is the focus of this thesis. In the *Pelargonium* case, as well as in the three cases below, indigenous communities challenged the use of their IK without permission or acknowledgement by an outside party.

Although two of the cases (*Hoodia* and *Jeevani*) began before some of the most important current IPR law was passed, the three cases cited below are heralded in IPR-IK literature as successful examples of indigenous communities protecting their IK from misappropriation by an outside party (see Bodeker, 2003; Bullard, 2005; Folkins, 2003: 345-246; Gosh, 2003a). These are, firstly, the case of the product *Jeevani* (India); secondly, a similar case relating to pesticides that were developed by using the *Neem* tree (India); and, lastly, the *Hoodia* case (South Africa). In all three, local indigenous communities held and used knowledge of the medicinal and/or beneficial properties of the plants concerned prior to the use and/or appropriation by an outside third party.

4.2 The *Jeevani* Case

In the case of *Jeevani*, the Kani community, a traditionally nomadic community in Kerala, India, reached an agreement with the Tropical Botanical Garden and Research Institute (an independent plant research and development institute which was set up by the government

of Kerala), to receive 50% of any commercial returns that the institute received from the sale of the drug, *Jeevani* (Anuradha, 1998: 2). The drug was developed by the institute in the 1990s from the fruit of the plant *Trichopus zeylanicus travancorius*, after scientists from the institute discovered that Kani community members used the plant for sustaining strength and energy during arduous treks (Anuradha, 1998: 5). It was only possible to develop the drug, *Jeevani*, because the Kani community had identified the plant and its uses long before to the Tropical Botanical Garden and Research Institute (TBGRI).

Although the CBD (Convention on Biological Diversity) and TRIPS (Trade Related Aspects of Intellectual Property Rights) had not yet been passed when the case first arose, the case does hold significant lessons for agreements between indigenous communities and outside parties over the use of indigenous bio-resources and the knowledge attached to them (Anuradha, 1998: 2; Bodeker, 2003: 799-800). Despite there being no legal imperative to share benefits with the Kani community, the institute approached the Kani community and agreed to share benefits from the marketing of the drug with its members. The institute had decided to approach and negotiate an agreement with the Kani for two reasons. Firstly, the institute wished to attain intellectual protection of the product, *Jeevani* so that they could benefit from the products commercialisation. The institute had 'realised that without intellectual protection (IP), they would not be able to generate much revenue from [*Jeevani*]' (World Intellectual Property Organisation, n.d). In addition, being a state institute in India, where the knowledge and its peoples originated, the TBGRI recognised the importance of the IK to the Kani, and thus wished to ensure that the Kani benefited from the commercialisation of a product based on their IK (World Intellectual Property Organisation, n.d).

While the arrangement in the Kani case pleased some in the community, other members were less satisfied with the arrangement (Anuradha, 1998: 7-8). The reason for this relates to the fact that the Kani community is made up of small units of 10-20 families dispersed over Kerala, with no single representative body or juristic person to represent the interests of all the Kani units (Anuradha, 1998: 3). Consequently, the TBGRI chose to approach one of the Kani community units that were more supportive and appreciative of the efforts made by the institute to share its benefits (Anuradha, 1998: 7). Other members of the broader Kani community were not as receptive to the agreement, as they had not been

consulted when it was negotiated (Anuradha, 1998: 7). The Kerala Forest Department also contested the agreement as it sought its share of royalties and license agreements and other state and non-state bodies disputed the agreement on the grounds that very little consultation had taken place between the institute and state and non-state stakeholders which had vested interests in the commercialisation of *Trichopus zeylanicus travancorius* and the associated Kani IK (Anuradha, 1998: 6-8; Bodeker, 2003: 799). Nevertheless, this case is cited as one the early cases of successful benefit sharing in the IPR-IK debate (Bodeker, 2003: 799-800).

4.3 The *Neem* Case

In another Indian case, this time involving the *Neem* tree, the American company W.R. Grace held patents relating to the development of novel ways to increase the shelf life and stability of products containing *azadirachtin*, an active agent in the *Neem* tree (Kadidal, 1997). Although the patents related to the process of prolonging the shelf life and improving the stability, rather than the discovery of the active ingredient, Indian farmers claimed that their knowledge of the *Neem* plant and its use had not been recognised. For this reason, the Indian government, together with several farmers and trade groups, petitioned both the United States Patent Office and the European Patent Office to revoke the patents on grounds that the *Neem* tree was popularly used by Indian farmers as a pesticide long before the American company developed a commercial pesticide based on the farmers' knowledge (Marden, 1999: 283-289). The issue here was that the patents were related to knowledge that already existed and that the existing knowledge had not been recognised or compensated for. Although the case was dismissed by the US Patent Office because the patent was considered to be legal under US Patent Law, the patent was revoked by the European Patent Office. This was done on the grounds that the process of developing the pesticide was an obvious step based upon already existing knowledge (Bullard, 2005; Kadidal, 1997). For this reason, the patent failed the novelty requirement of patent law and was revoked. This decision was upheld in 2005 after the company appealed the decision in 2000 (Bullard, 2005). Although no Benefit Sharing Agreement was reached with the Indian government on behalf of the Indian people, Indian farmers continued their use of the plant and gained some satisfaction from having prevented a company from misappropriating their knowledge.

While both the *Jeevani* and *Neem* case studies hold some relevance to this thesis, the most relevant case, legally, politically and topically, is the South African San *Hoodia* case in which the San community successfully negotiated a Benefit Sharing Agreement with the South African Centre for Scientific and Industrial Research (CSIR) over the use of an appetite suppressing plant called *Hoodia*. The case is relevant to this thesis because it involved a South African marginalised indigenous community which held indigenous medicinal knowledge. It is also cited as one of the most important cases to date of indigenous communities using IPR law to protect their interests (Folkins, 2003: 345-346; Munzer and Simon, 2009; Vermeylen, 2007; Wynberg, 2004). By providing an overview of this case, it is hoped that it will provide some insights into the question of whether IPR law can effectively protect IK in South Africa.

4.4 The *Hoodia* Case

Before the *Hoodia* case is considered more closely, it is necessary to provide some background information on the community in question. The San are a vulnerable indigenous group in southern Africa whose communities are mainly settled in Angola, Botswana, Namibia and South Africa (Suzman, 2001: 2-3). The San number at approximately 3 500, 50 000, 27 000, 7 500 in the respective countries mentioned (Munzer and Simon, 2009). In each of these four countries, they amount to less than 5% of the total population (Suzman, 2001: 5). San communities can also be found in Zambia and Zimbabwe, although in significantly fewer numbers (Suzman, 2001: 2-3). Their history is similar to that of many indigenous peoples around the world: it involved over two centuries of marginalisation, relocation and, in some cases, extermination at the hands of colonialists with continued discrimination following decolonisation (Munzer and Simon, 2009: 846). The San are a traditionally nomadic hunter-gatherer group and have been recognised as some of the first and oldest inhabitants of southern Africa (IPACC, 2010). For this reason, and due to their traditionally nomadic lifestyle over hot desert areas, the use of the *Hoodia* plant as an appetite suppressant is credited to them, despite the fact that there are several other groups that hold knowledge of its use (Wynberg, 2004). Settled over several state lines and divided into several sub-groups, the San are not a homogenous group but, rather, are loosely grouped together due to a shared language which, according

to Munzer and Simon (2009: 837), is 'one version or another of Khoisan, which is a cluster of related languages whose exact connections and classifications are in dispute'. The heterogeneity of the San is of significance when it comes to questions of representation and distribution of benefits from the Benefit Sharing Agreement reached with the CSIR.

To date, the San are commonly seen as being the most socially, economically and politically disempowered members of the various countries in which they live (Suzman, 2001). The Working Group of Indigenous Minorities in Southern Africa (WIMSA) and the International Federation of Red Cross and Red Crescent Societies (IFRC) have raised some of the issues that San communities commonly face. These include poor health, low literacy rates, inadequate education, HIV/AIDS, malnourishment, social exclusion, and a lack of housing sanitation, electricity and general participation in mainstream politics (Munzer and Simon, 2009). In a statement made by the administrator of the Angolan city of Lugango cited in Munzer and Simon (2009: 840), the San are said, politically speaking, to be 'on the lowest level of the social scale'.

The details of the *Hoodia* case are as follows: In the 1960s, the CSIR, a South African state research facility, discovered that a plant, now popularly referred to as *Hoodia gordonii*, was being used by the San as an appetite suppressant (Vermeulen, 2007; Wynberg, 2004). The CSIR began to research the appetite suppressing properties of the plant. Over the next few decades, technological advances allowed the CSIR to finally discover and isolate the active ingredient in *Hoodia* which was registered as P57 in 1996. Following this, the CSIR granted a license to a British pharmaceutical company, Phytopharm, to further research and develop P57. In 1997, Phytopharm in turn sub-licensed Pfizer to develop the drug. In 2001, the San became aware of the CSIR's patent as well as of the increased attention that the drug received in the media. With the help of several NGOs, the San were represented by WIMSA and the San Council and made the CSIR aware of their intention to institute legal proceedings against it. This pertained to the use and spread of the San's knowledge without attaining Prior Informed Consent nor negotiating a Benefit Sharing Agreement with the community. After increased media pressure (Laird and Wynberg, 2008: 123), the CSIR eventually agreed to sign a Benefit Sharing Agreement with the San in 2003, but the organisation insisted that the agreement

would only be negotiated with an umbrella body which represented all of the concerned San communities, and that once concluded, no groups other than those mentioned in the agreement would be able to institute claims against the CSIR for the use of *Hoodia* (Munzer and Simon, 2009; Wynberg, 2004). According to the terms of the agreement, the San would receive 8% of all of the milestone payments received by the CSIR, and 6% of all the royalties that CSIR received from Phytopharm (Munzer and Simon, 2009). Milestone payments are payments that are made subject to agreed technical performance targets of P57 during its clinical development (CSIR, 2003). Royalty payments refer to the 'remuneration payable to a person in respect of the use of an asset, calculated with reference to the quality produced or sold as a result of the use of such asset' (Kimuda, 2008). In the San case, royalty payments are a percentage of the profits made once the drug has become commercially viable (CSIR, 2003). The translation of royalty percentages into monetary value depends on factors such as the size of the market for appetite suppressants (CSIR, 2003). All payments would be made into a San *Hoodia* Benefit Sharing Trust established by the San and the CSIR, the composition of which would be as follows:

A non-voting observer appointed by the South African Department of Science and Technology or its nominee; a representative appointed by the CSIR (or its nominee), three representatives appointed by the South African San Council, representing the Khomani, the !Xun and the Khwe; three representatives from other San stakeholders in the southern African region, appointed by the Working Group of Indigenous Minorities in Southern Africa (WIMSA); a representative of WIMSA; a South African professional appointed by the San Council and agreed upon by WIMSA (CSIR, 2003).

Once the payments were made, 75% of the money would be equally divided between San communities in Angola, Botswana, Namibia and South Africa (Vermeulen, 2007: 428). The rest of the money would be used in development projects and to cover the administrative costs of various San bodies such as WIMSA and the San Council which had been involved in the dispute (Vermeulen, 2007: 428). The division of benefits between the various San communities appears to have been an internal matter left to the various San umbrella groups to decide upon. Ostensibly, it would come down to which

communities are recognised by the respective countries' San groups. No claims or benefits could be made independently after the successful negotiation of the agreement. For this reason, lawyers representing the San had to ensure that the negotiation process and the outcomes of the agreement were as inclusive and participatory as possible to ensure its legitimacy (Munzer and Simon, 2009; Vermeulen, 2007).

The San *Hoodia* case is frequently cited as a 'success story' for various reasons. Firstly, it was one of the first agreements in the world to give holders of IK a share of royalties from drug and product sales developed from IK (Wynberg, 2004; Munzer and Simon, 2009). Secondly, the case is noteworthy as it involved a marginalised community, such as the San, coming to an agreement with an institution as powerful as the CSIR (Folkins, 2003: 345-346; Wynberg, 2004; Munzer and Simon, 2009; Maharaj *et al.*, 2008). And, thirdly, it also raised some of the important issues that other stakeholders, such as the Masakhane community, the focus of this thesis, will face when negotiating agreements to trade and protect their IK.

One of the most important issues that the parties in the *Hoodia* case had to resolve was the question of how to identify the community which first used *Hoodia* as an appetite suppressant (Munzer and Simon, 2009). When the San notified the CSIR of its intention to institute legal proceeding, the CSIR argued that it did not attain Prior Informed Consent because of the difficulty in identifying which group 'really' owned the knowledge pertaining to the uses of *Hoodia* (Munzer and Simon, 2009). The San are not the only group which holds knowledge of the use of the plant as an appetite suppressant (Munzer and Simon, 2009). However, historical knowledge of the traditionally nomadic lifestyle of the San, and their recognition as one of the first inhabitants in southern Africa, were used as the basis for attributing *Hoodia* knowledge to the San (Munzer and Simon, 2009). It was argued that, as the San had settled in various parts of southern Africa, San communities had interacted with other Africa groups with whom they might have shared their knowledge, but that they could be considered the original 'owners' of this knowledge (Munzer and Simon, 2009; Wynberg, 2004). Other concerns, such as determining who qualifies as a member of the San, were also raised, but these were side-lined due to the need to conclude an agreement between the parties (Munzer and Simon, 2009; Wynberg, 2004). Another difficult issue pertained to how the benefits would be shared within a

group that was spread over several countries. Although these were all recognised as concerns, the existence of an umbrella body which represented the San's interests in the four countries in question partially resolved them. As was mentioned previously, the issue of how the benefits would be shared remained the responsibility of WIMSA and its representative bodies (Munzer and Simon, 2009; Vermeulen, 2007; Wynberg, 2004).

Another problem which made coming to an agreement difficult was the general distrust of the CSIR by San representatives due to the CSIR's establishment by the former apartheid state (Vermeulen, 2007). Negotiating a fair and equitable agreement, therefore, was more difficult as the negotiating process requires a modicum of trust between the parties involved (Vermeulen, 2007). Furthermore, the use of an umbrella body to represent all San interests was found to be disconcerting to some San members as it required election of representatives to act on the behalf of the communities. Although San communities often have leaders, decision making processes within communities typically take place in a participatory manner where all members of the community gather together to discuss an issue (Vermeulen, 2007). Decisions are made via consensus whereby members speak freely for themselves rather than through representatives. The use of representatives, therefore, was unfamiliar and created a schism between elected leaders and the rest of the community, locking many of the community members out of the negotiating process (Vermeulen, 2007). This resulted in some of the community members calling into question how fair and equitable the agreement truly was (Vermeulen, 2007).

The question of how communities should be represented during legal proceedings is mentioned in Article 15.7 of the CBD, and elaborated upon in the Bonn Guidelines of 2002. Whilst Article 15.7 of the CBD states that fair and equitable sharing of benefits must be negotiated with indigenous stakeholders in the event that their knowledge or resources are used, the Bonn Guidelines further elaborate this request by emphasising the importance of direct and extensive participation by indigenous communities in the negotiation process (Vermeulen, 2007: 424). In order to ensure this, the Guidelines suggest the use of bottom up approaches which involve the indigenous communities extensively (Vermeulen, 2007: 424). The issue of direct participation and representation is therefore critical in assessing how fair and equitable an agreement is and, in turn, how successful a case is. This is because issues of representation also affect the outcomes of

the negotiation process (Vermeulen, 2007). In this case, it was found that some San members questioned the fairness of the agreement because they had not been directly involved in the negotiation process (Vermeulen, 2007). Issues of representation, therefore, indirectly influence what the community considers to be a fair or just agreement. In deciding whether a particular Benefit Sharing Agreement is fair, the relevant indigenous community's perspectives or standpoint regarding representation and other issues must be considered at all times. Often a community has a different philosophy or 'approach to life' than the company seeking to use their knowledge, and this may complicate or hinder the process of arriving at a successful arrangement. As Vermeulen (2007: 429-430) notes, for the San community, there were expectations of both monetary and non-monetary outcomes with regard to benefit-sharing; however, the terms of the agreement were largely monetary.

Munzer and Simon (2009: 832-835) raise another important point in assessing the success of the San case. They argue that the success of the case cannot be evaluated without taking into account how resource access and power hierarchies might have affected the negotiation process. Lack of socio-economic resources, land rights and lack of political participation all placed the San as a collective in a relatively poor power position (Munzer and Simon, 2009; Suzman, 2001). However, with the help of a few landmark cases, such as *Alextor Ltd. v. Richtersveld Comty. & Others* 2003 (South Africa) and *Sesana and Others v Attorney General* 2006 (Botswana), which granted dispossessed and relocated San communities land rights, the communities were in a better position to take on the CSIR. Some San members, for example, stated that they had been more confident to 'take on' the CSIR due to the success of the *Richtersveld* decision (Munzer and Simon, 2009; Vermeulen, 2007: 433). In addition, work done by NGOs to improve their plight had also improved the social standing of communities. In countries such as Namibia and South Africa, the San are for the most part not involved in mainstream politics, but they are organised into San political organisations and some communities have a strong sense of solidarity which assists them in organising themselves politically (Munzer and Simon, 2009: 846). However, the lack of knowledge of mainstream political and institutional structures has limited their ability to negotiate and benefit more from the agreement. Access to resources and land rights affect power, and thus, in turn affect the likelihood of a successful case.

Despite the San *Hoodia* case being heralded as a success, the San community has received very few royalty and milestone payments (Munzer and Simon, 2009). There is a great deal of doubt on the part of Munzer and Simon (2009: 852-856) that the San community will ever receive substantial payments from the development of a drug based on *Hoodia* because of several difficulties involved in working with P57, the active ingredient in *Hoodia* (see Maharaj *et al.*, 2008 for a further discussion of the process). *Hoodia gordonii* not only grows slowly, but its preferred habitat is concentrated in southern Africa, and it is vulnerable to pests (Munzer and Simon, 2009: 834) Furthermore, the process for making a synthetic compound of P57 requires multiple expensive stages (See Maharaj *et al.*, 2008). All in all, it is unlikely that a drug based on *Hoodia* can be produced in commercially viable quantities at a reasonable price (Munzer and Simon, 2009: 834). The unlikelihood of the San benefiting substantially from the royalty agreement provides a valuable lesson, that is, how the lengthy and expensive process of drug development often indirectly undermines the value of IK. It could also provide valuable lessons to other communities to set realistic expectations in terms of the benefits likely to accrue to them.

4.5 Conclusion

There are growing concerns that strong IPR law and its effective use are not enough to ensure that the interests of indigenous communities are protected (van Niekerk and Wynberg, 2012). The three cases discussed reveal that there are several factors that affect how effectively IPR law can be used to protect IK. First and foremost, it appears that the successful protection of IK is closely linked to access to other resource rights. In the case of the San, for example, it was noted above that land rights, legal recognition of indigenous peoples' rights as well as a sense of political and social cohesion affected the outcome of their case. The recognition of indigenous rights, such as land, allowed communities to feel like they could challenge a much stronger outside party. In the case of the *Jeevani*, although the communities concerned lived in different units in Kerala, India, the units themselves had strong social and political cohesion which made them speak up for their rights individually.

There is also evidence which suggests that issues of representation may affect the outcome in these cases. An example is the role that WIMSA played in circumventing some of the concerns which related to the identification of groups that belonged to the San. In the case of the *Neem* tree, the Indian state was willing to take on the American pharmaceutical company W.C. Grace on behalf of the Indian farmers. Thus where there is no indigenous organisation or body to act on behalf of an indigenous community, the state may play an important role in aiding indigenous communities in the protection of their rights and interests by acting as these communities representative. This can however be problematic, given that the interests of the state and indigenous communities may clash as is indicated by the Kerala Forest Department in the case of *Jeevani*. The *Jeevani* case also strongly highlights the need for widely recognised and agreed representation in order for a fair and equitable Benefit Sharing Agreement to be reached. Where there is more than one community which holds the knowledge, with no recognised body to act as representative this can result in the outside party dictating the terms of agreement, including which community it chooses to negotiate with. The result is that the legitimacy of a Benefit Sharing Agreement can be questioned. The factors identified here will now be discussed in relation to a more recent case to explore the degree to which indigenous communities are able to use IPR law to protect their IK. The next chapter introduces the *Masakhane Pelargonium* case which will be the focus of the remainder of the thesis

Chapter Five:

The Masakhane *Pelargonium* Case - An Introduction

5.1 Introduction

This chapter describes the Masakhane *Pelargonium* case which has gained increasing media attention over the last few years. The case deals with a relatively vulnerable South African Xhosa community who used IPR law to win a case against a large pharmaceutical company, Schwabe Pharmaceuticals. This resulted in the revocation and voluntary withdrawal of patents which related to the use of a plant called *Pelargonium sidoides*, or *Uvendale* as it is referred to in Xhosa (Michael Magwa, 2011, Interview). The case was heralded by the media as an example of the successful use of IPR law by an indigenous community to protect IK (see *The Cape Times*, 28 January 2010; Spicy IP, 2008; Spicy IP, 2010; *The Sunday Independent*, 1 May 2010; Third World Network, 2010). The case is important to the concerns of this thesis as it appears to be an instance where IPR law was used successfully to protect IK. This chapter provides a description of the case in preparation for a more detailed exploration of the specific issues raised by it in Chapter Six. In addition to discussing the details of the case, the chapter also discusses the history of the establishment of the Masakhane community, who brought the case to court, as the history of this community had significant bearing on the success of the case.

The case under consideration deals with the use of the plant *Pelargonium sidoides*, by the German pharmaceutical company mentioned above, as one of the ingredients in the medicine called Umckaloabo which is used for the treatment of respiratory infections. The Masakhane community claims that the use of *Pelargonium sidoides* to treat respiratory infections is IK that has been used by the Masakhane and other communities for several generations (Funeka Nkqayi, 2011, Interview). The creation of the product Umckaloabo, they argued, would not have been possible without the IK of such communities (Funeka Nkqayi, 2011, Interview). Schwabe Pharmaceuticals, claimed community members, used their knowledge without their consent and also failed to negotiate a Benefit Sharing Agreement with them as is instructed in Article 15 of the CBD (Convention on Biological Diversity) of 1993 and in South Africa's National Environmental Management Biodiversity Act of 2004 (NEMBA). NEMBA and the CBD require that an outside party

wishing to use the bio-resources and/or IK of an indigenous community must attain Prior Informed Consent and negotiate a fair and equitable Benefit Sharing Agreement with the community concerned.

With the help of the African Centre for Biosafety (ACB), a South Africa NGO, and the Berne Declaration, a Swiss NGO, the community was able to successfully challenge the company and won a case against it in the European Patent Office. The result was that one of the company's patents was revoked in 2010 (European Patent Office, 2010) and the company subsequently withdrew some of the other patents that it held in relation to *Pelargonium* (Third World Network, 2010). As an introduction to the case, a detailed discussion of *Pelargonium* and its commercialisation follows.

5.2 About *Pelargonium*

Pelargonium belongs to the family *Geraniaceae* which are generally grown for their aromatic and ornamental value (Jones and Adams, 2011). Two species of *Pelargonium* are used for their medicinal value: *Pelargonium sidoides* (see Figure 1) and *Pelargonium reniforme* (see Figure 2). Both species have crowded, velvety, heart-shaped long-stalked leaves with a system of thickened underground root-like branches with sparsely branched aerial parts from the base (Lewu *et al.*, 2007: 381). The velvety stem is about 20–50 cm long with a branched system of two (rarely up to four or more) pseudo-umbels, each with three to seven (occasionally up to 14) flowers (Lewu *et al.*, 2007: 381). The two species are difficult to distinguish unless they are flowering. *Pelargonium sidoides* has dark, reddish-purple (almost black) flowers, while *Pelargonium reniforme* has pink petals (Lawrence, 2001). The former flowers mostly from late spring to summer (October – January) with a peak in mid-summer (December), while *Pelargonium reniforme* flowers throughout the year (Jones and Adams, 2011). The fleshy bright red tubers or rhizomes of the plant are harvested for their medicinal properties (Brendler and van Wyk, 2008). Both species can be found in the Eastern Cape (ACB, 2008b: 1) (see Figure 3). It is important to note here that it is *Pelargonium sidoides* that is popularly used in the Eastern Cape and which is the subject of the Masakhane *Pelargonium* case against Schwabe Pharmaceuticals (Interviews in 2011 with Roy Gower; Michael Magwa; Funeka Nkqayi).

Thus, the discussion focuses on *Pelargonium sidoides*. From here onwards, *Pelargonium* will refer to *Pelargonium sidoides*.



Figure 1: *Pelargonium sidoides*
(Motjoti, 2011: 4)



Figure 2: *Pelargonium reniforme*



Figure 3: Eastern Cape, South Africa (McKibbin *et al.*, 2012: 390).

The *Pelargonium* plant is used by Zulu, Xhosa, Khoi and Sotho indigenous communities for various ailments including stomach aches, flu and coughs (Brendler and van Wyk, 2008: 421). Although there is no clear indication as to which community first held this

knowledge, it is now popularly accepted that it forms part of these groups' indigenous medicinal knowledge (Brendler and van Wyk, 2008: 421). This medicinal knowledge has been passed down from generation to generation (Interviews in 2011 with Elizabeth Nkqayi, Funeka Nkqayi) and is often heavily relied upon to treat ailments that would most likely go untreated due to the socio-economic status of most indigenous communities (Brendler and van Wyk, 2008: 421). Thus, the plant is of significant importance to indigenous communities who are unable to effectively access the healthcare system due to their poor socio-economic positions.

Knowledge about the medicinal use of this plant is common throughout the Masakhane community. Even children, through watching their elders pick, prepare and use the plant, can identify it and state some of its uses (Interviews in 2011 with Elizabeth Nkqayi, Funeka Nkqayi). The rhizome or roots of the plant are picked, washed, ground and then boiled in water until the water turns a deep red colour (Elizabeth Nkqayi, 2011 Interview). This broth is then strained and cooled where after is ready for use. Families often have a litre of the prepared mixture in their homes to treat minor ailments (Elizabeth Nkqayi, 2011, Interview). The mixture is often also shared with friends, family and acquaintances that live further away and do not have access to the plants (Elizabeth Nkqayi, 2011, Interview). So, the reliance on this plant is not only limited to those in rural areas. People who have migrated to cities and no longer have access to the plant tend to source it from traditional healers in the cities or obtain it from acquaintances who still reside in the rural areas where the plant is found (Elizabeth Nkqayi, 2011, Interview).

The slow growth of the plant, unsustainable harvesting practices and an increased demand for the plants, largely due to commercial interest, led to a moratorium being placed on all *Pelargonium* harvesting between 2006 and 2008 by the Department of Environmental Affairs (Van Niekerk and Wynberg, 2012: 537). No harvesting permits, which are necessary in order to legally collect indigenous bio-resources, were granted during this period (BABS, 2008). Companies such as Gower Enterprises, a local harvesting company which contravened the moratorium, faced harsh consequences for their actions (ACB, 2010a). In 2009, the moratorium was eventually lifted and harvesting permits for the plant were granted again. Despite the brief period provided to help the plants recover, there is still concern for the future availability of the plant (Andre and Baux, 2011). The active

ingredient in cultivated plants have been found to be less potent than that of wild *Pelargonium* plants (Andre and Baux, 2011; Legalbrief Environmental, 2010). This means that wild harvesting is still heavily relied upon (Andre and Baux, 2011).

5.3 Commercialisation of *Pelargonium*

The first documented use of *Pelargonium* to treat respiratory infections was in 1897 by Charles Henry Stevens, an Englishman who was cured of Tuberculosis after consuming a remedy made from the plant by a Sotho traditional healer in Lesotho (ACB, 2008b: 3; Sechehaye, 1930). After having his health restored by the remedy, Stevens took both the plant and the knowledge regarding its use as a respiratory cure to England where he created his own remedy for respiratory infections (ACB, 2008b: 4). He called this remedy ‘Umckaloabo’, which was a name made up from two Zulu words which mean cough and chest pain (ACB, 2008b: 3). Stevens had some success with the sale of the remedy despite accusations of fraud and quackery by the British Medical Association (Van Niekerk and Wynberg, 2012: 533). He sold the remedy until his death in 1942 where after his son sold his company (Van Niekerk and Wynberg, 2012: 533). In 1974, the healing properties of the plant were tested and verified in Geneva by Swedish company, JSO Werks Regensburg (Iso-Arzneimittel). The company then began importing *Pelargonium* to produce and sell their own cough remedy with the same name used by Stevens – Umckaloabo. In 1987, JSO Werks Regensburg (Iso-Arzneimittel) became part of Schwabe Pharmaceuticals which specialises in phytomedicines (van Niekerk and Wynberg, 2012: 534). Schwabe Pharmaceuticals eventually took over the production and sale of Umckaloabo. This required the importation of *Pelargonium* from southern Africa, just like JSO Werks Regensburg (Iso-Arzneimittel) and Stevens had done. Schwabe Pharmaceuticals collected the plant from various places in South Africa and Lesotho, the only countries where the plant grows widely. One of the places that Schwabe collected *Pelargonium* from is on land belonging to the Imingcangathelo Xhosa community near Alice in the Eastern Cape (Interviews in 2011 with Roy Gower; Funeka Nkqayi). In 2008, Schwabe and Parceval applied to the Department of Environmental Affairs for *Pelargonium* harvesting permits (van Niekerk and Wynberg, 2012: 537). They also started negotiating a Benefit Sharing Agreement with the Imingcangathelo Community

Development Trust to harvest *Pelargonium* on land belonging to the Imingcangathelo (van Niekerk and Wynberg, 2012: 537).

The *Pelargonium* harvesting value chain for plants collected from the Eastern Cape is as follows: The chain begins with local harvesters, usually from poor communities with high unemployment rates, who spend all day collecting the wild plant by hand in the rural areas (Funeka Nkqayi, 2011, Interview). Thereafter, a local harvesting company, Gower Enterprises, which holds a virtual monopoly on the *Pelargonium* harvesting in the Eastern Cape, collects the plants from the local harvesters (Roy Gower, 2011, Interview; Van Niekerk and Wynberg, 2012: 534). According to the ACB (2008b: 5), harvesters are paid between R3-15 per kilogram. However, former harvesters which were interviewed by the researcher in 2011, reported being paid as little as R2 per kilogram (Interviews in 2011 with Nokhululekile Binda, Nosakhumzi Binda). Middlemen in the business were cited as receiving as much as R1000 per kilogram for the plants while Schwabe sells a 100 millimetre bottle of Umckaloabo for around R400 (ACB, 2008b). At Gower Enterprises, the plants are washed, packaged and sent to BZH Export and Import, another South African harvesting company in the Western Cape, where, together with *Pelargonium* plants collected from elsewhere in South Africa, they are further processed before being sent to Parceval Pharmaceuticals in the Western Cape (van Niekerk and Wynberg, 2012: 534-535). Parceval, which is a subsidiary of Schwabe, then further processes and prepares the plants for export to Schwabe in Germany. Parceval is the sole exporter of *Pelargonium* in South Africa (Andre and Baux, 2011; Van Niekerk and Wynberg, 2012: 534-535).

Gower Enterprises, which acts as an agent of Parceval in the Eastern Cape, collected *Pelargonium* from two specific areas which are of concern to the case: land that is settled by Imingcangathelo Xhosa community and the land on which the Masakhane community lives (Roy Gower, 2011, Interview). The former falls under the traditional authority of Chieftainess Tyali (Jara, 2011: 3; Magini, 2012) while the other has formed a Communal Property Association which represents the community despite claims by representatives of Chieftainess Tyali that the Masakhane community also falls under her jurisdiction (Interviews in 2011 with Roy Gower; Funeka Nkqayi).

As will be discussed later in the chapter, there is a great deal of tension between democratic structures and traditional authorities in South Africa and one of the places that this plays itself out is in the relations between the Masakhane community and Chieftainess Tyali (Jara, 2011). Both traditional authorities and democratic structures are recognised in South Africa (Hendricks and Ntsebeza, 1999; Southall and De Sas Kropiwnicki, 2003). In the rural areas, traditional authorities are still recognised as the representatives of rural communities (Ntsebeza, 2004; Southall and De Sas Kropiwnicki, 2003). Such communities are often made up of several villages; in the case of the Imingcangathelo, there are about 22 villages (Jara, 2011: 3).

Anyone wishing to collect indigenous bio-resources from rural land under a traditional authority has to approach the authority which is seen to represent the community in order to attain Prior Informed Consent and negotiate a Benefit Sharing Agreement as is necessitated by NEMBA and the CBD (Department of Environmental Affairs, 2012b; Roy Gower, 2011, Interview). Both NEMBA and the CBD call for outside parties to negotiate and attain consent from the community concerned and, given that traditional authorities are recognised structures in South Africa, they can act as the representatives of the community. Consequently, Schwabe Pharmaceuticals and Parceval came to a Benefit Sharing Agreement with the Imingcangathelo community, represented by Chieftainess Tyali, for the harvesting of *Pelargonium* on Imingcangathelo land. The terms of the agreement were decided upon by Parceval, Schwabe and the Imingcangathelo community as represented by the Chieftainess, her advisors and other representatives from the community (Roy Gower, 2011, Interview; Van Niekerk and Wynberg, 2012). The agreement relates to both monetary and non-monetary benefits, but is not available for public scrutiny (Roy Gower, 2011, Interview; Jara, 2011). However, regular monthly meetings with all the stakeholders, which include representatives from each village, the Chieftainess or her representative, Mr Zengwetha, and Parceval, ensure that matters pertaining to the agreement can be regularly discussed (Roy Gower, 2011, Interview). Any benefits which flow from the Benefit Sharing Agreement are administered by the Imingcangathelo Community Development Trust which decides how the benefits are to be used. The trust was set up in 1999, thus when Schwabe negotiated an agreement with Imingcangathelo community the Trust was already in existence and was already administering the financial matters of the community (Roy Gower, 2011, Interview; *The*

Sunday Independent, 1 May 2010). These financial matters may include any social development programmes and settling of traditional matters in the community. The Benefit Sharing Agreement would thus have been one of many financial matters pertaining to the Imingcangathelo community. The Imingcangathelo Community Development Trust consists out of representatives from all the villages that make up the Imingcangathelo community under Chieftainess Tyali's authority (Andre and Baux, 2011).

The Masakhane community claims not to fall under the authority of Chieftainess Tyali, and thus asserted that no Benefit Sharing Agreement had been negotiated with them, despite *Pelargonium* being harvested on their land. Chieftainess Tyali, on the other hand, claims that the Masakhane does indeed fall under her authority as part of the Imingcangathelo Xhosa community and were thus included in the agreement (Andre and Baux, 2011; Roy Gower, 2011, Interview).

Since 2007, when the Masakhane first instituted the case against Scwhabe Pharmaceuticals, there has been no collection of *Pelargonium* on Masakhane land (Interviews in 2011 with Nokhululekile Binda, Nosakhumzi Binda and Roy Gower). The tension between the traditional authority, Chieftainess Tyali and the Masakhane community extends so far as the administration of the Imingcangathelo Community Development Trust. Whilst the Masakhane deny the authority of the Chieftainess, and claim that they are not included in the Benefit Sharing Agreement with Schwabe, the Masakhane community does have a representative in this Trust (Interview in 2011 with Roy Gower; Funeka Nkqayi). This is despite a great deal of contention over whether or not the Trust represents the interests of the community.

From the above discussion it is clear that there is a great deal of tension between the Masakhane community and the traditional authority, Chieftainess Tyali of the Imingcangathelo. This tension is both a reflection and the result of the constant struggle between indigenous communities and their traditional leaders who had been recognised (and often co-opted by) the apartheid government, and which continued to be recognised after 1994 when the newly elected African National Congress (ANC) government chose to recognise traditional leaders in South Africa. Today, this struggle plays itself out in the constant tensions between democratic institutions and traditional authorities (Hendricks

and Ntsebeza, 1999; Jara, 2011). The next section discusses the history of the Eastern Cape and the Masakhane community. A better understanding of the history will provide a better understanding of the current tensions.

5.4 The History of the Masakhane Community and the Eastern Cape

The Masakhane community is a small Xhosa community which consists of five villages totalling about 250 families (Jara, 2011: 3). It is located in the old Victoria East district of the former Ciskei (now the Eastern Cape) (see Figure 3), 15km way from Alice where the University of Fort Hare is located (Jara, 2011: 3). Xhosa speaking people are one of many indigenous ethnic groups in South Africa. They are not as isolated and vulnerable as the San (discussed in the previous chapter) as many Xhosa speakers hold strong political positions and have attained some economic and social mobility since the end of apartheid. However, this particular community *is* vulnerable as it is located in one the poorest and underdeveloped provinces in South Africa (Westaway, 2012). High unemployment rates, lack of access to municipal and social services and poverty are common factors within each of the five villages of the Masakhane (Cocks *et al*, 2001: 59-60). Constant migration to nearby towns and cities is common as people attempt to find employment (Interviews in 2011 with Virginia Mkosana, Vicky Ngomane). The community, therefore, is in contact with the 'modern world', and is not as isolated and vulnerable as, say, a remote indigenous community in the South American jungle that has had relatively little contact with the outside world. Nevertheless, the community, like many of South Africa's historically marginalised ethnic groups is recognised as having IK that has been passed down orally from generation to generation (ACB, 2008a, 2008b; van Niekerk and Wynberg, 2012). The ethnic identity of most of the Masakhane community is that of members of the Imingcangathelo 'tribe' of the broader Xhosa nation (Jara, 2011: 3).

The Masakhane community was established during apartheid when about a hundred former farm workers moved onto formerly white owned farms around Cathcartvale when white farmers were forced to leave as a result of the implementation of the Homeland system (Human Sciences Research Council, 2006: 21; Jara, 2011: 3; Lahiff, 2002: 24). According to the apartheid Homeland system and the policy of separate development, white people could not live or own land in designated black areas and *vice versa*

(Hendricks and Ntsebeza, 1999: 101-106). The apartheid state started a process of moving black people into Homelands which would be ruled by apartheid approved traditional leaders and white people into the separate Republic of South Africa (Hendricks and Ntsebeza, 1999: 101-106). However, the relationship between the Homelands and the apartheid state meant that the Homelands were heavily dependent on the apartheid state (Ntsebeza, 2004) and, if anything, were mere dumping grounds and a cheap source of labour for neighbouring white farms in the white designated areas. In addition, the apartheid state was heavily involved in the running of the Homelands as the land was still technically owned by the state with the ultimate authority in these areas being the bureaucratic state system rather than traditional authorities (Ntsebeza, 2004).

As part of the programme of separate development which was given expression to in the Homelands system, the land that was taken from white farmers ought to have been allocated to the traditional leader to govern and allocate land tenure rights (a system which continues today) (Ntsebeza, 2004). Disorganisation and the complicated and uncertain nature of the land tenure system in rural areas have meant that it is unclear whether the land was ever allocated to a local traditional authority to rule (Jara, 2011). Over time, however, the number of people settled on the former white owned farms grew and, today, the Masakhane community is made up of five villages: Lokwe, Joe, Nomtayi, Mfingxane and Krwanyli (Funeka Nkqayi, 2011, Interview). In the interim period, before the end of apartheid in 1994, the community, like communities in some other areas in the Eastern Cape, lived with relative non-interference from the local traditional leaders (Funeka Nkqayi, 2011, Interview). Instead 'diverse, community-based systems, rules, structures and mechanisms of local governance, justice, management of common property and customary law' were popular (Jara, 2011: 2).

In 2001, the five villages mentioned above together applied to the Department of Rural Development and Land Reform to form a Communal Property Association in order to lodge a land claim for the former white owned farm land (Jara, 2011: 3; Lahiff, 2002: 24). In June 2002, the Masakhane Communal Property Association acquired 674 ha of the 7000 ha on which they are settled (Human Sciences Research Council, 2006: 21; Jara, 2011: 3; Lahiff, 2003: 27). Whether or not they will be given the title deed to the remaining land remains to be seen. The Communal Property Association Act 28 of 1996

was passed to give effect to the ANC-led government's land reform programme. The goal of the programme was to assist disadvantaged communities to get stronger land rights after the fall of apartheid in 1994. It was aimed at communities that were forcibly removed during apartheid and people who had settled on land and formed a community over time, such as the case of the Masakhane (Communal Property Association Act 28 of 1996). A Communal Property Association is one of the ways that land could be communally claimed and owned (Communal Property Association Act 28 of 1996). The Masakhane community realised that securing their land rights was critical to securing other rights in South Africa, such as access to municipal services (Office of the MEC for Roads and Public Works, 2001). Their attempts to have social and municipal services rendered to them had been hampered as they are not considered to be legal occupants of their land (Office of the MEC for Roads and Public Works, 2001). As of 2011, the Masakhane community had still not received the title deed to all 7 000 ha of the land they live on. Their legal position, therefore, continues to remain somewhat ambiguous as evidenced by further discussions by Cocks *et al* (2001; and Jara, 2011: 3).

Furthermore, tensions between the Masakhane community and the local traditional authority, Chieftainess Tyali, continue as the Masakhane community claim that the CPA, rather than the Chiefainess, represents them. This is largely, as was mentioned previously, due to the dual recognition of traditional authorities and democratic institutions in South Africa (Jara, 2011; Hendricks and Ntsebeza, 1999; Ntsebeza, 2004; Southall and De Sas Kropiwnicki, 2003). This is a particularly contentious issue given that several communities in South Africa challenge the institution of traditional authorities because of the manner in which they were co-opted by the apartheid state (Jara, 2011). A discussion of the past and present role of traditional authorities will help clarify the position of the Masakhane community.

5.5 Traditional Authorities and the Contemporary Local Government System

The Eastern Cape includes the mainly rural former apartheid Homelands of the Ciskei and Transkei (Jara, 2011: 1). It is recognised as one of the poorest provinces in South Africa (Westaway, 2012). As part of the apartheid system, tribal boundaries and authorities were imposed without consultation or consideration. These authorities ruled the Homelands and

were to be the foundation of the Homeland scheme in terms of the Bantu Authorities Act of 1951 (Jara, 2011: 1). The state attempted to move all black people to Homelands which were ruled by a traditional authority based on ethnic identity or 'tribe' (Jara, 2011). The forced imposition of the authorities, co-option by the apartheid system as well as a tendency to use their position for their own interests would eventually lead to tribal authorities and boundaries being on the verge of collapse by the time apartheid ended (Jara, 2011: 6, 7). The role that traditional authorities played in apartheid land dispossession meant that these tribal structures were largely unsupported by black people (Hendricks and Ntsebeza, 1999: 105; Jara, 2011).

By the 1980s and early 1990s, when apartheid power was waning, political struggles for democracy which had spread to rural areas led to mass mobilisation against corrupt traditional leaders. What followed was a period of relative 'liberalism' in the tribal system and community-led civic organisations began to emerge in some rural areas (Jara, 2011). The ANC initially supported this relative liberalism and the emerging civic associations (Hendricks and Ntsebeza, 1999: 107). This support, however, was withdrawn when traditional leaders, who still held some power, threatened to deny election campaigns for the first democratic local government elections in rural areas (Jara, 2011: 10). Traditional authorities were worried that they would lose power in the new democratic South Africa and thus hoped to pressurise the ANC to recognise and reinforce their power after 1994 (Jara, 2011). The ANC in turn wanted to increase its support base in the rural areas (Hendricks and Ntsebeza, 1999: 107). Thus, the ANC 'decided to woo the chiefs...[and]...embarked on a strategy of cajoling chiefs into their movement' (Hendricks and Ntsebeza, 1999: 107-108).

The result was the recognition of the role of traditional authorities in the new South Africa in the Interim Constitution of 1993 and the Constitution of the Republic of South Africa of 1996 (Hendricks and Ntsebeza, 1999: 110-113). Later, their powers were further recognised and confirmed in the Traditional Leadership and Governance Framework Act of 2003 and in the Communal Land Rights Act 11 of 2004 (now repealed) which accommodated traditional leaders by securing their place in local government structures, establishing a House for Traditional Leaders and retaining headmen (Jara, 2011: 1-2). This meant that, in areas where the roles of traditional authorities were virtually defunct such as

Ndlambe, Phrudoe and Rabula in the Eastern Cape, traditional authorities attempted to reinstate their authority (Jara, 2011).

In the case of the Masakhane, where there had previously been little interaction between local traditional authorities and the community, the above Acts instigated tensions between the community and the local traditional authority (Jara, 2011). To complicate matters further, although the institutions and the powers of traditional authorities were reinstated by the Constitutions of 1993 and of 1996, the same Constitution (1996) and the Local Government Transition Act No 209 of 1993 had dismantled the Homeland local government system. In their place, provinces, municipalities and a ward system was created to replace the Homeland system as enacted within the Municipal Structures Act of 1998 and the Municipal Systems Act of 2000 (Jara, 2011: 16). In addition, the Regulation of Development in Rural Areas Act of 1997, which was passed by the Eastern Cape Provincial Legislature, stripped traditional leaders in the Eastern Cape of their development duties which had been prescribed to them under the Bantu Authorities Act of 1951 (Jara, 2011: 15-16; Ntsebeza, 1999 : 87). The post-apartheid state thus clearly expected that traditional authorities and democratic structures would co-exist and co-operate with each other. In order to make this possible, a complex local government system was created.

The post-apartheid South African government is divided into a three tier hierarchical system: national, provincial and local. The Eastern Cape Province is divided into district municipalities and these in turn are divided into local municipalities (Ntsebeza, 2004: 71). The Masakhane and Imingcangathelo communities fall under into the Nkonkobe Local Municipality which falls under the Amathole District (Eastern Cape Development Corporation, 2013; Legalbrief, 2010; Lupuwana, 2008: 213). For voting purposes and greater accountability to constituents, local municipalities are also divided into wards with a single councillor in each ward who represents and addresses the concerns and interests of a community. Wards may cut across rural and urban areas so that they include both developed and underdeveloped areas. This was partly done in an attempt to avoid areas being drawn up along racial lines as the more developed urban areas tend to be disproportionately white whilst underdeveloped rural areas tend to be almost exclusively black. Ward councillors are voted in by their constituents. Alongside the ward system are

Traditional Local Councils (TLC) which only represents the interests and concerns of communities in rural areas (Department of Co-operative Governance and Traditional Affairs, 2011). 40% of a Traditional Local Council is elected and 60% is appointed by the senior traditional leader (Carrim, 2011). TLCs were created to 'administer the affairs of a traditional community, and assist traditional leaders to perform their functions' (Department of Co-operative Governance and Traditional Affairs, 2011). They are, however, also expected to work with local municipal ward councillors to assist in the identification of the needs of the (rural) community which they represent. This applies to municipal affairs such as shaping Integrated Development Plans (IDPs) and co-ordinating service delivery (Department of Co-operative Governance and Traditional Affairs, 2011). These two separate institutions, the ward system and the TLC, together form local municipalities (See Diagram 1). Municipal Councils in the rural areas include both the TLC and the elected ward councillors, but the TLC does not have voting rights. Their composition in the municipal council is 20% non-voting rights to the TLC and 80% voting rights to the ward councillors (Southall and De Sas Kropiwnicki, 2003: 73; Municipal Structures Amendment Bill, 2000).

The boundaries of a ward and TLC may cut across either the same or different territory in rural areas (Jara, 2011: 15). It is possible for example, to have the same ward divided between two different tribal authorities or TLCs (Jara, 2011: 15). The circumstances are province specific but either way, the wards and the TLC are separate systems encouraged to work together at the local municipal level in the interests of rural communities. It is a complicated system which may cut across several territorial lines, resulting in community members not knowing who to approach for recourse when the community experiences problems (Hendricks and Ntsebenza, 1999; Southall and De Sas Kropiwnicki, 2003).

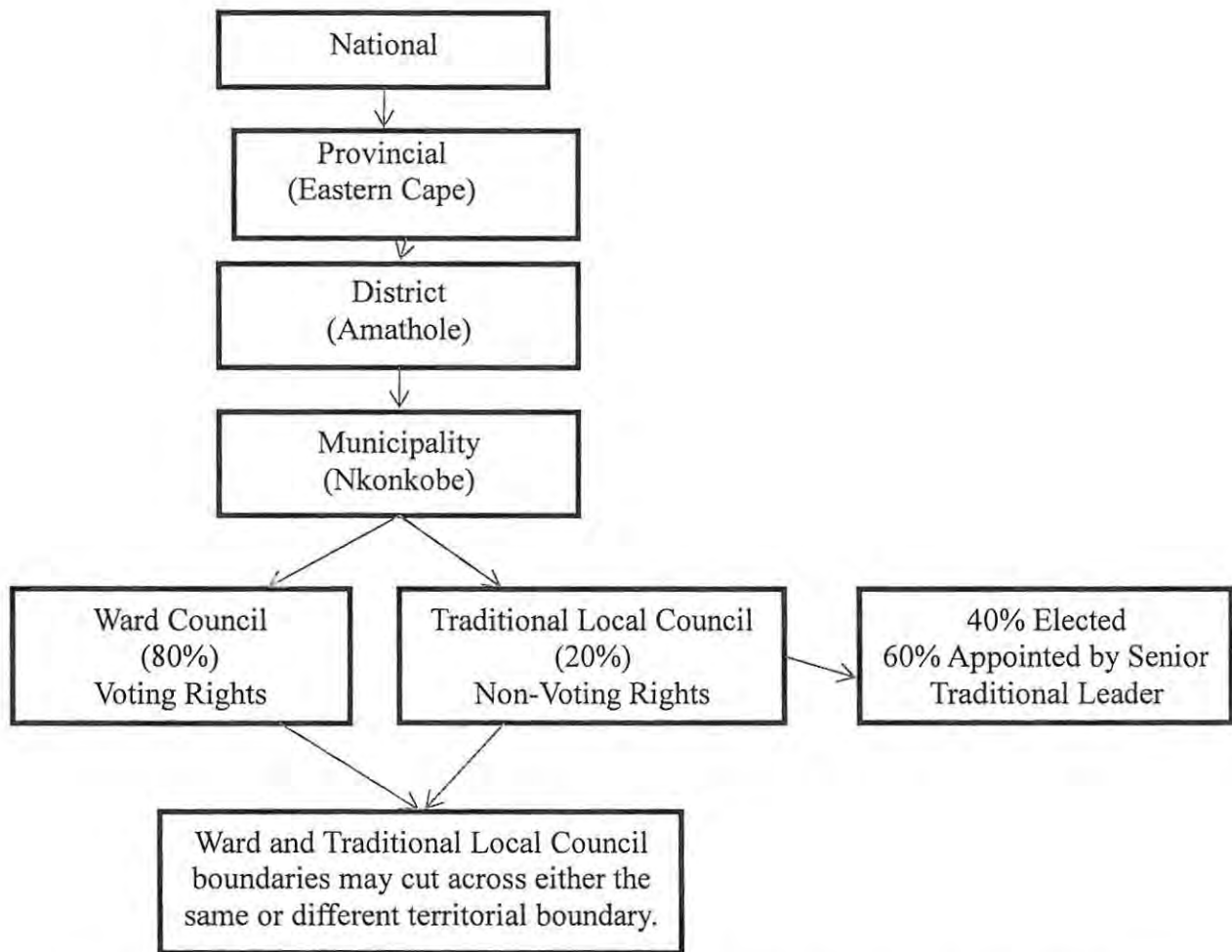


Diagram I: How local government is organised (Based on Carrim, 2011, Jara, 2011; Southall and Kropiwnicki, 2003).

The Masakhane community falls under the Nkonkobe Local Municipality, but also, according to some, under the traditional authority of Chieftainess Tyali. However, most community members deny the authority of the traditional authority and rather claim to fall exclusively under the local municipality (Funeka Nkqayi, 2011, Interview). One Masakhane community member explained the relationship by giving the example that the Masakhane community had always dealt with the municipality, not with the traditional leader, when it instituted its land claim and attempted to access municipal services (Funeka Nkqayi, 2011, Interview). Despite their denial of Chieftainess Tyali's authority, the government Acts listed above, including the Traditional Leadership and Governance Framework Act of 2003 and the Communal Land Rights Act 11 of 2004, ostensibly place the Masakhane under the authority of traditional leadership. Such authority is based upon the fact that the community is located in a rural area and was classified under apartheid as

being part of the Imingcangathelo Xhosa 'tribe'. In addition, the Masakhane have a representative on the Imingcangathelo Development Trust. However, the land that the community is settled on does not appear to have been allocated to any traditional leader to rule and there has always been some dissent in the community when it comes to the question of whether or not the community falls under the jurisdiction of the local traditional authority (Funeka Nkqayi, 2011, Interview). Whilst most community members agree that they did not want the traditional authority involved in any way when it came to any benefit that might have flown from winning the case against Schwabe, some members do not mind minimal involvement or interaction with the traditional authority such as in the matter of traditional customs (Interviews in 2011 with Nokhululekile Binda, Nosakhumzi Binda, Funeka Nkqayi, Zameka Nxakala).

The tension that exists between traditional authorities and democratic institutions in South Africa is very evident here. As much as government anticipated that the two systems would co-operate to represent the interests of the community, the reality on the ground is that relations between the two are contentious. There is no clear recourse for a community such as the Masakhane community which does not appear to fit squarely under either the democratic institutions or traditional structures.

5.6 The Masakhane *Pelargonium* case

The Masakhane *Pelargonium* case began when community member and Masakhane Community Property Association Chairperson (MCPA), Nomthunzi Api, became aware of the increased harvesting of *Pelargonium* in her community (Carte Blanche, 2011). She had started to notice that some people in the community were collecting the plant in larger quantities than was needed for domestic use (Carte Blanche, 2011). One day she spotted a van arriving in the community. After subsequent sightings, she discovered, through discussions with community members, that the van arrived to collect and pay people for the *Pelargonium* that they had picked (Carte Blanche, 2011; Funeka Nkqayi, 2011, Interview). She became concerned about the future availability of the plant for the community as well as the paltry amount that the harvesters were paid for a days' work.

Although Ms Api is a member of the Masakhane community, she works at the Albany Museum in Grahamstown and, therefore, travels to Grahamstown for work (Funeka Nkqayi, 2011, Interview). When in Grahamstown, she contacted Mr Tony Dold, a botanist at Rhodes University in Grahamstown, and relayed her story and concerns (Carte Blanche, 2011; Funeka Nkqayi, 2011, Interview). Mr Tony Dold, in his capacity as a botanist, had been increasingly contacted by bio-prospecting pharmaceutical companies over the years asking about *Pelargonium* and its uses (Andre and Buax, 2011; Carte Blanche, 2011). He investigated Ms Api's claims and found that the van belonged to Mr Roy Gower, the owner of Gower Enterprises which collected *Pelargonium* from various areas in the Eastern Cape, including the Imingcangathelo area (Funeka Nkqayi, 2011, Interview). Mr Dold proceeded to put Ms Api in contact with the African Centre for Biosafety, a South African NGO which has the protection of South Africa indigenous resources and IK as one of its many aims. The African Centre for Biosafety met with Nomthunzi Api and community members from the MCPA (Funeka Nkqayi, 2011, Interview). In a series of community meetings, which all community members were invited to, the African Centre for Biosafety explained that *Pelargonium* was being collected for export to a German pharmaceutical company in order to make Umckaloabo, a cough mixture sold in Europe and South Africa to alleviate respiratory infections (Funeka Nkqayi, 2011, Interview). The African Centre for Biosafety outlined the *Pelargonium* value chain to the community, the amount of money made by Schwabe from Umckaloabo as well as the legal options available to the community (Funeka Nkqayi, 2011, Interview).

Community members stress that these meetings were conducted with the involvement of the whole community (Interviews in 2011 with Nokhululekile Binda, Nosakhumzi Binda, Funeka Nkqayi, Zameka Nxakala). The invitation and notice of these meeting went as follows: The MCPA, which has a chairperson and secretary, represents the five villages which make up the MCPA. Each of the villages in turn has its own chairperson and secretary (Funeka Nkqayi, 2011, Interview). When a meeting is to be called, a letter is written by the chairperson of the MCPA to each chairperson of the five villages (Funeka Nkqayi, 2011). The chairperson of each village then arranges a door-to-door notification within the village (Funeka Nkqayi, 2011, Interview). This means that not only was virtually everyone aware of when the meetings were held, but that almost everyone attended at least one meeting (Interviews in 2011 with Nokhululekile Binda, Nosakhumzi

Binda, Funeka Nkqayi, Zameka Nxakala). All the meetings to discuss the *Pelargonium* case were held close to an empty shop stall in the village of Lokwe (Funeka Nkqayi, 2011, Interview).

In 2007, the community decided that it wished to stop collection of *Pelargonium* on MCPA land by external parties and wished to institute proceeding against Schwabe Pharmaceuticals (Funeka Nkqayi, 2011, Interview). While the community knew that there was a Benefit Sharing Agreement between Schwabe and the Imingcangathelo community, as represented by Chietainess Tyali and the Imingcangathelo Community Development Trust, the community alleged that neither Chieftainess Tyali nor the Imingcangathelo Community Development Trust represented them and that the existing Benefit Sharing Agreement brought them no benefits (Funeka Nkqayi, 2011, Interview). Not only had the community never been consulted regarding the Benefit Sharing Agreement, but it was alleged that the community did not even know what the amount of money in the Trust was, or what it was used for (Funeka Nkqayi, 2011, Interview). For this reason, the Masakhane community decided to institute their own proceeding against Schwabe, claiming that the patents which the company held were based on the community's IK and, thus, they wished to challenge the patents. The African Centre for Bio-safety, using its network of contacts, contacted the Berne Declaration, a Swiss NGO. With its assistance, the African Centre for Bio-safety instituted proceedings at the European Patent Office where the patents were lodged. Carrying affidavits from the community regarding the use of *Pelargonium*, Ms Api travelled with the African Centre for Biosafety to Germany and, together with the NGOs, presented the Maskhane's case (Funeka Nkqayi, 2011, Interview).

Two patents were challenged (ACB, 2008a; 2008b). The first patent, EP 1 429 795 which was granted on 13 June 2007, patents the method of producing extracts of the *Pelargonium sidoides* and or *Pelargonium reniforme* using aqueous-ethanol solvent (10-92% ethanol) (ACB, 2008a). As explained earlier, this means that Schwabe claimed a patent for the use of a water and alcohol solution to extract the active ingredients in the *Pelargonium* root. The African Centre for Biosafety (2008b) claims that the patent essentially gave the German pharmaceutical company the exclusive right to make, sell or import/export the active ingredients of the *Pelargonium* root that were extracted by water

and alcohol in any country that is party to the European Patent Convention (EPC). The second patent, EP 1 651 244 which was granted on 29 August 2007, was for the ‘use of extracts from roots of *Pelargonium* for the manufacture of a medicament for the treatment of AIDS and associated infections’ (ACB, 2008a). These included ‘a vast number of bacterial, viral, and parasitic infections and inflammations; including TB, all respiratory tract infections, sexually transmitted diseases, etc. [and] precludes everyone in the European Union and contracting States to the EPC [European Patent Convention] from using the two species of *Pelargonium* for AIDS and opportunistic disease’ (ACB, 2008a).

The first patent was challenged on the following grounds: a lack of Prior Informed Consent in terms of Articles 1, 8(j), 15 and 16 of the CBD and the argument that the patent effectively controlled the entire trade in *Pelargonium* – a clever way in which Schwabe circumvented Article 53 of the EPC which explicitly bans patents on plant varieties (ACB, 2008a). Furthermore, it was argued that the patent did not demonstrate novelty or an inventive step as the water-alcohol extraction method was not discovered by the company and, therefore, cannot be regarded as novel or inventive (ACB, 2008a). The second patent, for the use of the root extract for the treatment of AIDS and associated infections, was also challenged for lack of novelty or an inventive step, failure to obtain Prior Informed Consent for the use of the roots for these ailments, and claims that ‘the alleged AIDS therapy is disclosed in the specification of the patent in an extremely summary way and therefore does not comply with the rules requiring sufficient disclosure of the subject matter of the invention’ (ACB, 2008a).

In 2010, the European Patent Office revoked the EP 1 429 795 patent pertaining to the use of a water and alcohol solution to extract the active ingredients in the *Pelargonium* root. The European Patent Office ruled that this method did not involve a new or inventive step which is one of three requirements of a valid patent. The other requirements are demonstration of novelty and industrial application. The European Patent Office claimed that method used was common enough to be found in any science textbook. The case against the second patent, EP 1 651 244, which was for the use of the root extract for the treatment of AIDS and associated infections, did not run its full course. Three months after the first patent was revoked, Schwabe withdrew the second patent and several other

Pelargonium patents that were not listed in the case even though it claimed that these did not contravene European patent law.

The conclusion of the case was followed by widespread media coverage which heralded the case as a successful example of an indigenous community using IPR law to protect their IK (Spicy IP, 2008; Spicy IP, 2010; *The Cape Times*, 28 January 2010; *The Sunday Independent*, 1 May 2010; Third World Network, 2010). After winning the case and returning home, another series of community meetings were held between the Masakhane community and the African Centre for Bio-safety in order to discuss the next step (Funeka Nkqayi, 2011, Interview). The community hoped that winning the case would result in Schwabe being forced to conclude a Benefit Sharing Agreement with them (Nokhululekile Binda, Nosakhumzi Binda, Funeka Nkqayi, Zameka Nxakala). An attempt was then made to garner the support of Chieftainess Tyali by the MCPA in a meeting with her (Funeka Nkqayi, 2011, Interview). The Chieftainess is reported to have supported the idea of a Benefit Sharing Agreement with the community but no action was taken by the Chieftainess following the meeting (Funeka Nkqayi, 2011, Interview). The MCPA in turn refused to approach the Chieftainess for a second time, believing that the Chieftainess had her own agenda which had not been revealed to the community (Funeka Nkqayi, 2011, Interview).

The current situation is that Masakhane community continues to await a Benefit Sharing Agreement between itself and Schwabe to be negotiated as they believe it to be the next logical step following their victory in the *Pelargonium* case. *Pelargonium* is also currently not being harvested in the area around the five Masakhane villages (Interviews in 2011 with Roy Gower, Funeka Nkqayi). This stands in contrast to the Benefit Sharing Agreement that exists with the Imingcangathelo Community Development Trust and the harvesting of *Pelargonium* in the areas under its jurisdiction (Roy Gower, 2011, Interview).

5.7 Conclusion

The Masakhane *Pelargonium* case is a complex one which raises several issues relating to the use of IPR law to protect IK. The history, context and various tensions that exist

between the different parties and institutions involved in the case, all played a factor in the outcome of the case. This means that there are insights and lessons to be gleaned from the Masakhane *Pelargonium* case that can be used to provide a nuanced answer to the research question, of whether or not IPR law can be used to effectively protect IK. The next two chapters explore the issues raised by this case in more detail.

Chapter Six

Issues Raised by the Masakhane Pelargonium Case Relating to the Use of Intellectual Property Rights Law to Protect Indigenous Knowledge

6.1 Introduction

The Masakhane *Pelargonium* case has all the makings of a David and Goliath story (Fakir, 2010) a small vulnerable community taking on a large, foreign company with little to no available resources to do so. Despite being located in one of the poorest areas in South Africa, with very high unemployment levels (Westaway, 2012), the Masakhane community was able to use IPR law to successfully challenge a large pharmaceutical company, which held much greater economic power and strength than the community, and in this way protected its interests. This case, as well as some of the other cases briefly reviewed earlier in the thesis, suggests that IPR law can be used with some success to protect IK. However, the question that remains, is determining how beneficial the use of IPR law ultimately is. Although the community managed to have one patent revoked and a few others voluntarily withdrawn by the company, the current state of affairs suggests that this case may not be as successful as it has been portrayed in the media. The community is still waiting for a Benefit Sharing Agreement, but neither the pharmaceutical company nor the local traditional authority appears to be taking steps toward the negotiation of such an agreement. This chapter examines the factors which may either assist or hinder the successful use of IPR law to protect IK. The particular challenges that the Masakhane community face may provide lessons that may be relevant for other similar cases and also add to the existing literature and knowledge in the field.

6.2 Private Property versus Communal Property

Although the Masakhane community successfully challenged Schwabe Pharmaceuticals, it is important to note that under current IPR law the community cannot expect to have a Benefit Sharing Agreement negotiated with them for their IK as they are not the only community that has knowledge of the use of *Pelargonium* to treat respiratory infections. Zulu, Xhosa, Sotho and Khoi communities have been noted to use *Pelargonium* to treat

colds, coughs, flu and other symptoms associated with respiratory infections (Brendler and van Wyk, 2008: 421). Since IK is passed down orally it is difficult to determine which community discovered this use of *Pelargonium* first. Charles Henry Stevens, the British man who was healed by taking a remedy made from the plant by a Sotho traditional healer, provided the first written account of the healing properties of *Pelargonium* (ACB, 2008b; Sechehaye, 1930). However, this does not prove that it was the Sotho who first discovered the use of *Pelargonium* to treat respiratory infections.

IPR law requires the identification of one person or juristic entity (a group of people who can be legally considered as a single composite) as the creator of a novel idea or an inventive step which has industrial application (Firth, 1997; Folkins, 2004: 346-347; Long, 1991). In the case of *Pelargonium*, however, there is more than one community that holds the same knowledge and there is no single body that has been set up to protect the interests of all the affected indigenous communities. While South Africa has passed laws to protect IK, indigenous communities have largely been left to represent themselves with no thought as to the circumstances which they face which may influence the outcome of such cases. There is no juristic body that has been set up to represent the interests of all South Africa's indigenous communities in the event that circumstances such as those faced by the Masakhane arise. The result is that where more than one community has the same knowledge, no South African community can claim ownership of this knowledge and reap the benefits which IPR law accords to owners of knowledge. By virtue of being known by more than one juristic person, the IK of such communities becomes common knowledge and can be used by anyone.

Nevertheless, the principles guiding IPR law do require that a person has to be paid for their intellectual creativity (Mukuka, 2010: 19). This means that despite the fact that knowledge is held by more than one community, there ought to be attempts made to find out which of the many communities first held the knowledge. What this means for IK is that where more than one community have the same knowledge, it may sometimes be possible to identify which community first held the knowledge so that they can be rewarded for their intellectual creativity. This is what transpired in the San *Hoodia* case discussed in Chapter Four. In this case, the San was recognised as having been the first to know about the medicinal properties of *Hoodia* and, fortunately, a body to represent the

whole San community was already in existence. However, where it is not possible to identify the community which first held the knowledge and if there is no juristic body representing all the interests of the communities in question, then the IK can be appropriated to create products that generate millions without companies having to acknowledge any of the indigenous communities that hold the knowledge or share benefits with them (Folkins, 2004: 346-347; Shiva, 1997a, 1997b; van Niekerk and Wynberg, 2012). In the *Pelargonium* case, the knowledge was taken out of southern Africa to make Umckaloabo in Germany, which generates significant profits for Schwabe Pharmaceuticals. While a Benefit Sharing Agreement exists with the Imingcangathelo community, this agreement relates to the use of their bio-resources rather than the use of the knowledge of the medicinal properties of *Pelargonium*. No Benefit Sharing Agreement relating to the knowledge itself has been negotiated with any community in South Africa or Lesotho, despite the fact that this knowledge generates substantial profits overseas.

Situations like this one lead critics of the IPR regime to argue that IPR law aids the misappropriation of IK (Mshana, 2002; Riley, 2000; Shiva, 1997a, 1997b; Whitt, 1998, 2009). The requirement for a single owner or innovator means that certain forms of property ownership (that is, private property) are recognised over others (communal property ownership) to the detriment of indigenous communities' interests. By only considering the possibility that one community can hold IK, this means that in cases where the knowledge is known and used by several different communities, there is insufficient protection for IK. Rather, the requirements of IPR law relegate IK to public knowledge which can be taken and used by anyone, including large foreign pharmaceutical companies. So, it is not only possible for the knowledge to be misappropriated but the misappropriation may result in the flow of goods and benefits from developing states to the developed world where most of the largest pharmaceutical companies are located.

Having more than one community who holds the knowledge pertaining to *Pelargonium* and no way to determine which community thought of the knowledge first means that Schwabe Pharmaceuticals does not have to negotiate a Benefit Sharing Agreement with any of the aforementioned communities for the use of IK relating to the use of *Pelargonium* for the treatment of respiratory infections. The community may continue to use the knowledge as they please and there is nothing to prevent them from using the

knowledge to manufacture and market their own remedy, but there is no requirement that they ought to benefit from others' use of their knowledge. However, Schwabe Pharmaceuticals would be required to negotiate a Benefit Sharing Agreement with the Masakhane if they decided to resume the harvesting of *Pelargonium* on Masakhane land and accepted the Masakhane community's claim that they do not fall under the authority of Chieftainess Tyali. This would, however, place Schwabe right in the middle of the tensions between the Masakhane community and Chieftainess Tyali as the negotiation of a separate agreement would imply that the company recognises the independence of the Masakhane from the local traditional authority. For this reason, it is unlikely that Schwabe Pharmaceuticals will negotiate a Benefit Sharing Agreement with the Masakhane for the harvesting of *Pelargonium* on their land. The result is that, although the community had one patent revoked and several others voluntarily withdrawn, the circumstances of the case make it unlikely that either a Benefit Sharing Agreement for the IK itself or for the harvesting of *Pelargonium* on Masakhane land can be expected.

The results of this case are very similar to that of the *Neem* case that was discussed in Chapter Four. In both the *Neem* and the Masakhane *Pelargonium* case, a patent had been revoked due to the use of IPR law, but no Benefit Sharing Agreement was reached with those who took legal action to revoke the patent. This is because, in both cases, the knowledge is widely held and thus it is difficult for any one community to claim ownership of it. In addition, both the communities concerned are now legally entitled to develop their own commercial applications of the plant (because the patents were revoked), but their position in the global economy makes this impossible. In other words, they are unable to benefit from the outcome of their cases respectively.

The results of the *Pelargonium* case remind us that the idea of IPR law was developed out of a particular context and history in Europe where private property and individualism are valued (Long, 1991; Prager, 1944; Sherman and Bentley, 1999). The basic premise of IPR law is that one person has created and thought of something and that this person ought to be rewarded for their intellectual creativity. IPR law is thus underpinned by a specific economic philosophy: that every person should be reap the fruit of his or her labour (Mukuka, 2012: 40; Dean, 2001). Yet, what emerged from the Masakhane case is that, where there is more than one community that holds the same IK and it cannot be

determined which community held the knowledge first, IPR law fails to assist communities to benefit in any way from the knowledge that they hold.

One of the claims of advocates of IPR law is that it fosters creativity and further development in a society (Mukuka, 2010: 19, 138-139). Put differently, the protection of people's intellectual property through IPR law allows people to make money from their invention and thus ought to be an incentive for people to be creative and innovative. In addition, as patents expire, considering that they are only granted for a limited amount of time, the knowledge or innovation becomes available for everyone to use and, therefore, everyone in society supposedly benefits in the long run (Mukuka, 2010: 19, 138-139). Yet, this is exactly the opposite of what has happened in the Masakhane *Pelargonium* case. Knowledge pertaining to the use of *Pelargonium* to treat respiratory infections was used by several people in several communities to treat respiratory complaints. Research indicates that not only do people depend on this knowledge to create indigenous remedies in lieu of access to formal healthcare services, but this knowledge is often also used to create remedies for others who no longer reside in the community (Elizabeth Nkqayi, 2011, Interview). So, this knowledge is clearly held by several people for the benefit of people both in and outside of the communities concerned and thus for society as a whole. However, once companies wish to use the knowledge and the bio-resources related to this knowledge, the resources are taken and used to create remedies that benefit only those who can afford them. This adds weight to the arguments of Hountondji (2002), Odora Hoppers (2002a), Shiva (1997) and Whitt (1998) regarding the way that IPR is sometimes used to misappropriate IK as it can be used without giving recognition to the indigenous communities that hold the knowledge. The claim by proponents of IPR law, that such law is ultimately for the benefit and development of society in the long run, does not ring true in the case of IK. Rather IK already exists for the benefit of the community in the way in which it is held and developed, but it is the very fact that the knowledge is held communally and for communal benefit that makes it vulnerable to misappropriation.

Thus, in summary, the Masakhane *Pelargonium* case illustrates that where knowledge is widely held by various indigenous communities, it is very difficult to use IPR law to protect that knowledge. It seems then correct to say that IPR law does not easily accommodate IK. As pointed out by critics such as Hountondji (2002), Mshana (2002),

Odora Hoppers (2002a), Shiva (1997a, 1997b) and Whitt (1998, 2009) IPR law was not developed with IK in mind and, for that reason, has limited applicability to IK.

6.3 Indigenous Communities and Commercialisation

As discussed in Chapter Three, it is sometimes assumed that most indigenous communities do not wish to trade or commercialise their IK for romantically altruistic reasons. This approach to IK is captured in Abrell (2009), Semali and Kincheloe (1999) and Shiva (1997a). Rather than assuming the romantic ideal that most indigenous communities are driven purely by altruistic reasons despite being touched by modernisation and thus no longer completely isolated, the Masakhane *Pelargonium* case suggests that at least some indigenous communities are very keen to commercialise their knowledge and to benefit financially from it. While commentators like Abrell (2009) and Shiva (1997a) imply that indigenous communities are generally unwilling to commercialise their knowledge, the fact that indigenous communities such as the San and the Kani have successfully pursued and negotiated Benefit Sharing Agreements with the outside parties interested in their knowledge suggests that the commercialisation of knowledge is not necessarily unattractive or foreign to indigenous communities. Rather than an unwillingness to commercialise their knowledge for altruistic reasons, what is of concern to indigenous communities is the loss of control or respect of their knowledge once it has been shared with outsiders. When negotiating agreements with outsiders who want to use their knowledge, indigenous communities often have to negotiate with very powerful entities. Even in the most successful negotiations, such as the San *Hoodia* case, several community members were concerned about how their knowledge would be treated once it left the community. They were also dissatisfied with the benefits they would receive (Vermeyleen, 2007). With the spread of development, most communities are neither 'stuck in the past' nor unwilling to benefit through participation in the 'modern' economy. It seems likely that if such communities are confident that they can set the terms of the use of their knowledge both in and outside of the community and that they will reap significant benefits from trading their knowledge, they will be very willing to share some their knowledge.

The Masakhane community's situation illustrates the way in which many indigenous communities seek to benefit from trading their IK and using IPR law to protect their interests. Despite the title of the African Centre for Biosafety's brief on the case, 'Knowledge Not For Sale', community members that were interviewed by the author indicated that they wished to see the successful challenge of Schwabe result in the company negotiating a Benefit Sharing Agreement with them (Interviews in 2011 with Nokhululekile Binda, Nosakhumzi Binda, Funeka Nkqayi, Zameka Nxakala). They did not object to trading their knowledge, they simply want to benefit from sharing their knowledge with pharmaceutical companies. The community wanted to establish an agreement with Schwabe itself rather than through the local traditional leader, Chieftainess Tyali, or a harvesting company. The community's stated preference is that Schwabe establish an agreement directly with the community and that the community be assisted to establish a factory of their own where they could process the plants themselves before exporting them directly to Schwabe (Interviews in 2011 with Nokhululekile Binda, Nosakhumzi Binda, Funeka Nkqayi, Zameka Nxakala). Although several other benefits were also mentioned, what is really important in these expectations is the desire for control – the community is happy to share their IK but they want to retain a sense of control over their knowledge and the purposes for which it is used. Sadly, however, the circumstances of the case suggest that this is unlikely to happen as was discussed above.

Nevertheless, the community was successful in that they managed to have a large pharmaceutical company's patent revoked and another to be voluntarily withdrawn by the company. The result of this is that Schwabe can no longer prevent other companies from developing medicines from *Pelargonium* using a water and alcohol solution. This is no small feat, given that the community is from one of the poorest provinces in South Africa and has neither the capital nor the legal expertise to institute such a case.

If the *Pelargonium* case can be considered to be at least partially successful, it is important to determine which factors facilitated this limited success and which factors hindered greater success. The remainder of the chapter discusses the two critical factors that affected the success of the Masakhane *Pelargonium* case. These are access to resources and issues of representation.

6.4 Access to Resources

As touched upon earlier, Munzer and Simon (2009) and Vermeyleen (2007, 2009) argue that the successful protection of IK through the use of IPR law is heavily dependent upon the resource rights to which the community has access. Due to a history of discrimination and, in many cases, dispossession, many indigenous communities find themselves on the social and economic margins of society (Munzer and Simon, 2009; Suzman, 2001). In the *San Hoodia* case, for example, past struggles with colonialism and apartheid left most San communities on the lowest social rung of every state in which they reside (Munzer and Simon, 2009). Poverty, high unemployment rates and a lack of access to basic social and municipal services are common problems both in this community and many others (Munzer and Simon, 2009; Suzman, 2001). Legal proceedings require money, time and knowledge of the law which, in most cases, amounts to knowledge of a plethora of relevant legislation and case law. In effect, using the law requires substantial resources which most indigenous communities, due to their socio-economic marginalisation, do not possess. However, access to some resources is essential if an indigenous community is to successfully use IPR law to its benefit.

Munzer and Simon (2009) argue that one of the most important resources that determine whether or not a community will be able to successfully use IPR law is land rights. This is because strong land rights not only provide a means to access other resources such as loans, for example, but also because strong land rights often correlate to a strong cultural and group identity (Munzer and Simon, 2009). Most indigenous communities, however, have weak or insecure land rights. There are, however, other factors that can assist communities in their quest to use IPR law to their benefit. Even indigenous communities who do not have access to conventional resources, such as land, money or legal expertise, may be able to access other relevant resources. Many communities rely on external support such as NGOs for resources such as capital, legal or logistical expertise. Instead of only focusing on such resources as a determinant of how successfully communities can use IPR law to protect their IK, it may be helpful to also focus on what could be called 'confidence and network resources'. The effect of land mark decisions and policies which incrementally recognise indigenous peoples' rights provide indigenous communities with the confidence and experience to fight for their rights in the future (Munzer and Simon,

2009; Vermeulen, 2007, 2009). When a community has won a land mark decision or any other recognition of their rights, they are much more likely, due to the experience and confidence gained from their success, to fight for their rights in other matters. In the San *Hoodia* case, the effect of winning two land marks claims in *Alextor Ltd. v. Richtersveld Cmty. & Others* 2003 (South Africa) and in *Sesana & Others v. Attorney General* 2006 (Botswana) gave the community experience in using the law which assisted them in a later case against the CSIR (Council for Scientific and Industrial Research) (Munzer and Simon, 2009). Not only did community members state that the cases gave them the confidence to take on the CSIR, but the San communities which had been directly involved in the case felt inspired by their outcomes (Vermeulen, 2009: 433).

Winning some of their land in a land claims case in 2002 had a similar effect on the Masakhane community. The Masakhane community own 674 ha (Lahiff, 2003: 24) of the 7000 ha (Jara, 2011: 3) on which 250 families of the 5 villages are settled on from a land claim case that was made in 2001. Although their claim to the rest of the land remains uncertain, the Masakhane community's struggle to establish their land rights, helped to build a strong group identity. Also, the confidence they gained from the mobilisation around their land claim was useful in their attempt to use IPR law to protect their IK. What is more, their subsequent victory against Schwabe may give them further confidence to continue fighting for their rights.

The organisational experience that the community gained from the land claim was invaluable for the Masakhane *Pelargonium* case. The community had managed to successfully organise themselves into a Communal Property Association (CPA) in order to communally claim and own the land on which they were settled. The requirements of setting a CPA up, such as drawing up a written constitution, providing a list of names of the intended CPA members and developing procedures to resolve disputes regarding the right of other persons to be members of the CPA, entail a great deal of co-ordination and commitment (Section 5 of the Communal Property Association Act 28 of 1996). To do this, some sense of social cohesion, or sense of community, would have been necessary and evidence suggests that this ability, of a community to work together, is crucial in IK cases (Munzer and Simon, 2009; van Niekerk and Wynberg, 2012). The community's ability to work successfully together on one legal case provided it with a strong sense of

community and confidence which then enabled them to feel sufficiently empowered to take on a powerful outside party like Schwabe. Pharmaceutical companies and other third parties, such as NGOs, prefer to work with organised communities who can make decisions quickly and effectively and the Masakhane community demonstrated considerable ability in this respect. For example, when decisions are to be made, the community prefers to discuss and make decisions collectively at community meetings. Given that there are five villages, organising the meeting could be a logistical nightmare. However, the Masakhane community has a means to do this effectively. Firstly, all the meetings are held in the same place: near an empty shop in the village of Lokwe, which is one of the five villages. The MCPA (Masakhane Communal Property Association) has a chairperson and secretary but, in addition, each village has a chairperson and secretary of its own. As discussed earlier, when a meeting is to take place, the chairperson of the MCPA writes a letter to the chairperson of each village. The chairperson of the each village in turn organises a door-to-door notification in the village that he or she chairs. Through this notification process in villages where most of the people know each other, most of the people testified to not only having known about and attended the community meetings where the Masakhane *Pelargonium* case was discussed, but also claimed to know the details about the *Pelargonium* case and having views on its outcome (Interviews in 2011 with Nokhululekile Binda, Nosakhumzi Binda, Funeka Nkqayi, Zameka Nxakala). Organised decision-making structures such as these enable communities to make decisions quickly and efficiently and, most importantly, it means that the decisions made are largely supported and recognised by community members as valid. Organisation and wide recognition of the decisions that were made was instrumental in the success of the San *Hoodia* case, for example, as have been noted by various writers such as Munzer and Simon (2009), Vermeulen (2007) and Wynberg *et al.*, (2009).

Aside from the resources that are gained from experience, a new factor that has not yet been adequately explored in the literature that deals with the IPR and IK debate, relates to the networks that communities often have and that can prove useful in using IPR to defend IK. This is evident in relation to the Masakhane *Pelargonium* case. While the Masakhane community is vulnerable, politically and socially, they are not completely isolated and have some access to resources and institutions which may not be accessible to more remote communities. The community is situated close to the town of Alice where the

University of Fort Hare, one of South Africa's oldest universities, is situated. Community members thus have contact with researchers from the learning institute. Some community members are even employed at the university (Interviews in 2011 with Michael Magwa; Vicky Ngomane) while others work in nearby towns such as Alice and Grahamstown (Funeka Nkqayi, 2011, Interview).

As indicated earlier, the *Pelargonium* case began around 2007 when Nomthunzi Api, Chairperson of the MCPA, drew on her networks as an employee of the Albany Museum in Grahamstown, to get into contact with the African Centre for Biosafety which assisted her and the Masakhane community (Carte Blanche, 2011; Funeka Nkqayi, 2011, Interview). It was because the community had relatively privileged members who lived and worked outside the area, that they were able to access the assistance of the African Centre for Bio-safety. The Centre was able to gather the knowledge necessary to assess the viability of the case and to provide the community with the necessary information that allowed them to take the necessary action. The Centre was also able to draw on its own resources and networks to garner in the help of another NGO, the Berne Declaration. The Berne Declaration became involved in the case because Schwabe patents were registered in Europe. Knowledge of European patent law, therefore, was needed. Through several conversations and interviews it was revealed that Ms Api's use of contacts was not unusual – community members similarly use contacts obtained through their workplace to further the interests of the community as a whole. When talking to the community it was clear that when somebody did not know something, people who left the village during the week to work would, upon their return, provide the necessary information (Interviews in 2011 with Michael Magwa, Virginia Mkosana; Vicky Ngomane).

In addition to the legal and economic resources that the community had been able to access through Ms Api's actions, the African Centre for Bio-safety also publicised the community's situation in the media. Consequently, the community was able to use the media to bring the case to light and to pressurise the company to withdraw its patents and, it was hoped, encourage them to establish a mutually beneficial relationship with the Masakhane community. In the past, negative media coverage has successfully pressurised outside parties to approach communities to negotiate a Benefit Sharing Agreement (Laird and Wynberg, 2008: 123). The media coverage of the case is likely to have contributed to

Schwabe's decision to withdraw the other *Pelargonium* patents that it held after it lost the first case.

6.5 Issues of Representation

The question of who represents the Masakhane community has been a vital one in the Masakhane *Pelargonium* case. On the one hand, the community has clear, organised and recognised representation through the MCPA, but on the other hand, the local traditional authorities, led by Chieftainess Tyali, claim to represent the community. Partly as a result of these tensions, Schwabe is unlikely to negotiate a Benefit Sharing Agreement for *Pelargonium* with the Masakhane community.

Through the creation and use of the MCPA, the community is familiar with democratic processes of representation which are crucial to any negotiating process, especially those involved in the establishment of Benefit Sharing Agreements (van Niekerk and Wynberg, 2012). Lack of familiarity with democratic processes can undermine a community's ability to negotiate and attain the benefits they wish to achieve (Vermeeylen, 2007). The level of co-ordination and commitment necessary for negotiating such agreements are more likely to be apparent in communities which have prior experience of organising in this way and where bodies already exist which can cohesively and legitimately represent community interests (Chennells *et al.*, 2009, Wynberg *et al.*, 2009 for further discussion).

While the Masakhane community already had an association which could have represented them and which had experience in democratic processes, they were in conflict with the local traditional authority, Chieftainess Tyali, who claimed that the Masakhane community was under her authority. If the Masakhane community is indeed considered to fall under her authority, then they are included in the Benefit Sharing Agreement between the Imingcangathelo community (as represented by Chieftainess Tyali and the Imingcangathelo Community Development Trust) and Schwabe and Parceval for the harvesting of *Pelargonium*. This Benefit Sharing Agreement allows Schwabe and Parceval to harvest *Pelargonium* on land which falls under the authority of the Chieftainess. According to her, this includes Masakhane land. Due to the fact that *Pelargonium* can be found growing wild in several places in the Eastern Cape, including both Masakhane

land and the land under the authority of Chieftainess Tyali, as well as in other southern African countries, Schwabe Pharmaceuticals can choose which communities it wants to harvest from, and thus negotiate a Benefit Sharing Agreement with them. In this case, the company decided simply to stop harvesting *Pelargonium* from the disputed area rather than negotiate an additional Benefit Sharing Agreement exclusively with the Masakhane community. As indicated above, it is likely that the company is reluctant to negotiate a separate agreement with the Masakhane community as this would imply that the company recognises the Masakhane as independent. Such recognition may put strain on the relationship between Schwabe, its subsidiary, Parceval, and the Imingcangathelo Community Development Trust.

The case provides some indication that traditional authorities can act in ways which disempower the local communities which they are meant to serve. Aside from the fact that these authorities are highly contested in some areas due to their undemocratic and problematic history as cogs of the apartheid machine, there are also clear indications, as shown by van Niekerk and Wynberg (2012), that these authorities sometimes impede the larger rural community from benefiting from benefit sharing schemes. Instead of the larger community benefiting from such schemes, the *Pelargonium* case indicates that benefits may be captured by the local elite rather than the community as a whole due to the traditional authority's ability to claim to speak on behalf of the community under their authority (Van Niekerk and Wynberg, 2012). And whilst there are some democratic practices within the Traditional Local Council structure which help govern rural areas, the majority of the Council is appointed by the senior traditional authority. In addition, there is evidence to suggest that the members of the Imingcangathelo Community Development Trust are appointed by the local traditional authority (Andre and Buax, 2011).

The power of traditional authorities in South Africa means that the national legislation which is meant to protect the interests and rights of indigenous peoples is sometimes ineffective. In the Masakhane case, the requirement that the Benefit Sharing Agreement be fair and equitable to all members of the community concerned is determined by authorities who are not elected by the community and whose representation of the whole community is contested. On first consideration, it appears as if IPR law and law dealing with traditional leaders in South Africa have nothing to do with each other, but at the local level

– one ends up undermining the other. Thus, it is evident that local political dynamics can undermine one of the principle aims of NEMBA and CBD which is to allow indigenous communities to benefit from the commercialisation of their knowledge. There needs to be careful consideration of existing contexts and circumstances, both at the national and local level, which can undermine the aims of NEMBA and the CBD. In this case, it is relevant to consider the local political dynamics which have been created as a result of the recognition of traditional authorities alongside democratic institutions.

The issue of representation also affects whether a Benefit Sharing Agreement can truly be considered to have been negotiated on mutually agreed terms if the negotiating parties are not recognised as representatives of all the people concerned. While it is likely that there will always be some dissent regarding whether or not the representative party has made the right decisions, most of the community being represented should recognise the legitimacy of the representative and accept the decisions made. This problem was particularly prevalent in the *Jeevani* case where the benefits negotiated between the TBGRI (Tropical Botanical Garden and Research Institute) and the Kani was heavily criticised by some Kani units who had not been consulted in the negotiation process (See Chapter Four). In the case under discussion, five out of 22 villages in the area deny the authority of the traditional leader, so, can the traditional authority truly be recognised as a representative? If South Africa does not take issues like these into account in its legislation, then the choice of who to negotiate with is left to the third parties who wish to use South Africa's indigenous bio-resources and IK.

6.6 Indigenous Knowledge and the Broader Neo-Colonial Capitalist Economic System

The Masakhane case also highlights how monopolisation in the industry ensures that local indigenous peoples are not able to capture a slice of the industry's profit despite the provisions in the CBD (van Niekerk and Wynberg, 2012). The *Pelargonium* industry in South Africa is very small. Harvesting permits have only been granted to Gower Enterprises and BZH Export and Import, and only one company, Parceval, which is a subsidiary of Schwabe, has the right to export the plant to the international *Pelargonium* market (Van Niekerk and Wynberg, 2012). The existence of harvesting permits in line

with the provisions of the CBD, NEMBA and BABS are supposed to protect the environment and to ensure the sustainable use of the plant as well to improve the lives of indigenous communities. The companies referred to above were the first to acquire permits in the industry. When they negotiated an Access and Benefit Sharing Agreement with the Imingcangathelo Community Development Trust, it was stipulated that they have exclusive harvesting rights in the community represented by the Trust (van Niekerk and Wynber, 2012). It is likely that Parceval has also negotiated similar agreements with other communities for the harvesting of their bio-resources. The result is that these companies have considerable control of the industry so that they determine the prices that are paid to the harvesters who often come from local indigenous communities (Van Niekerk and Wynberg, 2012). Aside from the benefits paid directly into the Imingcangathelo Community Development Trust, harvesters are paid a pittance for the *Pelargonium* they harvest. An evaluation of the *Pelargonium* value chain indicates that very little value is assigned to the plant as a raw material, while the real value of the plant begins at the washing, drying, shredding, and packaging of the plant which occurs at Gower Enterprises, BZH Export and Import and at Parceval (Van Niekerk and Wynberg, 2012). The next step, which is assigned the most monetary value, occurs in Germany at Schwabe Pharmaceuticals where the plant is further processed and used to create Schwabe's Umckalaobo, the final product that is sold to consumers worldwide (Van Niekerk and Wynberg, 2012). This could be considered as an aspect of neo-colonialism as the capitalist system which underpins the industry continues to treat Africa's resources as something of little value, assigning much more value to the processing of these resources (Shiva, 1997a; Van Niekerk and Wynberg, 2012). Part of the reason that developing states and their peoples are unable to benefit extensively from the commercialisation of their resources is because they often do not have the capital and technology to break into the industry so that the only benefits they are able to obtain are through offering their labour and natural resources, neither of which are accorded much value (Van Niekerk and Wynberg, 2012).

In the value chain that leads to the eventual development of a pharmaceutical drug, Crouch *et al.* (2008: 356) note that bio-resources and IK only constitute 'good starting points for drug development research ... and not end products of a drug development pipeline, which has fundamental implications for the degree to which communities can benefit from commercialisation of IK and bio-resources'. Furthermore, they argue, '[m]arket forces,

toxicity and efficacy standards, production, processing and formulation challenges, and the sustainable use/supply of bio-resources are among numerous factors' which add to the value of the final product or pharmaceutical drug that is created, but result in the plant and bio-resource being assigned little value (Crouch *et al.*, 2008: 356). This undervaluing of indigenous communities' knowledge makes Crouch *et al.* (2008) doubt whether indigenous communities will gain significantly from the commercialisation of their IK or bio-resources. Both the *Pelargonium* and *Hoodia* cases support their suspicion. Although the Masakhane and the San communities won their cases against pharmaceutical companies, as shown earlier, neither is likely to reap considerable financial benefits as a consequence. Even the San who have rights to both royalty and milestone payments are unlikely to see substantial payments from the marketing of a *Hoodia* based drug. This is because IPR law does not take the value chain into account nor does it take steps to limit the negative effects that the value chain have on the benefits which indigenous communities can attain from the commercialisation of their IK (Munzer and Simon, 2009; van Niekerk and Wynberg, 2012). This means that, contrary to arguments that IPR laws can be changed to suit IK through the development of *sui generis* law or special policy considerations, as suggested by Myburg (2010, 2011), IPR law may not enable indigenous communities to protect their interests sufficiently for them to benefit from commercialisation as it is likely to be unable to tackle the poor positioning of indigenous communities in the broader national and global economy. In essence, IPR law on its own, even if it is strengthened and adapted to local realities is not sufficient to protect indigenous communities' knowledge or their bio-resources. For this reason, IPR law and the capitalist economic system arguably work together to undervalue African resources and undermine African people. However, even if one were to consider such claims as being too extreme, at the very least it must be acknowledged that indigenous communities are not well positioned to reap considerable financial benefits in the contemporary global capitalist order and that this poor positioning makes it difficult for them to protect their IK (Mazonde and Thomas, 2002; Mshana, 2002; Odora Hoppers, 2002b).

6.7 Conclusion

From the above it is clear that the answer to the question of whether IPR law can be used to protect IK is dependent upon many factors. Firstly, where more than one community

holds IK and it is difficult to determine which community owned the knowledge first, IK cannot be adequately protected under IPR law. This is because IPR law focuses upon the idea of ownership by a single juristic person. Where the knowledge is held by several communities who are not represented by one juristic person, the knowledge can be considered common knowledge which means that it can be used by anyone without having to give recognition (monetary or otherwise) to any of the communities that hold the knowledge. Thus, one of the key complaints against the IPR system, namely that IPR law is incompatible to IK, appears justified.

Secondly, the resources that these communities are able to access are critical to the success of a case as such resources enable them to access the necessary legislation to protect their rights. Although most indigenous communities are on the margins of society, most are not completely isolated and thus do have access to resources which help their case. Even if they do not have financial or legal resources themselves, their networks, experience and organisational abilities can be invaluable, not only in providing the community with the confidence to start a case but also in helping them to make contact with people who have the necessary resources. NGOs have been found to be critical in successful cases of indigenous communities using IPR law to protect their interests, but indigenous communities also have resources which they bring to the table. Thinking of communities as being able to bring resources to the table makes us realise that they are not completely helpless and that these cases would not have started without them. These communities have agency and options available to them which should be examined rather than the being viewed as completely vulnerable and isolated. Perhaps by viewing the communities this way we can begin to consider other ways in which communities can act proactively and take steps to protect their interests as IPR legislation is clearly not adequate on its own.

Thirdly, clear, organised representation which has often been gained through experience, together with familiarity with democratic processes, can be very helpful in cases aiming to protect IK. Consultations and decisions often need to be made quickly and, should be recognised as valid by most if not all of the community members. Thus, communities which have had previous experience in fighting for their rights are more likely to achieve success.

Fourthly, representation can prove to be a problem where there are tensions between different forms of representation with no clear means of recourse. The South African state's recognition of traditional authorities as representatives of rural communities' interests in rural areas can have negative consequences for indigenous communities. The lack of recourse for indigenous communities where there is disagreement between the community and the local traditional authority can leave communities in uncertain and vulnerable positions. This can hamper communities' chances of negotiating a Benefit Sharing Agreement as was the case with the Masakhane. Given the fact that there is still a great deal of contention over the recognition of traditional authorities in South Africa, this is a factor that might prove to be problematic for other South African communities who wish to benefit from the commercialisation of their IK in the future.

Lastly, a further consequence of contested representation and the marginal position of indigenous communities in society is that the community's IK may end up principally benefiting local and international elites who are able to commercialise communities' bio-resources and the IK associated with such resources. This is because of a combination of factors: the monopoly held by the harvesters and pharmaceutical or other companies on the harvesting and exporting of plants like *Pelargonium*, the marginalised socio-economic position of indigenous communities and the recognition of traditional authorities as legitimate representatives of indigenous communities in rural areas. In the case of the Masakhane community, the local traditional authority, the local harvesting companies and Schwabe itself seem to have benefited most from *Pelargonium* harvesting. This has left very little space for indigenous communities, who are on the lowest rung of the *Pelargonium* harvesting chain, to benefit substantially from the commercialisation of *Pelargonium*. What this case also reveals then is that IPR laws will continue to fail to protect indigenous communities' interests because IPR law does not take into account the socio-economic positions of indigenous communities and the role that local political dynamics may play in the effectiveness of such laws.

Chapter 7

Conclusion

7.1 Introduction

The use of intellectual property rights (IPR) law to protect indigenous knowledge (IK) is highly contested as various actors involved in the commercialisation of IK have different interests. Given the interest in IK and its increasing value in the global knowledge economy it is imperative to provide an answer to the question of whether IPR law can be used to effectively protect IK. The goal of this thesis has thus been to provide a well-reasoned and nuanced answer to one of the most hotly debated issues in the field of IK: the question of whether IPR law can be applied to IK.

In order to answer the research question, the thesis carefully examined an instance where IPR law was successfully used by an indigenous community to protect its knowledge. The case study that was used in the thesis was that of the Masakhane community, a small Xhosa community situated in the rural Eastern Cape, South Africa, which challenged the patents held by the German pharmaceutical company, Schwabe, for the use of *Pelargonium sidoides* to treat respiratory infections. This case was chosen because it is one of the few instances in South Africa where an indigenous community has successfully used IPR litigation to protect their IK. Furthermore, given that it is a relatively new case, its potential importance to the IPR-IK debate had not yet been thoroughly evaluated. The political and socio-economic and legal circumstances of this community are somewhat different to that of a similar case, the San *Hoodia* case, which also made considering this case alongside others such as that of *Jeevani* and *Neem* helpful.

7.2 Summary of Aspects Raised by the Masakhane *Pelargonium* Case Pertaining to the Debate

The Masakhane case highlights several issues relating to the broader IPR-IK debate that was discussed in the third chapter. Firstly, there are indications that IPR law cannot easily be used to protect IK as the types of property ownership recognised by IPR law and the

approach IPR law takes to the transmission of knowledge is very different from those of indigenous communities. Thus, there are some very deep contradictions between IPR and IK. This is not to say that IPR law can never be used to protect IK. However, it is likely that, in many cases, such as that of the Masakhane community, additional steps have to be taken to alleviate some of the negative effects that the IPR regime may have on indigenous communities' interests and to ensure that IPR law is used in a way that translates to concrete benefits for the community concerned. Secondly, the Masakhane case suggests that there is some truth to concerns that IPR law can facilitate the misappropriation of IK for the benefit of developed states. Thirdly, there are indications that indigenous communities do have an interest in commercialising their knowledge. It is the loss of control of their knowledge which makes some communities wary of commercialising their knowledge rather than the idea of commercialisation *per se*. The more control a community has over the use of their knowledge the less wary they are likely to be about commercialising their knowledge. And lastly, the Masakhane case makes it clear that the question of whether or not IPR law can be used to effectively protect IK can only be answered through the consideration of other related factors, such as the position of the indigenous community in the national and global economy.

In brief, the findings of this thesis suggest that IPR law can to some extent be used to protect IK; however, the successful use of IPR law in this way is case specific. Ultimately, if IPR law is to offer significant protection to indigenous communities' rights it will have to take on a drastically different form than the one it currently takes. In other words, it will have to take into account all the negative factors that have been noted here. In its current form, however, IPR law is not the most suitable way to protect IK.

7.3 Recommendations

There appears to be some recognition in international policy and scholarly writings that IPR law might not automatically deliver benefits to indigenous communities and thus that other steps may have to be taken to ensure that this happens (Dean, 2011; Kiggundu, 2007; Myburg (2010, 2011). To some degree, the CBD (Convention on Biological Diversity) recognises this as states are instructed to pass *sui generis* laws that will suit the needs and circumstances of the state. In other words, the CBD still leaves it to the state concerned to

determine how to give effect to the principles of the CBD even though this has to be within the parameters set by CBD and, where relevant, TRIPS (Agreement on Trade-Related Aspects of Intellectual Property Rights). This means that it is up to states to assist indigenous communities to benefit from the commercialisation of their knowledge and bio-resources. Myburg (2010, 2011) suggests that special policy agreements be created specifically to ensure that indigenous communities are given special consideration and recognition in national legislation. Myburg's suggestions are supported by the findings of this thesis. The Masakhane *Pelargonium* case demonstrates that, on its own, existing IPR law is not solution and, so, additional steps need to be taken if IPR law is to have any benefit for the holders of IK.

To begin with, in the event that several communities hold knowledge in common and are not represented by a large, recognised and inclusive body which can act as a single juristic entity in their interests, the state ought to help communities establish a body to act on the behalf of these communities. While this might present some challenges, it will at least help to prevent IK and, in some cases, the bio-resources of indigenous communities, from being appropriated without any benefit to the holders of the knowledge. In the event that the knowledge or bio-resource crosses state boundaries, the states in question must be willing to help communities set up regional bodies. The organisations set up to protect the interests of the San in the *Hoodia* case are an example of such bodies. The recently passed South African Intellectual Property Laws Amendment Bill of 2011 makes provision for such bodies to be set up and so it can be hoped that such bodies will indeed soon be set up in South Africa.

Secondly, indigenous communities' plights must be generally improved in order to provide them with the resources that are necessary to access the legal system. Land ownership rights and other socio-economic rights play a critical role in providing communities with some of the resources that they need to negotiate with outside parties. At the very least such rights provide indigenous communities with the networks to access the resources they require. While indigenous communities might hold resources that are largely overlooked, as has been argued in the previous chapter, land and other socio-economic rights and a general improvement in indigenous communities' socio-economic position are critical if such communities are to be able to successfully commercialise their

IK. Not only will an improved socio-economic position assist communities to access the law to protect their IK, but it will also empower communities so that they can find other channels to protect their knowledge given that IPR law is unlikely to provide adequate protection.

Thirdly, it is critical that more attention be paid to the local political contexts which can undermine the benefits that can accrue to local communities when a Benefit Sharing Agreement is negotiated. In areas where traditional authorities are contested, the recognition of traditional authorities as the legitimate representatives of indigenous peoples in rural communities can undermine community interests. NEMBA (National Environmental Management: Biodiversity Act) and BABS (Bio-prospecting, Access and Benefit Sharing Regulations) do not account for situations where traditional authorities are contested. Consequently, in terms of South African legislation, the outside party concerned can negotiate with the traditional authority as the alleged community representative even where significant sections of the community do not accept this authority as their representative. Furthermore, even where their authority is not contested, traditional local elites can capture the benefits that can accrue from the commercialisation of the local bio-resources and the knowledge pertaining to its use. The Masakhane case highlights the above issues and it is likely that many other rural communities find themselves in a similar position.

Fourthly, it is worth noting that communities can use IPR law with some degree of success where pharmaceutical (or other) companies have clearly failed to satisfy the requirements of IPR law. Thus, it can be recommended that, where appropriate, IPR law can indeed be used to protect IK. Even though the outcome of the case did not fulfill the desire of the Masakhane community for a Benefit Sharing Agreement, the case was a success in that the company no longer holds patents relating to the production of products using a water and alcohol solution to extract the active ingredient from *Pelargonium*. Also, the confidence gained by the community through this process may be of use in their other attempts to improve their conditions.

Ultimately, however, despite what indigenous communities do to improve their position when challenging the use of their IK without permission or without a Benefit Sharing

Agreement, it is apparent that IPR law in its current form is not a particularly helpful tool to protect IK. Even in the event that communities are able to challenge an outside party for the use of their knowledge, the focus of IPR law is upon individual ownership while IK is based upon communal ownership and, therefore, unlikely to produce the benefits that some communities expect from the sale of their knowledge.

7.4 Concluding Remarks

Given the foregoing conclusions and recommendations drawn from the case study, some comments can also be made about the recently passed South African Intellectual Property Laws Amendment Bill of 2011 which is touched upon earlier. The Bill does not bode well for indigenous communities being able to use IPR law to protect their IK as it merely amends IPR law to fit IK under the IPR framework without dealing adequately with the incompatibilities between IPR and IK. It also does not take into consideration the political contexts that prevent communities from benefiting from the commercialisation of IK. However, the Bill does make provision for the creation of a national body which would act as a single representative body in the event that more than one community holds the same IK, which is a positive development. Nevertheless, the deep contradictions between IPR and IK are not addressed in the Bill and thus will continue to limit the extent to which IPR can be used to protect IK.

As discussed earlier, writers such as Kiggundu (2007) and Paterson and Karjala (2003), and legal experts such as Dean (2011), argue that a combination of traditional IPR law and separate *sui generis* laws is the best approach to protect IK. While the creation of *sui generis* laws may well be helpful, the greatest challenge in doing this is the limited scope which TRIPS provides given that it sets the parameters regarding what states can protect and how they can protect it (Diaz, 2005: 12-13). States like South Africa find themselves in a difficult position as they try to protect their IK in a world which not only undervalues the contributions made by indigenous communities, as is apparent in the discussion on the *Pelargonium* chain by van Niekerk and Wynberg (2012), but also limits the parameters within which they can protect their indigenous communities' IK. Thus, the question of whether or not IPR can be used to effectively protect IK relates to a continuing struggle for power between developing states in the South, who are limited in their actions by

controversial agreements like TRIPS, and developed states in the North which have had several decades to develop IPR laws to suit their needs and who hold disproportionate power in the international arena where agreements such as TRIPS are crafted (Diaz, 2005: 12; Gosh, 2003b; Long, 1991). The successful passing of TRIPS, an agreement that undermines developing states' interests, indicates that this is a broader issue related to the continued struggle for economic and political power between developing and developed nations. Thus, the question is indeed a new site of old contestation for power and freedom (Gosh, 2003b), and as long as the power relations remain imbalanced, indigenous communities and the states to which they belong will continue to experience difficulties in the protection of their interests.

Thus, while the Masakhane case seems encouraging as it saw a small, relatively impoverished community defeating a powerful pharmaceutical company by using IPR law, the Masakhane case demonstrates that there are several broader economic, political and historical issues that undermine the possibility of the successful use of IPR to protect IK. While IPR law may provide indigenous communities with limited protection of IK, indigenous communities ought not to rely principally on IPR law as a way to protect their IK.

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Interviews

Ms. Nokhululekile Binda, 15 September 2011, Former Harvester and Masakhane community member, Masakhane.

Ms. Nosakhumzi Binda, 15 September 2011, Former Harvester and Masakhane community member, Masakhane.

Mr. Roy Gower, 19 September 2011, Owner of Gower Enterprises, 40 Market Street, Grahamstown.

Professor Michael Magwa, 7 April 2011, Botany Department, University of Fort Hare.

Ms. Virginia Mkosana, 6 April 2011, Alice community member, Sangweni Lodge BnB Owner, Alice.

Ms. Vicky Ngomane, 6 April 2011, Alice community member and nurse home owner, Alice

Ms. Elizabeth Nkqayi, 15 September 2011, Masakhane community elder and user of *Pelargonium*, Masakhane.

Ms. Funeka Nkqayi, 15 September 2011, Masakhane Community Property Association member, and Vice –Secretary of the Imingcangathelo Community Development Trust, Masakhane

Mr. Radasi Ntoli, 6 April 2011, Alice community member, Alice.

Ms. Zameka Nxakala, 15 September 2011, Regular user of *Pelargonium* and Masakhane Community member.