DEVELOPING A SYSTEMATIC MODEL FOR THE CAPTURING AND USE OF AFRICAN ORAL POETRY: THE BONGANI SITOLE EXPERIENCE

Thesis submitted in fulfilment of the requirements for the degree of

MASTER OF ARTS

of

RHODES UNIVERSITY

by

ANDRE MOSTERT

SUPERVISOR: PROFESSOR RUSSELL H KASCHULA

December 2010

DECLARATION

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

SIGNED

DATE: 15 November 2010

ABSTRACT

Oral traditions and oral literature have long contributed to human communication. The advent of arguably the most important technology, the written word, altered human ability to create and develop. However, this development for all its potential and scope created one of the most insidious dichotomies. As the written word developed so too the oral word became devalued and pushed to the fringes of societal development. One of the unfortunate outcomes has been a focus on the nomenclatures associated with orality and oral tradition, which although of importance, has skewed where the focus could and should have been located, namely, how to support and maintain the oral word and its innate value to human society in the face of what has become rampant technological developments. It is now ironic that technology is creating a fecund environment for a rebirth of orality. The study aims to mobilize technauriture as a paradigm in order to further embed orality and oral traditions to coherently embrace this changing technological environment. The central tenet of the study is that in order to enhance the status of orality the innate value embodied in indigenous knowledge systems must be recognized. Using the work of Bongani Sitole, an oral poet, as a backdrop the study will demonstrate a basic model that can act as a foundation for the effective integration of orality into contemporary structures. This is based on work that I published in the Journal of African Contemporary Studies (2009). Given the obvious multi-disciplinary nature of the material the work covers a wide cross section of the debate, from questions of epistemology and knowledge in general in terms of oral traditions, through the consciousness and technical landscapes, via the experience with Sitole's material to issues of copyright and ownership. This work has also been submitted for publication together with my supervisor as a co-author. The study intends to consolidate the technauriture debate and lay a solid foundation to support further study.

Acknowledgements

This journey was initially embarked upon as a much younger student in an attempt to complete further study in economics, in the era before Google. Now 23 years later and with more life experience and the luxury of Google and the internet in general I have been able to complete the following dissertation. Complimenting the internet was access to wetware in the form of my supervisor Russell Kaschula whose insight and analysis frame most, if not all, of my thinking on the subject and without this I firmly believe my education would have been much more parsimonious. With access to his knowledge base and guidance and the opportunity to work with my fellow students I have been able to develop a much more coherent understanding of my life and context. In completing the writing process and developing my thesis more robustly I would like to thank Anthony Sparg and Breda Leyne whose inputs were essential in taking a raw piece of work and beating it into the shape that I now wish to present. I must caution and acknowledge that any errors contained herein are mine alone and indicative of the further work that I and perhaps others still need to do in this field.

TABLE OF CONTENTS

Page

Chapter 1

Introducing Technauriture as a Paradigm

„What I really needed was a Grand Unified Theory of Culture that explains creativity, human interactions and progress.' (Man 2000:206)

Culture is by definition complex and the idea of a grand theory is as unlikely as quantum physicists striving for the grand theory of everything. The idealistic nature of these goals, not withstood, developing key insights into culture and its nature is essential for a myriad of reasons from identifying what is important to recognising the role of culture in a people's identity through developing intercultural understanding. This thesis will attempt to address a key aspect of indigenous cultures with their dependence on oral and oral traditions and endeavour to build a coherent environment for effective digital modelling of orality through the mobilisation of technauriture as a referential paradigm.

The study consists of seven chapters, which build on each other in terms of addressing the challenges that technauriture presents to the researcher. In chapter one the concept of technauriture is introduced and acts as the foundation of this study. Following on from this foundation, chapter two addresses the fact that effective digital modelling of orality and oral traditions must be built on a coherent treatment of epistemology and knowledge. Chapter three gives a brief overview of the economic concept of a public good, which must form an internal part of any motivation for public investment and resource allocation to capture, nurture and cultivate all oral traditions. Chapter four investigates the technical landscape that needs to be explored if any meaningful analysis is to be achieved in locating orality and oral traditions within the technological infrastructure. Chapter five outlines the experience with the work of *imbongi*, Bongani Sitole, and its application in classrooms. This is a key aspect of moving orality and oral

traditions into a modern applicable context. Chapter six explores the significant issues of copyright and the intellectual property that are an inevitable outcome of engagement with modern technological frameworks. The study concludes with an attempt to integrate the outcomes, experiences and challenges that lie ahead.

This study aims to develop a coherent modelling environment for capturing oral histories and poetry built around the innate value embodied in these utterings, it will attempt to demonstrated that indigenous knowledge systems have extensive value for the modern human, and that an understanding of the relationship between traditional societies and their temporal existence offers a value system that Western philosophical thinking has denied many developed communities. This study will explore the experience of capturing and mobilising the work of the oral poet Bongani Sitole. His work will be offered as a tool for documenting similar oral material across the many traditional cultures that need to be captured as a matter of urgency before the millennia of human knowledge manifest in these societies disappears. Sitole's work has the unique quality of straddling traditional culture (in terms of orality), contemporary culture (in terms of South Africa's transition to democracy), and future culture (in terms of informing future generations of South Africa's history). The role of orality and oral traditions is an integral part of any debate addressing the concept of cultural diversity, and Sitole's material offers the ideal focal point for building any effective model. Some have argued that cultural diversity and biodiversity are related, (Shiva 2001). This study aims to argue that this relationship is not direct, but rather that it is within orality of diversity and traditional communication structures that human knowledge is embodied and that this is essential for our sustainable cohabitation with the environment.

Our intimate relationship with the environment is rapidly becoming a central element in terms of media focus, this intimacy is by no means a new phenomenon; the attention now being given is a consequence of many modern societies becoming alienated from the finely balanced relationship between human communities and the environment.

„Sadly, our culture's relation to the earthly biosphere can in no way be considered reciprocal … Through our destruction of the ecology around us, we have become distressed physically and psychologically … Caught up in a mass of abstractions, our attention hypnotized by a host of human-made technologies that only reflect us back to ourselves, it is all too easy for us to forget our carnal inherence in the more-than-human matrix of sensations and sensibilities … We are human only in contact, and conviviality, with what is not human.' (Abram 1996:22)

Traditional societies have been exemplary in terms of their reciprocal relationship with the environment; that lessons abound from these communities for modern developed societies is without doubt. Technological developments have been a doubled-edged sword, from the alphabet through to Ipods, creating a reflective paradigm that skews the innate engagement with the wider environment and militates against the desire to capture disappearing knowledge bases. The challenge lies in selecting those aspects of technological advances that can contribute to such knowledge systems, in a manner that is coherent and feeds social well-being.

If a suitable sustainable model is to be developed for capturing orality and oral cultures, it is imperative that an effective structural paradigm is developed. This study proposes using technauriture as the analytical paradigm. „Technauriture' is a term coined by Russell Kaschula (2004) in an attempt to capture the modalities associated with the „three-way dialectic between primary orality, literacy and technology'. The term has its etymological roots in two key aspects „technologized' and „auriture'. Kaschula observes that „auriture' offers a combination of the oral and the aural, which is central to all orality, both primary and secondary, with the relative importance shifting significantly to the aural in the case of secondary orality (Kaschula & Mostert 2009). With the growing ubiquity of technology and technological solutions that have and are emerging a term such as technauriture or similar was inevitable. This study aims to develop

an argument and justification for the extension of the technologising of orality so that it encapsulates all aspects of indigenous knowledge systems. Key to developing the paradigm is the need to ensure that indigenous knowledge systems are effectively valued, both in terms of their innate value to the human psyche, and the extensive potential they embody in terms of supporting a sustainable future for humanity.

If technauriture is to develop into a new analytical paradigm, it is imperative to recognise that any new paradigm goes through various stages before it is accepted. Broadie observes that his evolution of any new idea or paradigm, goes through stages in terms of public reaction, namely:

1. **Complacency/Marginalisation –** This stage sees a new idea dismissed and even ridiculed. Editors of *The New York Times* magazine of 22 January 1995: „A sceptic might wonder what the notion of a meme adds to the paradigm of cultural evolution. Perhaps there is nothing new under the sun.'

2. **Ridicule –** Existing schools of thought and vested interests will endeavour to dismiss ideas, **'**Complacency fades as a new idea refuses to fade.'

3. **Criticism –** As the new idea gains traction, the opponents who have vested interests in the old paradigms become more aggressive in the face of the challenge to their beliefs. Broadie notes that Darwinism is still under attack from various quarters today**.**

4. **Acceptance –** Eventually enough people become aligned with the new paradigm, which leads to intellectual acceptance. „[T]he new world agrees on the new paradigm. Peer pressure starts to work for it rather than against it' (Broadie 1996:xxi-xxii).

While technauriture may not be as controversial a new paradigm as Darwinism, it does, however, offer a foil against what can be called a form of informational Darwinism (Ahamed and Lawrence 2005). A sort of „survival of the fittest' application to knowledge and information, for example, what value does a typical

traditional society hold for modern medicine or for sustainable farming techniques. What technauriture allows is the creation of a coherent paradigm for researchers to assess the potential for harnessing technology to reverse the demise of oral traditions and the knowledge systems embodied in such traditional contexts. Effectively to offer a home for orality and oral traditions within the complex technological environment that is becoming characteristic of all modern human societies.

With technauriture as a referential paradigm the recognition of the pressing issues surrounding indigenous knowledge systems and orality can be effectively engaged and investigated. Much of the cumulative knowledge and experience of human societies continues to be embodied in orally based societies:

> „They ("Oral people", people for whom the written word, if they have ever come into contact with it, has little or no significance) belong to societies which, whatever inroads modern technology may have made, continue to place great store on the oral tradition as a vehicle of social cohesion.' (Alant 2006:201)

The store placed by oral people on the oral tradition represents the kernel of the dialectic that needs to be captured in terms of technauriture. Alant acknowledges the limitations that technology presents, however this limitation is less a consideration of hardware issues than it is a case of the effectiveness of software and wetware[1]. Computing potential is exponential and these *prima facie* limitations in the face of capturing orality and other aspects of indigenous culture are fast diminishing. As far back as 2006, in terms of computing technology, Martin observed:

> „IBM introduced the first petacomputer in 2005 (a thousand trillion floating-point operations per second {FLOPS}), and it is likely that a 100 petaflops (equivalent to the human brain) will be developed by 2015.' (Martin

---

[1] The term "wetware" is used here to refer to the interface between human beings and computer hardware and software.

2006:122)

These advances make it critical that the debates are consolidated around the migration of indigenous knowledge systems into a digital environment, in a manner that does not result in similar loss of essence as that which have been associated with the limitations of reducing orally based systems to written form (Chinyowa 2001).

Critically developing the technauriture paradigm is essential to the establishment of a conceptualisation framework, in order to avoid the pitfalls that have become evident with the issues of literacy. „In truth, though, the word "literacy", even though it still does mean "the ability to read and write", has long taken on more ambitious dimensions – of reason, rationality and progress' (Alant 2006:201). This dimension takes on wider implications when associated with the concept of „technological literacy', with its explicit and implicit dimension, that is, that the medium is familiar and levels of information processing capabilities are present for the user. Alant asserts that literacy is a function of language. A basic corollary for technology could state that technological literacy is a function of language and human/machine interface (op cit). Baron offers the distinction of the first-order linguistic representation, „the ability of a language user to represent speech' (Baron 1981:149); while the second-order representation enables the language user to „(re)structure knowledge at a distance from immediate lived experience' (op cit 149). The latter is a central element to the meta-cognition and epistemological aspects of thinking and knowing.

The nature of indigenous knowledge production exacerbates the potential impact of the technology on the inherent nature of the systems in question. Is an oral poet's performance fundamentally altered in a reproduction through technology? How does audience participation inform the performance? How does the knowledge manifest orally and *in situ* migrate to other contexts? These open up further questions regarding the social construction of reality:

„Media processes are part of the material world, yet we must also capture

the force of the mystifications that media generate or, less pejoratively, their contribution to the „social construction of reality' (Couldry 2003:1).

The fact that ideological issues present problems in the technological deterministic context for orality may be further exacerbated in terms of the media's contribution to the social construction of reality. Ideally, if those ideological constructs reflected those carried by the producers of the indigenous knowledge systems, this would present a significant positive factor to the reproduction. However, the assertion is more pejorative in this context. Couldry offers a clear summation of the problem at hand: „But the causal relationship between specific media contents and people's beliefs has proved elusive' (Couldry 2003:2).

A comprehensive analysis of social reality and the role of the media is beyond the ambit of this study, however, a brief investigation of post-modernist social-theory in an attempt to assess the impact of media institutions on culture would offer a backdrop against which to evaluate a proposed model for the capturing and dissemination of indigenous knowledge systems.

Bourdieu's field theory claims that every social action is understandable only in terms of the field in which it is situated (from which a notion of the „journalistic' or „media' field springs quite naturally). Although straightforward at first sight, how can this model cope with the distinctive ambiguity of media processes, as being both localised processes of production (part of the wider, structured space of economic and cultural production), and the generator of representations of the social world as a whole? (Debord 1983)

Another aspect that is central to the currency of orality is „symbolic power', which can be defined as „capacity to intervene in the course of events, to influence the actions of others, and, indeed to create events, by means of the production and transmission of symbolic forms' (Thompson 1995:17). Symbolism as a general theme runs deep in all oral cultures, however in this context (technauriture), the capacity to influence beyond the *in situ* production presents the essence of the

debate, and interplay with the role of the media becomes paramount (Kaschula & Mostert 2009).

Couldry highlights the impact of concepts that enjoy strong symbolic power, which „suggests that some concentrations of symbolic power are so great that they dominate the whole social landscape' (Couldry 2003:4). Bourdieu expands the concept of „symbolic power' to a „symbolic system', where the university/post initial schooling system and earlier religious systems had the power to classify social space within which humans exist. This type of symbolic system needs to be developed for indigenous knowledge systems, in a manner that will make the delivery of the media as neutral as possible, allowing the original message to carry the „symbolic credibility' to resonate across contexts (Bourdieu 1996).

Developing the technauriture paradigm requires an analysis of the migration of context, with its symbolic and social construct aspects, to ensure that the medium of delivery does not become an end in and of itself. To restate, Alant's assertion, namely „Oral people; people for whom the written word, if they have ever come into contact with it, has little or no significance' (op cit: 201), must not be further exaggerated within a technological environment. New technological developments have presented all practitioners with an opportunity to reverse the alienation that the written word has brought to many oral cultures. However, in order to reverse this alienation, it is incumbent on the researchers to engage in a rigorous exploration of what knowledge is, how knowledge is valued, and how it can be mobilised effectively. The history of knowledge development is replete with agendas of domination and conquest, richly sprinkled with theological objectives thinly disguising a goal of exploitation of societies and securing resources (Norman 1979).

If the rich veins of human knowledge and experience are to be captured in a coherent and useable manner, it is imperative that the opportunity presented by technauriture as paradigm is firmly predicated on the innate value of knowledge and knowledge systems. This study aims to build on an analysis of indigenous

knowledge and knowledge systems, particularly oral poetry, through a demonstration of the wider resonance of such systems to the modern human environment. On this base the challenges of the oral nature of the bulk of this knowledge will be addressed, by examining and evaluating oral material, in the form of Bongani Sitole's work.

The logic of selecting Sitole's work is twofold. Firstly, it has a deep resonance for South African society as it captures a period of unity of thinking between the essentially disparate cultures of, on the one hand, Western science and logic (as represented broadly by the white community as the descendants of the colonists) and, on the other hand, the orally based culture of the historically oppressed. For many people in South Africa, even members of the black community, to see an *imbongi* now being free to perform on the most prestigious stages in the country is indicative of the transformation of South African society. Secondly, the material that Sitole produced can be easily mobilised into the contemporary classroom, opening the door to wider adoption of knowledge systems that have been historically eschewed.

The study aims to conclude with a proposed systematic model for the capture and dissemination of indigenous knowledge systems. Any workable model has to address the plethora of issues that have long legacies, from social, political and economic perspectives. If a model for the capture and dissemination of indigenous knowledge systems is to be harnessed and embraced, it needs to bridge the fissure that social engineering has endeavoured to create, and be built upon coherent structures, that recognise the value of these knowledge systems and their role in enhancing modern human existence.

In summary, the goal of the study is to explore, identify and develop a strategic framework, that will contribute to the ‚work to introduce/affirm/re-inscribe knowledges' (Sefa & Simmons 2009:17). Through the proposed digital model, it is hoped that a structure will be developed for an enhanced valuing system for the bulk of human knowledge and mobilisation of its potential to all facets of

modern human societies. So-called modern knowledge has swamped the oral traditions that sustained human communities for the bulk of human history.

Perhaps the irony regarding modern treatment of stories, folklore and tales is best captured by Harrison , in an interview with Shoydak-ool a Tuva, a southern Siberian storyteller: „People are not interested in the old stories … [Kids] just want to watch Jackie Chan movies nowadays." Not an inappropriate analogy, I thought to myself: heroes of Tuvan myths often represent the same archetypal character found in Hong Kong action flicks' (Harrison 2007:142).

Juxtapose this experience with the Sokal affair. In 1994, a mathematical physicist, Alan Sokal, submitted an article to *Social Text*, in which he reviewed contemporary topics in physics and mathematics. The editors accepted and published the paper. Sokal exposed the paper as a hoax in another journal. He explained that his *Social Text* article had been 'liberally salted with nonsense' and, in his opinion, was accepted only because „(a) it sounded good, and (b) it flattered the editors' ideological preconceptions' (Weinberg 1996:11). Sokal argued that his motivation was to expose the lack of academic rigour that had started to afflict the academic community. Clearly, his actions bore testimony to that view. Another perspective on the hoax is that the academic community has become so wrapped up in rhetoric that, provided the message is effectively worded, the meaning is of little relevance (Weinberg 1996).

In a sense, these two extremes,(Siberian story-tellers and Sokal affair) represent a nadir for different types of knowledge, the former seemingly having run its course, and the latter having folded in on itself. In terms of indigenous knowledge systems, much can still be done to embrace and nurture this wide swathe of human knowledge and experience, and perhaps what the Sokal case shows is that some disciplines could learn more from being more in touch with the context in which the knowledge is produced.

As Pat Manson, Head of Unit 3: „Cultural Heritage and Technology-Enhanced Learning' European Commission Information Society and Media Directorate-

General, observes:

> For the research community, the challenge is also to build new cross-disciplinary teams that integrate computer science with library and archival science (and even with social and historical sciences). We need to ensure that future technological solutions for preservation are well-founded and grounded in understanding what knowledge from the past and from today we need to keep for the future. (Manson 2010:3).

This study aims to make a contribution in this regard, especially in terms of how knowledge from the recent, and perhaps distant, past can be identified, captured and made widely available through existing and future technologies.

In terms of methods, procedures and techniques, my study investigates the effectiveness of developing the concept of technauriture and endeavours to solidify the dialectic between primary orality, literacy and technology. Through a review of relevant literature, the study aims to concretise technauriture as an effective term through demonstrating that it encapsulates the natural evolution in terms of the contemporary debates associated with IKS and technology.

In this study the literature review offers the basis for the development of the technauriture concept. The poetry that is used in the case study has already been captured and it is readily available. Through the concretisation of the concept of technauriture, it is applied to the life and work of Bongani Sitole.

The study offers technauriture as a conceptual framework and creates a web based platform for the capture and utilisation of IKS. Through the study's outputs all stakeholders with an interest in IKS and oral traditions (the poets, those interested in maintenance of culture, community leaders and educators) will enjoy access to a model that will enhance the dissemination and utilisation of IKS beyond their historically limited local contexts.

Chapter 2

Epistemology as Backdrop

'Among the Western civilization's more dubious claims is that Western man possesses the ability to define and delimit all knowledge.' (Progler 1999: 381)

Any analysis of knowledge must offer an exploration of the concepts of knowledge, that is, what is classified as knowledge and the general epistemological perspectives that dominate the global community. The dialectic between human societies has been characterised by a nomothetic perspective associated with Western cultural analysis, while indigenous cultures have invariably been subject to idiographic assessments and study, albeit on a community-based scale (Wallerstein 2000). This has been central to the marginalisation of knowledge systems that have had their etymology in societies that have been subject to this idiographic perspective and which carry rich oral traditions. While a detailed investigation of this dichotomous approach to the *de facto* common human experience is unnecessary, it is imperative that the undervaluing of numerous knowledge systems is understood, as this will be essential to the creation of a value-based system that must form the backdrop of any model to harness the innate value of such systems to modern human society, and to justify the allocation of resources, both technical and financial.

In this chapter, Indigenous knowledge systems will be investigated, and how such knowledge systems are assessed, mobilised and perceived. A brief treatment will be given of the types of Indigenous knowledge systems and an attempt will be made to establish how such knowledge systems can be prioritised. The chapter will end with an investigation of the oral and written traditions which are characteristic of such knowledge systems. This will offer a

backdrop against which the public good nature of Indigenous knowledge systems will be explained.

a   What is Knowledge?

A rigorous treatment of the concept of „knowledge' and „knowledge creation' is not necessary. However, the archaeology and politics of knowledge are essential to any debate addressing indigenous cultures and the knowledge systems that continue to be embodied in orally based societies. Taylor offers a succinct observation of the dialectic that has dominated the interface between knowledge cultures since initial contact; „since the undeniable superiority of Western technology „commands attention in a quite non-theoretical way' (Taylor 1982:88). Maffie argues that as a consequence Western technology, „functions both as a theory-neutral foundation for rejecting epistemological relativism, as well as a non-self-serving foundation for defending the epistemological superiority of modern Western science' (Maffie 2009:54) Consequently, it is the Western technological framework which by extension makes Western epistemology right (Maffie 2009). It is the concept of epistemological relativism that needs to command our attention if we are to establish a workable foundation which seeks to assess the value of knowledge in a subjectively neutral paradigm.

The nature and effectiveness of rejecting such relativism has had wide-reaching implications for many human communities, and technological superiority has in some cases acted in a counter-productive way in the evolution of modern societies.   Developing a suitable definition for knowledge which captures epistemological relativity is essential, as such a wider definition of knowledge must act as the foundation for further investigation and valuing of indigenous knowledge systems. It is tempting to adopt one of the myriad of definitions, with their complexities and ambiguities. However, this adds layers to the debate that

are of little intrinsic value. Consequently, it is proposed to use the following simplistic definition. Knowledge embodies all ideas, experiences and practices carrying equal status that have been transformed by human existence and have contributed to the general level of human well-being. The kernel of this definition acts as the central pillar of the definition of indigenous knowledge systems outlined below and offers some respite in terms of the epistemological relativity issue.

Accepting this definition of knowledge as sufficiently generic and recognising the essentiality of epistemological relativism, it is necessary to recognise that the oral versus written knowledge dialectic creates further challenges within the definition of knowledge and its role and impact on the construction of social reality. Here it becomes necessary to address the role of language and thought, as captured in the „mould' and „cloak' theories. According to Bruner et al, the role of language in mould theories acts as „a mould in terms of which thought categories are cast', while cloak theories view language as „a cloak conforming to the customary categories of thought of its speakers' (Bruner, et al 1956:11). In terms of the Sapir-Whorf hypothesis of linguistic determinism, our thinking is determined by the structure of our language and the associate linguistic relativity, where people who speak different languages perceive and think about the world differently (Chandler 1995). These perspectives have been central to debates addressing translation issues. However, little attention has been paid with regard to these and their value to addressing orally based cultures and knowledge systems.

Combining the concepts of linguistic determinism, linguistic relativity and epistemological relativism presents a challenge to valuing knowledge and knowledge systems. These (concepts) offer extensive scope in terms of the nature of reality as an extension of language when language is purely oral, as in preliterate cultures. Whether the Whorfian perspective is accepted in its strongest form, which holds that „language determines thought and often behavior', (Slobin 1971:122) or if other less extreme forms are explored, there is sufficient consensus within the debate that some degree of Whorfian perspectives are in

operation (within an oral culture). However, an alternative view holds that „linguistic skill depends very, very heavily upon a pre-existing perceptual capacity' (Premack and Woodruff 1978:606). This area is well researched, and debates abound. However, for the context of this study, the central issue that needs to be addressed is the role and use of language in oral cultures. As will be demonstrated later, language plays an integral role in the interface between oral cultures and their communing with wider reality. The separateness that is implied by the Sapir-Whorf debates and issues address language as deterministic and relative, but implicitly of a separate nature.

b   Defining Indigenous Knowledge (IK): The politics of IK

'... the unique, traditional, local knowledge existing within and developed around the specific conditions of women and men indigenous to a particular geographic area ...' (Grenier 1998:1)

Despite the debates implicit in the previous section, there needs to be clarity on what is indigenous knowledge (IK). This requirement is based on the fact that much that has been classed as IK in the past has been dismissed by the nomothetic perspectives, and must thus, to a greater or lesser extent, be resurrected into the annals of serious philosophical debate. This is now happening across many disciplines. Further, it is imperative that the content of contemporary curricula is brought into play, while the power dynamics associated with the definition of knowledge are addressed.

These dynamics are extensive and warrant a study in their own right, However, Langdon (2009) argues for a pluralisation of the term „IK', that is, „indigenous knowledges' offers two key reasons for adopting this technique:

„…by saying "Indigenous knowledges", we are acknowledging the depth, breath and multiplicity of knowledges developed over thousands of years by indigenous peoples … second, we are muddying the waters of potential dichotomization, where Indigenous knowledge is set up as some „other' against which the drama of Western thought has emerged or where Indigenousness is boiled down into some single set of characteristics universally determined through the gaze of Western colonization (Langdon 2009:3).

This tool of pluralisation may strike as an oversimplification of a major philosophical and historical imbalance in the terms of knowledge and knowledge systems, but it does offer a coherent nomenclature for effectively valuing such knowledge systems. While it is tempting to adopt Langdon's pluralisation, the term „indigenous knowledge systems' offers a wider and more comprehensive term for the oral traditions/poetry material under discussion.

Using the term indigenous knowledge systems affords the status that indigenous knowledge warrants. However, it would be remiss not to recognise the distinction that Mignolo offers between „local histories' and histories with global designs. For Mignolo, „all histories are local histories, yet some, such as Western scientific thought, have global designs' (Mignolo 2000:2). It is these global designs that have directly contributed to the undervaluing of Indigenous knowledge systems.

Semali and Kincheloe continue:

This Western modernist way of producing knowledge and constructing reality is one of a multitude of local ways of knowing – it is a local knowledge system that denies its locality, seeking to produce not local, but translocal, knowledge. (Semali & Kincheloe 1999:28)

Furthermore, Rains (1999:317) observes:

> It is an interesting system, this "Western" knowledge production – it is self-contained, self-sustaining, handy, convenient, and even tinged with a sense of righteousness … Hermetically sealed, the closed system of "Western" knowledge production has been institutionalized, in a matter of several hundred years, to such a degree as to dismiss Indigenous knowledge based on thousands of years of experience, analysis, and reflection as primitive.

The key historical point relevant to the interface of Western knowledge with most other local histories is the colonial era, as this is „the point of the power relations between the Western knowledge production system and a wide array of other epistemic systems' (Langdon 2009:4). It is this power relationship that has allowed Western thought to „discredit the depth, astuteness and innovation of Indigenous epistemologies' (op cit:5). Contact between indigenous cultures and Western thought has seen the former being „disciplined daily through „development' discourse, which presents itself within its self-accorded epistemological authority' (Sefa & Simmons 2009:24).

Against these power relations, it is obvious that the indigenous knowledge system has been devalued and marginalised, due to a combination of factors from the Western thought patterns, built on a perceived sense of superiority due to an obvious technological superiority and the underlying economics of colonization. This has resulted in the present challenge that requires a rethink of how we can and should engage with the indigenous knowledge system. In order to couch this rethink, it is necessary to develop a workable definition for the indigenous knowledge system, from the myriad of definitions that exist. Working from a necessarily limited set of characteristics, this study will attempt to develop a definition below.

Some of the major characteristics of the indigenous knowledge system, as identified in the literature, include:

- It is based on ideas, experiences, practices, and information that have been generated either locally or elsewhere, and have been transformed by local people and incorporated into their way of life (Web Reference [2](WR): Ina Hoi Riwa Foundation 2000).

- It is expressed in local languages (Langill 1999).

- „Local knowledge existing within and developed around the specific conditions of women and men indigenous to a particular geographic area' (Grenier 1998:1)

- It is difficult to transmit indigenous knowledge to those who do not share the language, tradition and cultural experience in question (World Bank 1998).

- It is non-hegemonic, anti-colonial, and does not masquerade as the expert knowledge (Sefa & Simmons 2009:20).

It is interesting to juxtapose these formal characteristics with a list, offered by Native Science (WR: Native Science 2010):

- It is practical common sense based on teachings and experiences passed on from generation to generation.

- It is knowing the country. It covers knowledge of the environment – snow, ice, weather, resources – and the relationships between things.

- It is holistic. It cannot be compartmentalised and cannot be separated from the people who hold it. It is rooted in the spiritual health, culture and language of the people. It is a way of life.

---

[2] WR is Web Reference and will be used in the abbreviated form hereafter

- Traditional knowledge is an authority system. It sets out the rules governing the use of resources, respect, and obligation to share. It is dynamic, cumulative and stable. It is truth.

- Traditional knowledge is a way of life – wisdom is using traditional knowledge in good ways. It is using the heart and the head together. It comes from the spirit in order to survive.

- It gives credibility to the people.

Finally, in 1994, Federico Mayor, then Director-General of UNESCO, offered this definition:

> The indigenous people of the world possess an immense knowledge of their environments, based on centuries of living close to nature. Living in and from the richness and variety of complex ecosystems, they have an understanding of the properties of plants and animals, the functioning of ecosystems and the techniques for using and managing them that is particular and often detailed. In rural communities in developing countries, locally occurring species are relied on for many – sometimes all – foods, medicines, fuel, building materials and other products. Equally, people's knowledge and perceptions of the environment, and their relationships with it, are often important elements of cultural identity. *(WR: UNESCO)*

These definitions and perspectives all carry slightly different focus and priorities, with the fundamentals being common to all. However, it is only the first list that highlights issues of transmission of any knowledge base between cultures. It is this aspect that is the key focus for the study, as it is this aspect, among other things, that technauriture seeks to address. The transmission challenge has to be included in the process of creating a value-based system for the indigenous knowledge system. The knowledge system may be of enormous value, but

without a suitable method to transmit it across cultures and contexts, there is no possibility of it being captured, nurtured and utilised.

Another fundamental debate pertinent to the issue is the use or otherwise of „traditional'. The term „traditional' is difficult to define; one man's tradition is another's straight jacket, to extend a common aphorism. Consequently, as Berkes suggests, „[T]his is one of the reasons why some scholars avoid using the term "traditional", and instead favour the term "indigenous"'(Berkes 1999:5). Berkes cites Warren, who concurs:

> [W]e were struggling to find a term that could replace "traditional" in the designation "traditional knowledge" … "traditional" denoted the 19th-century attitudes of simple, savage and static. We wanted a term that represented the dynamic contributions of any community to problem solving, based on their own perceptions and conceptions, and the ways that they identified, categorized and classified phenomena important to them (Berkes 1999:5).

This argument reflects the significant movement towards addressing the legacy paradigms that promoted the marginalisation of all things „traditional'. Despite the plethora of definitions of what is and what qualifies as indigenous knowledge, using the characteristics outlined above. It is proposed to weave the following definition for indigenous knowledge systems: indigenous knowledge systems are not confined to specific areas or groups, but embody all ideas, experiences and practices carrying equal status, that have been transformed by local people and are integral to their way of life. They are expressed in a local language or through a local oral tradition, and are extremely difficult to transmit across cultures.

Accepting this definition opens another critical aspect that needs to be addressed, namely the so-called „language issue'. The fact that many indigenous knowledge systems are embodied in languages that are not literate or

documented makes this a significant and costly hurdle to overcome. The positive outcomes associated with the missionary zeal of the colonial era were that many learnt the indigenous languages, but the purpose was for the spreading of the gospel, and not as a tool for the embracing of local knowledge.

If we accept the role and importance of language, then as Harrison observed: „when Chomsky proclaimed language "a window on the mind", an entire research program for the discipline of linguistics was launched' (Harrison 2007:205) so it can be argued that indigenous knowledge systems, offers a „window on the soul of humanity'. Thus any model for capturing the indigenous knowledge system effectively will have to carry significant language considerations. The possibility of making a language-neutral platform needs to be explored. However, the source of the indigenous knowledge system language will always be of critical importance.

c   Developing a Suitable Conceptual Framework

Any attempt at developing a coherent history of Indigenous knowledge systems is likely to be fraught with conjecture and speculation. However, it is not unreasonable to assume that the role of oral traditions, and the consolidation and transmission of relevant knowledge, was an integral characteristic of early human cultural, social and technological development.

Given the argument thus far, it is clear that technauriture offers a workable paradigm for assessing the three-way dialectic between orality, print and technology. However, it is necessary to explore how to create an effective framework for representation of the indigenous knowledge system. Woodley, in her investigation into ways of representing indigenous ecological knowledge, presents a suitable platform. That can be more widely applied. Acknowledging the complexity associated with indigenous ecological knowledge, Woodley (WR

2004) suggests three subsystems:

- Contextual knowledge – learning due to history, demographic factors, and biophysical features of place.
- Practice – meaningful action, through physical interaction and experiential learning.
- Belief – the influence that spirituality and values have on how people act within their ecosystem.

Woodley's perspective builds on the treatment of what Berkes calls the „traditional ecological knowledge' model of „knowledge-practice-belief complex' (Berkes 1999:13). The addition of context to knowledge is important to the development of the technauriture paradigm, as the effective transmigration of knowledge systems, which are predominantly oral, require coherent contextual re-creation.

Social evolution offers another broader perspective that, with some manipulation, can act as a suitable backdrop, both for developing the conceptual framework, and supporting the creation of an effective valuation system. Earley (1997) identifies two distinct qualities associated with our social evolution, namely grounded qualities, and   emergent qualities. Grounded qualities exhibit the following characteristics (Earley 1997:2):

- A connection with nature;

- A sense of belonging, and richness of experience; and

- Egalitarian community.

Grounded qualities served the early human settlements in their battle for survival. However, with burgeoning demand for limited resources in various areas, it

became necessary to develop what Earley (1997:2) calls „emergent qualities', namely:

- Technology;

- Reflexive consciousness; and

- Social structure.

These qualities opened the window to more control, or, at least, perceived control, over our lives, with „…the grounded qualities…characterised by vitality and organic wholeness; the emergent qualities…characterised by power and differentiated organization' (op cit:2). Earley continues, and observes that these two qualities have been characterised by a dichotomous dialectic. However, he feels „it is possible to integrate them' (op cit:2).

This integration is imperative if humanity is to embrace that which has been largely lost, that is, the ground qualities. Our obsession with technology has allowed the emergent qualities to become ubiquitous and a threat to the human sustainable experience. There are many movements and initiatives that have as a goal the re-embrace of the grounded qualities, although in the not-too-distant past, organisations were derogatorily called „tree huggers', „New Age crack pots', etc. The mainstreaming of these ideas is becoming more apparent, as organisations such as World Wild Life Fund, Greenpeace and the Green Party become much more central to the global discourse.

Earley (1997) observes that humanity is faced with the challenge of embracing our grounded qualities. He feels that our social structures and communities should begin to exhibit the following qualities:

- Ecological technology;

- An integrated mind and heart; and

- Social structures that promote community and equality.

Essential to the achievement of this objective, and no longer a luxury, is the interface between communities that have a dominance of emergent qualities and communities that still have strong grounded qualities and capabilities. Technauriture as a paradigm offers a coherent framework for supporting this required interface, in a sense acting as a sort of middleware between these relative cultural biases.

d. Types of Knowledge

There are many types of knowledge, their innate value is driven by the context within which such knowledge exists and is applied. For the purposes of developing a value system for indigenous knowledge systems, this study will address three types of knowledge that are essential to indigenous societies. The declining role of such knowledge systems will be addressed briefly for each knowledge system, as will those aspects of this knowledge that could and should resonate in contemporary societies.

It is customary to view indigenous knowledge systems as simply of an environmental nature, with any spin-offs being a consequence of that convivial relationship that people enjoy with their immediate environment. This perspective has been fed by the patronising manner in which indigenous people have been viewed. This is changing, due, in no small part, to the environmental degradation wrought by industrialised societies, and the identification of commercial possibilities embodied in much of the knowledge systems that have been marginalised (Lindh and Haider 2010). Further, social structures that have been seen as simplistic and quaint have become elements of more vigorous research, as modern societies experience social dissonance and seek alternative rites of passage and discipline. The problem at hand is that much of the material has no contemporary commercial value, at least in the short term, necessitating the mobilisation of wider social and long-term economic benefits, not least in terms of

sustainability, and in terms of environmental and social relationships.

The idea of effectively technologising orality, and the establishment of coherent structures that meet the challenge presented by the concept of technauriture, requires a framework for the valuation of content and material that will warrant the application of scarce public funds. All these public funds will be hotly contested, as much of the targeted knowledge is manifest in situations that have been impoverished by the dominant global paradigms.

Whichever definition of indigenous knowledge is accepted, it is a complex area, with many layers and facets, as outlined above. For the purpose of the study, a brief analysis of selected areas, medical and ecological, will be addressed. This selection is artificial, and not meant to devalue other areas. However, the medical and ecological areas are areas that offer clear economic benefits.   It is only through the demonstration of these economic values that it may be possible to effectively harness resources to capture orality.

Indigenous medicinal knowledge has been the area that was first to hit the commercial arena, due to its potential for generating profits for pharmaceutical companies, and the fact that any methods will have enjoyed a long trajectory of trial and error in ideal human conditions. This commercial attention has also been complemented by a more benign motivation as traditional medicine attracts new interest by healthcare policymakers as a field to be developed for the provision of equitable healthcare coverage in developing countries (Bodeker 2009).

In 1978, the World Health Organisation (WHO) defined traditional medicine as follows:

> On the basis of a community's or a country's culture, history and beliefs, traditional medicine came into being long before the development and spread of Western medicine, that originated in Europe after the development of modern science and technology. The knowledge of traditional medicine is often passed on verbally from generation to

generation. Nevertheless, in some cases a sophisticated theory and system is involved. (World Health Organisation 1978)

This definition has evolved into a less wordy and more accurate definition, without reference to any relationship with the emergence of Western medical epistemology, namely:

Traditional medicine is the sum total of the knowledge, skills, and practices based on the theories, beliefs, and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health, as well as in the prevention, diagnosis, improvement, or treatment of physical and mental illness (WR: WHO).

This evolving definition reflects the changing global political framework and the recognition of the innate value of these knowledge systems. The WHO has decided to drop any reference to the transmission mechanisms associated with such knowledge systems. This is unfortunate for the study at hand and it may be an oversight. However, it is most likely due to what is an erroneous belief that across the world growing movements to support indigenous cultures and knowledge systems are capturing that which is innately of value, for example, in traditional medicine, understanding of environmental factors and knowledge of bio-diversity.

When addressing knowledge and knowledge systems the issue of ownership is not always addressed explicitly. Bodeker observes in relation to the first definition: ‚Intrinsic to this definition is the notion of community or cultural ownership of their traditional medical heritage' (Bodeker 2009:24). The intrinsic nature of ownership is debatable, and perhaps should be read as these community's or culture's having possession, and thus, by extension, ownership. However, ownership implies an ability to extract any innate value, be it direct or

indirect, associated with these traditional systems. In order to exercise ownership rights, those in possession of these rights must have structures that allow for the embodiment of these rights. This has historically not been the case and presents many challenges.

The nature of traditional health structures differs from that of contemporary Western health structures in terms of the holistic approaches of the former, since „they are based in cosmologies that take into account mental, social, spiritual, physical and ecological dimensions of health and well-being' (op cit:24). This holistic dimension is also indicative of the multifaceted character of such systems, which do not easily lend themselves to a two-dimensional representation. With much of the knowledge of these systems being based in orality, the challenges of capturing, nurturing and disseminating this knowledge must be addressed and met, much in the same way that these are the challenges facing the collection and dissemination of oral literature, for example oral poetry today, within the paradigm of technauriture.

Cox (WR) relates a poignant anecdote of an experience he had in Western Samoa with a 73-year-old woman who lived in a modest *fale*, or hut: „True, some of the plants growing in her garden were unusual, but I did not expect anything extraordinary during my first interview.' Cox asked the woman if she knew anything about herbal medicine. Over a period of three hours, Cox then recorded „the most detailed account of Samoan herbal medicine that I have ever recorded'. Cox relates that among this wealth of herbal knowledge was a treatment for hepatitis. This hepatitis cure led to the discovery of an antiviral drug prostratin (Korin et al 2002). This is one case of the potential that may lie in the world's different indigenous knowledge systems. Cox observes that this is a case where „an indigenous claim of a plant used in traditional medicine has been corroborated by a laboratory finding' (Cox WR). While the capturing of medicinal knowledge enjoys a higher degree of innate commercial value than, say, oral literature per se, the fact that much of the information is embodied orally presents many of the challenges raised above.

Any discussion of indigenous knowledge systems invariably carries a significant bias towards the relationship that indigenous cultures enjoy with the environment. But, here again, the value associated with this relationship is limited to any commercial value that can be extracted and/or related to the limited tourism potential, that is, aesthetic value.: „[N]ot only extinction, but loss of knowledge about plants, is one of the most dramatic facts we are living nowadays' (Munoz 2004:1). The challenge is to develop a structural framework that can extract this knowledge and apply it in a sustainable way that ensures that the communities that own the knowledge bases are adequately remunerated. This ethnobotany and ethnozoology must be viewed within a framework of ethno-environment science, or indigenous ecological knowledge.

As with the generic definition of indigenous knowledge systems, indigenous ecological knowledge does not have a widely accepted definition. This is due predominately to the political and social contexts in which such knowledge manifests (Smylie et al 2003). This has made any effective categorisation of this knowledge extremely elusive. Indigenous ecological knowledge, like any other area of indigenous knowledge systems, is complex: „[T]here is still a lack of awareness of the complexity in indigenous ecological knowledge, and the barriers to its effective uses for ecosystem management' (Woodley 2004:WR). Woodley suggests that indigenous ecological knowledge can be understood as knowledge that comes from a complex set of context, practice and belief. This conceptual framework incorporates structural and organizational features of human ecosystem interaction and concepts of space and time in the understanding of indigenous ecological knowledge (Woodley 2004:WR).

This observation of complexity is common across all indigenous knowledge systems, suggesting the need to ensure a holistic framework for capturing context and the transmigration of the *in situ* knowledge base into other applicable situations, such as classrooms. This migration must to inform political and other decision making processes, promote engagement with communities and enhancing intercultural discourse. In a sense, there is a need for what can be

called intercultural osmosis of knowledge that serves general human well-being. Woodley suggests that her case study from the Solomon Islands shows that understanding how people are engaged within their surroundings, instead of documenting knowledge that can be articulated, can help in bridging differences in world views between researchers and indigenous people (Woodley 2004:WR). The manner in which indigenous communities engage with their surroundings is intrinsically related to oral and oral traditions.

It is tempting for researchers to simply record, in analogue and digital form, any information that they anticipate to be of value beyond the context in which they undertake their research. According to Woodley researchers often stress the factual aspects of indigenous knowledge over the spiritual foundations, world views and values of indigenous peoples, which „has not served indigenous peoples nor the environment well' (Woodley 2004:WR). This temptation is predictable, partly as a result of the dominant Western paradigms that have fed much of the historical research agenda and, perhaps more importantly in recent decades, the problems associated with the re-creation of context. Ironically, similar context re-creation issues have been shown to offer challenges associated with indigenous testimony in legal cases (Kaschula et al 2008).

To effectively develop a definition of indigenous ecological knowledge requires a combination of ethnobiology and human ecology: „[I]mplied in the concept is a component of local knowledge of species and other environmental phenomena' (Berkes 1999:6). This, in terms of the suggested conceptual framework of technauriture, is contextual knowledge. In terms of practice, this would entail the relationship with the immediate environment, farming, and other livelihood activities. This also requires acknowledgement of the belief systems that are operative: „There is a component of belief in peoples' perceptions of their role within the ecosystems and how they interact with natural processes' (Berkes 1999:6).

Important in terms of the ecological knowledge is the concept of a reciprocal

relationship. Abram effectively highlights the nature of the relationship of the so-called developed community with the environment:

> „It is this conviviality that is so characteristic of indigenous lifestyles, which are a necessary and sufficient condition for supporting sustainable human communities. This aspect of indigenous ecological knowledge is often downplayed, as it lacks any obvious perceived economic value' (Abram 1996:94).

Abram offers a more telling observation concerning the role played by Western civilization's reputed greatest thinkers:

> „European civilization's neglect of the natural world and its needs has clearly been encouraged by a style of awareness that disparages sensorial reality, denigrating the visible and tangible order of things on behalf of the absolute source assumed to exist almost entirely beyond, or outside of, the bodily world' (Abram 1996:94).

There is little doubt that extensive knowledge is manifest in indigenous systems. However, although it is tempting to extrapolate and generalise that all such knowledge is of value, the researcher must be cautious and acknowledge the following caveat:

> „Some traditional management systems may have worked well because of low human population densities. They cannot be expected to solve today's resource management problems, where demands on resources exceed their productive limits' (Johannes 1989:8).

Despite the above caveat, „the potential for applications of traditional

environmental knowledge of management of soils, crops, forest, water resources, wildlife and fisheries is, quite simply, vast' (Johannes 1989:8). Johannes effectively summarizes the challenge for indigenous knowledge systems in general within the ecological knowledge framework:

> „Such information must not only be collected and verified. It must also blend with more technical forms of biological research – population dynamics, population genetics, physiology, soil chemistry and microbiology' (Johannes 1989:8).

This hints at some of the scope and latitude that is embedded in indigenous ecological know-how. By way of example, Harrison recounts the story of Phil Rice, the Philippine Rice Institute, which advocates hybrid rice strains, pesticides, etc. Traditional beliefs are treated as superstitions.

The short-term results can be seen as justified, but long-term impacts are becoming clear in terms of environmental degradation. Hybrid rice promotes farmers' dependence on chemical inputs that are harmful to human health and the environment. Contrary to the claim of Phil Rice that it serves the interests of farmers, it actually protects the interests of agrochemical transnational corporations (Harrison 2007).

This example reflects only some of the complexities associated with indigenous ecological knowledge. However, despite these complex issues, modern human society needs to learn from its history, and not just record history. The aphorism „Those who do not learn from history are destined to repeat it' is perhaps not applicable, but in this context, perhaps not learning from this accumulated knowledge will mean that humanity will learn a lesson, if only in terms of our relationship with the environment, that need not be learnt.

While this offers some insight into what knowledge may be of economic value to modern well financially resourced societies, it is imperative that research

continue to build the case, as it is only through this approach will the public

investment be made in capture, nurture and mobilisation of oral and orality.

Chapter 3

Indigenous Knowledge Systems as Public Good: From Performance to Epistemology

For the first time in the history of humanity, societies are faced with a common set of global problems, from climate change, to food and water shortages,[3] to other resource depletion issues. Received wisdom says that if more societies had embraced indigenous knowledge systems, many of these issues would not have arisen. Shiva contends:

> „Only where cultural diversity has been able to persist does biodiversity continue to exist; it can be found in the few niches that have not yet been completely modelled after the Western pattern and its mechanistic metaphor' (Shiva 2001).

While the UN-OHCHR Leaflet No. 10 states:

> There are an estimated 300 million indigenous people in more than 70 countries worldwide … Indigenous peoples account for most of the world's cultural diversity … Of the estimated 6,000 cultures in the world, between 4,000 and 5,000 are indigenous. Approximately three-quarters of the world's 6,000 languages are spoken by indigenous peoples. (OHCHR 2001:1-2).

The cultural diversity alone clearly has extensive potential to contribute to well-being across the globe, not to mention the well of collective human knowledge

---

[3] Although not all societies are faced with food shortages, the general global shortages have implications for all of humanity.

and experience that these indigenous populations embody.

Further, the World Wildlife Fund (WWF) reports that „4,635 ethno-linguistic groups, or 67 per cent of the total number live in 225 regions of the highest biological importance' (Oviedo et al. 2000:1-2). Since a vast amount of the world's ecological knowledge is stored in indigenous peoples' languages, which are rapidly disappearing, and „since in most traditional cultures this knowledge is passed on to other groups or new generations orally, language extinction is leading to loss of ecological knowledge' (Oviedo et al. 2000:1). This adds further merit to the focus of an effective digitisation strategy for orality.

Among the many challenges of any attempt to mobilise indigenous knowledge systems for contemporary social discourse and impacting social order is establishing indigenous knowledge systems as an economic good. According to Mugabe „conventional intellectual property law does not cover inventions and innovations of indigenous and local peoples' (Mugabe 1988:17). Jones and Hunter, in reference to the Maori people of New Zealand, present the following argument for investing knowledge as a public good:

> [G]iven that the choice for protecting indigenous knowledge appears to be divided between protracted legal advocacies or investing knowledge as a public good, we believe the latter to be a potentially more dynamic strategy that will benefit both the Maori and the nation of New Zealand in both short- and long-term time frames. The enshrinement of indigenous knowledge as a public good validates the cultural and social capital inherent in community, which represents the innovative potential that property rights fail to protect and transnational commercial interests mine (Jones and Hunter 2004:104).

There is growing recognition that much can be learned from indigenous societies and their harmony with their natural surroundings. However, the challenge is how

to harness this knowledge base within contemporary developed societies. The underlying thesis of this study holds that it is a necessary journey that humanity needs to take to re-engage with its natural surroundings in a coherent manner that allows for full manifestation of the sum total of human knowledge that is shared and held by all human communities in different degrees.

What is required is to develop the journey from performance to epistemology, for all to view the performances of shamans, sangomas, praise poets, etc, as less of an end in itself, but as a relevant and important part of the general human epistemological paradigm. If this is to be achieved, all knowledge has to be viewed as equally important and valuable, not from strictly commercial perspectives, but as fundamental to the human experience and essential to the achievement of a sustainable human future.   In order to achieve this, it is incumbent on all researchers from a wide cross-section of disciplines to demonstrate the innate value of knowledge from diverse contexts and to build suitable models for harnessing such knowledge effectively.

a. What is a Public Good?

'[A]nd he tells you that American University biology departments now exist, in essence, to transfer knowledge from old Jewish men to young Chinese women.' (Fishman 2005:3)

As the name suggests, a public good is something that has a positive contribution to a social environment. It should not be confused with anything that is available freely to the public. The strict economic definition is a good that is non-rivalrous and non-excludable. This means that consumption of the good by one individual does not reduce availability of the good for consumption by others, and that no one can be effectively excluded from using the good (Cornes and Sandler 1996). Therefore, in this context, a public good is opposed to a private

good. By way of illustration of a private good, suppose you visit the dentist. There is then, by definition, one less visit to the dentist available to others. Thus, your consumption directly reduces the availability of visits to the dentist by others. So, there is a rivalrous aspect to this visit. Further, it is possible to exclude others from visiting the dentist. The most commonly cited public good is the air we breathe. By breathing, there is no significant reduction in the air available to others, nor is it possible to effectively exclude others from breathing.[4]

The origins of knowledge as a public good are rooted in the belief that knowledge is a non-exclusive holding and is dependent on the multiple gains of others. Public goods are now understood to reflect two properties: they are not diminished by use (they are non-rivalrous), and they are freely available to all (they are non-exclusive) (Jones and Hunter 2004).

Thomas Jefferson offered an ideal metaphor for the transmission of ideas passed from one person to the next as analogous to someone lighting a candle from another's candle without decrease of personal luminance, with both persons finding benefit through the diminishing of darkness (Boynton 2004).

Posey (2000) describes how indigenous leaders are frustrated and angry that the very governments that do not guarantee basic human rights to indigenous groups are currently claiming sovereignty over the plants, animals and resources that indigenous peoples have managed, protected and defended, and even over the very knowledge that defines and sustains the souls of their people and the identities of their cultural systems. The contemporary notion that knowledge is the means of production, in terms of which knowledge holders are viewed as human capital, may lead to violation of the human rights of indigenous peoples (Jones and Hunter 2004).

When indigenous knowledge systems are analysed using the above definition,

---

[4] Obviously, in areas of serious environmental degradation, such a debate regarding air quality and availability may alter the status afforded to clean air.

certain interesting aspects become clear. Indigenous knowledge systems, when delivered and shared in their *in situ* contexts, as has been their characteristic for millennia, are non-rivalrous and, to a large degree, non-exclusive. It is non-rivalrous, as the use of the knowledge by one does not minimise the availability to others. In terms of non-exclusivity, the situation is less clear. Certain knowledge systems have been the „property' of shamans and sangomas, or other communities. However, exclusivity is only likely to become an issue when rivalry becomes a consideration. Consider the example of the manipulation of fire by early human cultures. Using fire was, by definition, non-rivalrous and non-exclusive, provided everyone had the knowledge of how to control; and initiate fires. This early technology, it could be argued, represented the first steps towards differentiation between human groupings. It's not hard to imagine the relative divide that existed between human groupings that had mastered fire and those that had not. An analysis of the quest for fire offers significant insight into the fissures that technology can create between groups not to mention a sense of superiority and dominion over those who have not mastered the technology.

Beyond the strict public good analysis, some aspects of indigenous knowledge systems do not lend themselves to a direct cost benefit analysis. For example, what is the socialisation role of fairy tales? Fairy tales are designed to offer a paradigm for defining codes of conduct. In Western cultures, the history of fairy tales is easily tracked (Harries 2001; Zipes 1998; Roymans 1995). However, in indigenous cultures, much of the material was and/or is treated as nothing more than folk tales, with customs such as rain dances seen as quaint rituals.[5] Much of indigenous knowledge systems embed social management techniques for impressing a code of conduct on people.

---

[5] The irony of praying for rain in many developed societies should not be lost on the reader.

b. Nurturing IKS in Contemporary Society

'It is vital to protect indigenous knowledge, not only for the sake of indigenous peoples in their own environments, but also to raise general awareness of the vitality of indigenous knowledge and its dynamic capacity to help solve contemporary problems.' (Battiste 2008:11)

Implicit in the heading for this section is a debate as to what constitutes contemporary society. For the self-appointed custodians of the dominant knowledge paradigms, contemporary society is characterised by mobile phones, large-scale farming, and fast foods. The fact that these (characteristics) are usually associated with societies where the human development index is better than average has resulted in an almost universal belief that it constitutes a better way of life (Wilkinson and Pickett 2009).

Whichever definition or perspective we wish to take regarding contemporary society, the challenge facing the researcher is to identify conduits that will allow for the valuing and nurturing of indigenous knowledge systems. This presents extensive difficulties, not least of which are issues of language, employment and economic opportunities, as well as the dominant knowledge system, that sees all things indigenous as inferior. In the case of language, employment and economic opportunities, the reality is hard to overcome, and no digital model will address the fundamental economic forces in operation.

For example, a young Inuit boy, while enjoying many of the traditional activities that most young boys would enjoy, also recognises that the development of English language skills and formal education offers more opportunities for his future (Harrison 2007). The eschewing by his peers of traditional ceremonies only feeds these ambitions of his, and drives his ambitions towards a non-traditional future. His experience can be aligned to that of a young Xhosa girl,

who, despite growing up in a rural area, is occasionally exposed to a more glamorous lifestyle, perhaps through television reality shows such as *Pop Idols*, and *America's Next Top Model*, or through a visit from an urban cousin or a friend. This perspective finds the traditional lifestyle inferior, for reasons that are corroborated by the material learned while in school. There are countless other examples from communities across the world (Harrison 2007; Agrawal 2005; Howes and Chambers 1979).

Against this backdrop, any attempts to nurture indigenous knowledge systems must be built around the hopes and dreams of future generations. Digital repositories do offer extensive scope for ensuring that this is achieved. However, the key challenge is how to ensure that the knowledge structures have resonance and impart overtly perceived value to the recipients. Recent history has demonstrated that the younger generations see no obvious value in many of the cultural artefacts that have served humanity over millennia.

c. Prioritising Knowledge Systems

We are reminded of the global and historical tendency of complex technologies associated with economic powers to squash smaller, local technologies … We are urged to identify the valuable elements of smaller technologies and to create a place for them in the new century. (Kroma 1996:2)

Any attempt to prioritise knowledge systems is, by definition, a subjective exercise and driven in broader terms by perceived value to the social and economic structures within which that knowledge needs to exist and grow. The demise of many indigenous structures was the result of the application of a hierarchy of knowledge, driven in no small part, as outlined above, by the technological superiority associated with Western knowledge systems. There

are several examples from around the world of practices that have evolved from using indigenous practices. These include mixed cropping systems, water management systems, pastoral cattle movement, crop rotation methods, irrigation systems, and the use of medicinal plants for people and livestock (Rouse 1999).

The majority of human experiences are embodied in oral traditions and cultures. The memories that are passed through generations are important aspects of social cohesion offering identity, meaning, and a sense of belonging (Georges 1969). Declining links with social and cultural roots are having profound effects on cohesion for many cultures, as they experience increased contact with consumerist cultures that are a central tenet of globalisation (Misztal 2003). Globalisation has been argued by many to be a good thing, bringing levels of prosperity to countries that may otherwise have languished in greater poverty (Friedman 2008). This is, of course, a skewed picture. Gross Domestic Product (GDP) figures are, at best, a yardstick for the general performance of an economy, with little regard for social well-being. GDP figures do not address the cost of cultural dilution (van den Bergh 2009). Here cultural dilution refers to concepts such as the loss of the richness that a culture confers on its people, the role of identity and culture and similar valuable aspects associate with cultural identity.

According to the Bhutan Observer (20 March 2009), culture dilution, one of the effects of globalisation, brings bad news. Culture dilution has been likened to „the wearing out of the shock absorber that a well-preserved culture is to any nation'. The Bhutan Observer explains the relationship between osmosis of styles and culture dilution during the heyday of globalisation. „[T]he osmosis of styles and manners in this global village across ill-defined and so semi-permeable international borders was a foregone conclusion during the high tide of globalisation. Osmosis thus resulted in dilution, and today we, claiming ourselves to be the high priests of culture, sit back and weep' (The Bhutan Observer 20 March 2009). Despite the emotive language used in the observation, the reality in

many societies is the same, and points to a pressing need for GDP figures to include the negative economic costs of culture dilution.

Any attempts to create a value system to support the nurturing and development of oral traditions must be built on a structure that will become self-sustaining. Currently, resources are allocated based on a sentimental driving force, which is, in and of itself, patronising. From the cultural tourist parks with indigenous dancing rituals and artefacts on show for visitors, the idiographic paradigm has done little to offer a systemic rethink of the interface between cultures and the establishment of an embracing of the beneficial ethos of the „other'.

Essential to the creation of such an ethos is the need to see all human cultures and experiences as equal. Perhaps the truism „All men are born equal' should carry the corollary „As all men are born equal, so all human cultures exits equally'. The global epistemological legacy has seen the concept of „All men are born equal' still trying to find ubiquitous traction, therefore little hope in the short term can be held out for an equality-of-cultures perspective. Despite this reality, the opportunities afforded by technology, in terms of demonstrating the values and essence of the „other' for example, oral traditions can be effectively mobilised to promote this as a normative goal for all of humanity.

d. Disappearing Knowledge

'When a knowledgeable old person dies, a whole library disappears.'
(An African proverb)

The present rampant Information Age is masking what could be termed a „knowledge holocaust' (Auron 2005). As languages die, or the younger generations strive for lifestyles that eschew their cultural roots, extensive swathes of humankind's historical memory and indigenous knowledge is lost.

The notion of disappearing knowledge is superficially an oxymoron. With Libraries of Congress and other legislative bodies that are required to collect and maintain all published information, all knowledge developed and perceived as valuable is being captured.

These legislative mandates are commendable and essential, if humanity is to maintain access to „knowledge and creativity', as listed by the first priority of the Library of Congress (WR: Library of Congress). It is the second priority which offers an effective structural framework for contextualising the notion of disappearing knowledge. Specifically, the second priority of the Library of Congress is, to acquire, organize, preserve, secure and sustain for the present and future use of the Congress and to supply the nation with:

  a) a comprehensive record of American history and creativity;

  The record of American history and creativity has to be maintained, in order to fulfil the mandates, which are twofold: to protect intellectual property rights (a constitutional mandate statutorily exercised by the Copyright Office), and to preserve the record of the past, for the sake of present and future creativity (the constitutional mandate „to promote the progress of science and useful arts').

  b) a universal collection of human knowledge.

This priority opens many avenues for debate in terms the history of American creativity, definitions of knowledge, and what is meant by „universal. However, for the purpose of assessing disappearing knowledge, the notion of developing a universal collection of human knowledge offers the ideal goal, as this statement acknowledges that all knowledge is equal. For present purposes, universal knowledge will refer to all human knowledge recorded, whether orally, anthropologically, or archeologically accessible.

Each of these types of recorded human knowledge requires different methodological activities. In the case of orally based knowledge, language is a key element. Harrison emphasises the importance of language as follows:

> „Most of what humans have learned over the millennia about how to thrive on this planet is encapsulated in threatened languages. If we let them slip away, we may compromise our ability to survive as our ballooning human population strains Earth's ecosystems' (Harrison 2007:19).

These disappearing languages present a significant challenge to the technauriture paradigm, in so far as the dialectic between orality, both primary and secondary, coupled to the need to manifest these orally based knowledge systems, makes the need to protect and nurture dying languages essential. Since it is within these disappearing languages that so much of humanity's accumulated knowledge is manifest, further the orality within these languages represents the key depository of this knowledge base.

Harrison argues that when small communities abandon their languages and switch to English or Spanish, there is a massive disruption of the transfer of traditional knowledge across generations. This arises, in part, from the way knowledge is „packaged' in a particular language. Harrison uses the example of !Xoon, a small language in Namibia. In this language, clouds are called „rain houses'. An English or French child learning the word „cloud' or *„nuage*' gets no extra information (Harrison 2007). The rich cultural diversity that humanity enjoys is an essential characteristic of the human condition, and any celebration of this diversity has to have as a focal point language and culture, and, by extension, the means by which all cultures express their identity. While the nature of this expression is diverse and varied, at the heart is the commonality of the human experience, which may or may not be informed by a global consciousness.

e. Indigenous Knowledge as part of a Global Consciousness

Accepting the notion of epistemological relativism implies openness to the possible existence of a global consciousness. That there has been a collective human experience over the millennia is without doubt. However, the manifestation of that experience has been fractured, most extensively by the written word. In a short number of generations, large swathes of human communities have become desensitised by the written word (Ramsey 2003). Our links to wider reality become tenuous. Much of our academic discourse has seen the human condition as something separate from the context within which human beings have lived their lives. This potentially removes us from the global consciousness that informed our sustainable existence for millennia.

Defining consciousness is, by nature, elusive. Earley argues that in a context such as the one under discussion, it is only the social evolution of consciousness that is relevant. Biological considerations are of no meaningful consequence, due to the fact that „in the last 35,000 years, our biological make-up has changed so little as to be irrelevant' (Earley 2002). However, many have seen that the search for a global consciousness, assuming that one exists, as an essential challenge of our time (Rifkin 2009; Ghandi 2007; Robertson 2003; Hagerty 2000). Critical to this concept is the potential role that orality and oral traditions play or at least may play in the accessing or the exploration of the global consciousness.

Notwithstanding the complexity associated with any attempt to investigate the concept, Hagerty does offer a suitable conceptual framework that has resonance with the material at hand. He recounts Teilhard de Chardin's book *The Phenomenon of Man*, in which de Chardin introduces the concept of the „noosphere' and „described it as "a living tissue of consciousness" enclosing the Earth and growing ever more dense' (Hagerty 2000:25). Although the noosphere is an attempt to capture the concept, the phenomenon of the noosphere is „rarely defined' (Samson & Pitt 1999:3). Samson and Pitt favour the view held by Peter

Medawar, who sees it as „signifying the realm or domain in which mind is exercised' (op cit:3).

Samson and Pitt give a broader analysis of the origins of the noosphere, arguing that it has its origins in the conceptual intellectual melting pots of the nineteenth and early twentieth centuries, which gave rise to „a growing anthropocentric influence … the idea that the human species … is ultimately destined to reach a higher plain of existence' (op cit: 6). The logical end point of this anthropocentric perspective on human development is encapsulated by Engels' argument that it is humankind that „provides the means by which nature finally attains consciousness of itself' (op cit:7).

The concept of the „noosphere' is perhaps obscure, and is introduced here purely to offer the reader an insight into the complexity associated with the existence or otherwise of a global consciousness. Perhaps the most effective way of addressing its existence is to assess the contemporary perspective hinted at above, which states that it is essential that humanity tap into, or at least develop, a global consciousness, if only for our own survival, in a sense to share a common purpose and future with the planet as a whole.

As discussed earlier, there is a need to develop a coherent interface between humanity's grounded and emergent qualities. The existence of a noosphere can act as an existential framework within which this interface can develop. Davies offers the following insights:

> „I cannot believe that our existence in this universe is a quirk of fate, an accident of history, an incidental blip in the great cosmic drama. Our involvement is too intimate. The physical species *Homo* may count for nothing, but the existence of mind in some organism on some planet in the universe is surely a fact of fundamental significance. Through conscious beings the universe has generated self-awareness. This can no be trivial detail, no minor by-product of mindless, purposeless forces. We are truly meant to be here' (Davies 1999:232).

While Davies' observation may seem a little sentimental, here again, there is the argument of the need to re-engage with all human experience since the emergence of our species as self-aware. Indigenous knowledge systems offer a crucial source of the human experience, and it is imperative that every potential of the modern technological infrastructure is brought to bear to capture, nurture and imbibe these knowledge systems.

Each cultural context will carry a different perspective on consciousness, and this will impact on how they engage with their environment and context. It is not a stretch to argue that societies that are characterised by a highly grounded set of qualities are likely to be more receptive to a concept of global consciousness and the noosphere than those that are high on the emergent capabilities scale, to use Earley's framework. This brings into focus the concept of „ecological anthropology', which has as one of its central tenets that „relations between humans and their environments are mediated by culture' (Ingold 1992:39).

At this point it would behove the investigation to address the question: What is meant by culture? Kramsch offers the following (Kramsch 1998:10):

1. Culture is always the result of human intervention in the biological processes of nature.

2. Culture both liberates and constrains. It liberates by investing the randomness of nature with meaning, order, and rationality, and by providing safeguards against chaos; it constrains by imposing a structure on nature and by limiting the range of possible meanings created by individuals.

3. Culture is the product of socially and historically situated discourse communities that are, to a large extent, imagined communities, created and shaped by language.

4. A community's language and its material achievements represent a social

patrimony and a symbolic capital that serve to perpetuate relationships of power and domination; they distinguish insiders from outsiders.

5. But because cultures are fundamentally heterogeneous and changing, they are a constant for recognition and legitimatisation.

The key element in this list is language, which opens the debate on linguistic determinism and linguistic relativism. Although these are wide and debatable areas, the role and influence they will carry in terms of the existence or otherwise of a global consciousness is likely to be highly significant. Any analysis of a language's structure and components will offer insight into the locus of consciousness control, that is, more personal pronouns are likely to be associated with those cultures that are characterised by emergent qualities, as characterised by Earley.

Accepting culture as the mediating factor between humans and the environment as a backdrop to the overall human experience, it becomes important to address how culture is granulated and moderated. In complex systems, there are numerous structures, institutions and organisations that are entrusted overtly and covertly with the maintenance and enforcement of cultural norms and standards. The development of culture and language are hard to separate, as Kramsch suggests:

> „[L]anguage is the principal means whereby we conduct our social lives. When it is used in contexts of communication, it is bound up with culture in multiple and complex ways … language expresses cultural reality' (Kramsch 1998:3).

These complexities and challenges have created a fecund environment for the creation of a robust paradigm for addressing the issues of orality and oral traditions in terms of language and culture and humanity's relationship with the environment and the idea of global consciousness. Much of the preceding

discussion has been focused on building the case of addressing orality and oral traditions through valuing the innate indigenous knowledge systems embodied within these structures. It now becomes necessary to address the digital and technological aspects that are also included in the term technauriture.

f. Technauriture and Digital Ontology

While technauriture moves well beyond the realm of digital ontology, as demonstrated above, it does, imply the existence of such a digital referential framework. Consequently, it is important to address the concept and highlight its resonance or otherwise to the obvious dialectic associated with primary and secondary orality. The reason for this requirement is the fact that digital ontology is itself still a matter of some contention. However, before this can be done effectively, it is important to define ontology. Hendler offers the Oxford English Dictionary definition as „the science or study of being'. Hendler continues:

> „I define an ontology as a set of knowledge terms, including the vocabulary, the semantic interconnections, and some simple rules of inference and logic for some particular topic. For example, the ontology of cooking and cookbooks includes ingredients, how to stir and combine ingredients, the difference between simmering and deep-frying … that oil is for cooking or consumption, and not for lubrication'. (Hendler 2001:30)

Gruber offers a more formal assessment of ontologies as an „explicit formal specifications of terms in the domain and relations among them' (Gruber 1993:199). The growing importance of the Web, and the related explosion of information, has resulted in a concomitant growth in the existence of ontologies.

This proliferation has lead the World Wide Web Consortium (WR: W3C) to

recommend a Resource Description Framework (RDF). The RDF has been designed for describing Web resources. However, the RDF does not require that resources be retrievable on the Web. The resources may be physical objects, abstract concepts, or anything that has an identity (McBride 2004). The RDF is, in a sense, a macro language/ontology for the whole Web. McBride observes that it is the RDF which acts as the foundation for the Semantic Web: „[J]ust as the Web is a global infrastructure representing information in documents, the Semantic Web is a global infrastructure representing information in a form that can be processed by computer' (op cit:51). This framework, it could be argued, is the digital ontology that casts the next phase of the Web, a phase that offers a more coherent infrastructure for supporting the realisation of the challenges highlighted by the concept of technauriture.

Floridi argues that digital ontology should be distinguished from informational ontology. Through this distinction it is possible to harness only the latter as suitable for further research. Floridi presents his argument as follows:

> „Digital vs. analogue is a Boolean dichotomy typical of our computational paradigm, but digital and analogue are only "modes of presentation" of Being (to paraphrase Kant), that is, ways in which reality is experienced and/or conceptualised by an epistemic agent at a given level of abstraction. A preferable alternative is provided by an informational approach to structural realism, according to which knowledge of the world is knowledge of its structures. The most reasonable ontological commitment turns out to be in favour of an interpretation of reality as the totality of structures dynamically interacting with each other' (Floridi 2007:219).

It cannot be denied that „computers create new spaces' (Chesher 1997:80), but if Floridi's analysis is embraced, then these new spaces should be conceptualised as simply new structures, only of a virtual nature. According to Chesher, „digital

domains are significant new virtual universes, but spatial metaphors do not adequately define their topology'. (Chesher 1997:80). These virtual universes offer the participant many of the „real-world' activities from the comfort of their own homes and/or offices. As Chesher observes, they make „the world invocable as digital domain' (op cit:80). However, this characteristic is driven wholly by commercial underpinnings; any invocation is „built' through application of extensive resources and human capital. This outlay must be recouped or supported by public funds.

With technauriture's focus on the role of technology in the interface between primary and secondary orality, the methodological framework that informs any suitable ontology is critical. With the emergence of the Semantic Web, the opportunities abound for effective and coherent digital structures for nurture of orally based knowledge systems. As Ding and Foo observe:

> „[O]ntology is an important emerging discipline that has the huge potential to improve information organization, management and understanding. It has a crucial role to play in enabling content-based access, interoperability, communications, and providing qualitatively new levels of services on the next wave of web transformation in the form of the Semantic Web' (Ding & Foo 2002:123).

In terms of the emerging Semantic Web, „ontologies offer a means of organising and representing the semantics of this knowledge base' (Ng 2010:2). Technauriture is key to this assessment of the role of ontology in terms of its role in addressing orality. The definition of the Semantic Web makes this observation almost tautological. In its simplest form, the Semantic Web will allow for a discourse between computers that is dynamic, in a sense, orality for computers. What technauriture calls for is the effective mobilisation of this computer discourse to address the innate aspects of orally based knowledge systems in terms of their migration into a digital representation of being.

Chapter 4

The Bongani Sitole Experience: A Case Study in Digitising Orality

As has been demonstrated above, much of indigenous knowledge systems is embodied in societies and communities that are preliterate or have had limited contact with the written word in terms of their language and customs. The challenges associated with orality and oral traditions are clear: from the *in situ* context, to reliance on memory, to lack of suitable recording tools, the researcher needs to be innovative in terms of balancing the recording process, while establishing structures that enhance the value of the material recorded beyond its primary context.

a. **Towards The Digital *imbongi***

There are a myriad of shamans, poets, sangomas and other oral practitioners; each has a uniqueness that is particular to their own cultural milieu and physical context. However, they all share the common characteristic of embodying their knowledge and the knowledge of their communities orally. This common thread allows for the development of a digital model that could have wide appeal in terms of any similarly orally driven contexts and cultures. For the purposes of this study, the *imbongi*, or Xhosa oral poet, Bongani Sitole has been selected as a case study. This is driven by three factors, namely the accessibility of his material, the fact that much work has been completed in making the material topical to contemporary pedagogic environments, with financial support from the Foundation for Human Rights (WR: FHR), and finally, and perhaps most importantly, his work offers a very unique and little-known perspective of the

transitional process in South Africa in the early 1990s.[6] Using Sitole's work, it is possible to develop a generic methodological framework for the capture, processes and utilisation of orally based knowledge systems and traditions. In a sense the challenge can be encapsulated in the drive to cement the post modern role of the digital *imbongi*, where this term is a catch all for all oral traditions and practitioners.

The tradition of the *imbongi*, or Xhosa oral poet, has never been a static one. Opland describes the dynamic nature of Xhosa oral poetry as follows:

> The dynamic element is necessary in our approach, since the tradition of Xhosa oral poetry has clearly changed, and is continuing to change, with changes in Cape Nguni society. Tradition is not a lifeless thing; it alters and adapts to new social circumstances (Opland 1983:236).

Although the concept of singing praises still has a distinct character, which is based on past traditions, many elements have been dropped, or adapted. The *imbongi*'s relationship with the audience, and the role that their *izibongo*, or poems, play within a particular society, remains of the utmost importance. Any analysis of the tradition of Xhosa oral poetry will have to take into account the context of the performance, the audience itself, and the function and role of the *imbongi* in a society which is subjected to constant sociocultural, political and technological pressure, particularly as a result of the influence of the World Wide Web. Contemporary performance poets such as Lebo Mashile, and some *iimbongi* (plural form), such as Zolani Mkiva, now have their own websites, where one can download information about them and also view their material and performances (WR: Mkiva). The tradition has grown and adapted to new environments and is dynamic. Urbanisation, the impact of education, the formation of the independent homelands and their later disbanding, the changing

---

[6] It is this quality that makes Sitole's work more topical for mobilisation in schools, and it is through this that the viability of the model can be demonstrated.

nature of chieftainship, the emergence of black nationalism during the regime of apartheid, the subsequent release of political prisoners and the unbanning of various political organisations in the early 1990s, along with South Africa's transition to democracy, and the rapid emergence of new technologies (including cellular phones for recording purposes, the Internet for advertising purposes, etc) have all affected the way the tradition of oral poetry can be captured, preserved and disseminated, thereby providing oral poets with a global audience. Coplan (1985) analyses changes in performance creativity and culture over the years in South Africa, and provides concrete evidence of the adaptability of tradition. Coplan states that „the production and reproduction of performances must be located within the set of political, economic, social and cultural relations between performers and the total context in which they perform' (Coplan (1985:242).

Today this context would include the realm of new technologies, such as the World Wide Web. In a similar vein, when referring to the more traditional oral poet, Mafeje (1967:91) defined the *imbongi* within a specific context as „A praise poet who frequented the chief's great place and travelled with him in traditional Nguni society. His distinctive feature is that he can recite poems without having prepared them beforehand.' The changing context within which the poet performs is therefore very important, and must be acknowledged.

If, however, one recognises the socio-economic, political and technological changes which have taken place in South African society over the past 15 years, then Mafeje's definition of an *imbongi* no longer reflects the reality of the situation. Any definition must take into account the role of the *imbongi* as mediator and sociopolitical commentator in the power base within which he or she operates. For example, Alfred Qabula, an *imbongi* who operated within the Congress of South African Trade Unions (Cosatu), saw his role as that of mediator between the people and the union that he represented, in the same way that the traditional *imbongi* mediated between the people and the chief (Gunner 1986). The late Bongani Sitole, an *imbongi* who operated in and around Mthatha in the 1990s, saw his role as mediator between organisations such as the ANC

and the PAC, or chiefs with differing viewpoints, and also as an advisor to such organisations or chiefs (Kaschula & Matyumza 1996:5). Gunner characterises the role of *izibongo* as follows:

> „The *izibongo* are a unique tool in raising workers' consciousness of their union and its role in their lives as workers. Yet they are also quite clearly an expression of a strong and old art form with its roots deep in social and political awareness' Gunner (1986:35).

While the *imbongi*'s role may still be that of mediator and socio-political commentator, the use of modern technology now makes it possible for the material to reach a global audience.

Given the adaptation of the *imbongi*'s role to 21st-century realities, a recent definition suggests that the contemporary *imbongi* can be classified as a person involved in the oral production of poetry, using traditional styles and techniques in any given context, where the *imbongi* is recognised as mediator, praiser, critic and educator, and is accepted as such by his or her audience (Kaschula 2002). There is, however, no mention of technology, such as open source or the Internet, which would need to form part of any contemporary 21st-century definition. Open source structures can and do play an important role today in capturing oral literature, and these structures must form part of any contemporary definition of oral literature and oral poetry. Similarly, the Sitole material will be placed on such an open source site, in original form, and in translation.

The discourse used by *iimbongi* and performers is shaped, to a significant degree, by both the physical environment and technological contexts in which they now find themselves. The themes of oral poetry have changed, due to the changing socio-political environment in which such poetry is produced. Changes in themes are also directly linked to changes in what Opland terms „contextual elements' (Opland 1983:253). Since the context in which the poetry is performed

is no longer limited to praising the chief, but includes political rallies and contemporary open mike sessions, this has also encouraged a change in the thematic repertoire of poets. A good example of an oral poet drawing on contemporary themes is the more recently acknowledged „President's poet', Zolani Mkiva, who has performed in honour of Nelson Mandela (1994 Presidential Inauguration) and Thabo Mbeki (1999 Presidential Inauguration) (Kaschula 1999:64-65). The repertoire of oral poets often now reflects the new power bases in South Africa, which were legitimised with the emergence of a democratic South African society.

This contemporary accord of status to the *imbongi* is a major contributing factor to the focus of the material in this study. It is no accident that the debate is centred around the concept of the digital *imbongi* since contemporary social focus is a necessary but insufficient criteria for developing a coherent, viable and model worth of preservation for orality and oral traditions.

b. The *imbongi* in Xhosa Society

Many elements of the tradition of Xhosa oral poetry have been dropped, or adapted. In the contemporary South African context, Opland argues that the poet's role is to „break down barriers between people', and that he is „a matchmaker, gathering people together who differ' (Opland 2005:387). He continues and characterises the well-known *imbongi* D.L.P. Yali-Manisi as follows:

> „In performance he came alive, he was freed of the constraints of social intercourse, he broke free of the pains of his body. He could say what he wanted as he wanted. And what he said and the way he said it demanded attention and marked him as a man of stature, a true son of the soil of Africa, and one of its greatest poets' (Opland 2005:387).

The role of *iimbongi* as mediators and as political and social commentators in the power base within which they operate has been retained over time. This is an important aspect of defining the contemporary oral poet. Alfred Qabula, in his role as mediator between the people and the trade union Cosatu, acted in the same way as the traditional *imbongi* once mediated between the people and the chief. Bongani Sitole saw his role as mediator between organisations or chiefs with differing viewpoints, and also as an advisor to such organisations or chiefs.

The tradition has grown and adapted to new environments and is „dynamic'. Urbanisation, the impact of education, the formation and later disbanding of the independent homelands, the changing nature of the chieftainship, the emergence of black nationalism during apartheid, the subsequent release of political prisoners, the unbanning of certain political organisations in the early 1990s, South Africa's transition to democracy, the growing equality between genders, as well as the rapid emergence of new technologies, have all had an effect on the tradition of oral poetry. Coplan's research, which analyses changes in performance creativity and culture over the years in South Africa, provides concrete evidence of the adaptability of tradition (Coplan 1985). Coplan describes the importance of the relationship between performers and their context as follows:

> „The production and reproduction of performances must be located within the set of political, economic, social and cultural relations between performers and the total context in which they perform' (Coplan (op cit: 242).

In accordance with Coplan's methodology, it is the purpose of this case study to contextualise Sitole's performances. This will provide a more holistic impression of the *imbongi*, as well as the factors which have contributed to change in the

tradition of oral poetry within the reality of globalisation and increasing reliance on technauriture. Further, it is through this approach that the concept of the digital imbongi can be realised and resonate across orally based contexts and promote the harnessing of orally based knowledge systems.

Kaschula recognises the need to evolve the recent definition of the *imbongi* (Kaschula 2002). Definitions are, in essence, anachronistic and require constant revision. In these (recent) definitions, it is suggested that the contemporary *imbongi* can be classified as a person involved in the oral production of poetry using traditional styles and techniques in any given context, where they are recognised as mediator, praiser, critic and educator and accepted as such by the audience. However, there is no mention of technology, which would need to form part of a contemporary definition of an *imbongi*. The discourse used by *iimbongi* is moulded within both the physical and technological contexts in which they find themselves, hence the digital imbongi as protagonist and technauriture as paradigm.

c. Bongani Sitole as *imbongi*

Bongani Sitole's book *Qhiwu-u-u-ula!! Return to the Fold!!* (Kaschula 1996, 2006) was recently re-released in a second edition. This work offers significant insights into the key focus of the study in terms of technologising and digitising of oral poetry and traditions, while providing a contextual analysis of selected poetry is provided. It presents an opportunity to trace the contemporary development of the oral word as a five-fold process: firstly, capturing the oral word through technology and transcribing the oral word into written isiXhosa; secondly, translating the written isiXhosa into English; thirdly, the publication of both the isiXhosa and the English translation in book form; fourthly, the digitising of some of the material and making it available on a website for downloading by

interested parties; and fifthly, the oral and live performance of some of the poetry by new and innovative township youth groups.

In essence, central to this study is the need to answer the following questions: How was the poetry collected? Where was it published? How did it come to be in book form? How has it come to be represented on a website? What was the process involved? What are the copyright issues involved in the further commercialisation of this oral art? To what extent does the technologising of the initial oral word, through the digitisation of the transcribed and translated word, bring it back to orality? This study aims to build on the primary works of Ong (1982), Finnegan (1988), and others, where the link between orality, literacy and technology is explored. Further, evidence shows that these three forms comfortably co-exist, as indicated in Finnegan's work (1988). However, Ong (1982) suggests a theoretical stance, which associates orality and literacy as separate modes of thought, can be misleading in the context of Bongani Sitole's work. Street explains the dangers of Ong's (1982) stance as follows:

> „Ong's thesis, then, appears to have little value in the investigation of the relationships between orality and literacy. We would do better to look for more specific relationships between literacy events and literacy practices, on the one hand, and oral conventions, on the other. In the project of investigating these relationships on a cross-cultural basis, and in such a way as to yield fruitful generalizations, Ong's thesis does not provide much help and is, indeed, likely to mislead the unwary researcher' (Street (1995:158-59).

Building on critical works such as that of Street (1995), it is important to note that parts of Sitole's book are now available online, together with an accompanying teacher/student guide. This completes the orality-literacy continuum and brings it full circle. Exercises accompany each of the poems in the book, and this study guide can be downloaded from the Oral Literature Project site, together with the

oral poems (both the isiXhosa and the English versions).

d. Who was Bongani Sitole?

Sitole was born at Mqhekezweni near Mthatha in the former Transkei region of the Eastern Cape Province on 21 June 1937. This area was under the control of Chief Jongintaba Dalindyebo, whose chiefdom was very supportive of the anti-apartheid liberation movement, the African National Congress (ANC), as well as its leader, Nelson Mandela.

Sitole worked as a migrant worker from 1959 to 1976 in Johannesburg as well as in Port Elizabeth. He then returned to Mthatha, where he resided until his death in 2003. He retired from the then University of Transkei, where he was a research assistant for the Bureau for African Research and Documentation (BARD). There is a certain irony in the fact that he was employed in an institution of higher learning, when he himself had hardly progressed beyond primary-level schooling. It takes one to the orality-literacy debate. In this instance, a university largely based on literacy rightly recognised the importance of the cultural and sociopolitical underpinnings of orality.

According to Sitole, he began praise-singing when he was still at school, in about 1954. He would praise-sing at various school functions, such as school concerts. Sitole's contemporary poetry shows that, although the themes of his poetry have changed, or been added to, they have been adapted to accommodate new pressures and new power bases. Historical themes also permeated their poetry. Today, modern *iimbongi* are concerned with events which are affecting their lives, and it is these events which form the basis of their poetry. Sitole's poetry was therefore fuelled by present-day events immediately prior to 1994, the audience's response, and so on. It also contains historical perspectives regarding, for example, the origins of the struggle against apartheid. Again, the

adaptation of themes reflects a change in „textual elements', those features which, according to Opland (1983:241), are reflected in a transcribed text

Sitole began praising in the former Transkei region of the Eastern Cape. He praised Chief Jongintaba Dalindyebo of the Mqhekezweni. Sitole stated in interviews conducted in the 1990s that his inspiration for producing oral poetry was entirely dependent on the occasion at which he found himself, as well as the particular audience that was present. The occasion and the audience largely determined whether or not he felt inspired to produce. When in the mood, Sitole burst forth, producing poetry of which he was often unaware. In other words, he was often unaware of the content of his poetry. Sitole accounted for this phenomenon as being part of the process of *ukuthwasa*, where he moved into a state of „emotional intensity', which was also often associated with Xhosa ritual or religious expression. Sitole's performance was always a spontaneous one, of which there was no record, unless the poetry had been recorded. Cronin (1989:41) makes the following general comments with regard to this type of protest oral poetry, which was prevalent in the 1980s and 1990s:

> „The poetry is, clearly, largely a performance. The bodily presence of the poet becomes an important feature of the poetics. Arm gestures, clapping, and head nodding are often used expressively and deictically. The poets also draw freely from the current political lexis of gestures: the clenched fist salute of people's power (*amandla ngawethu*)' (Cronin 1989:41)

Although the modern *imbongi* normally holds a microphone, which can be an inhibiting factor, there is still a lot of movement and the *imbongi* is never stationary. Gestures are therefore still an important part of the performance. The performance, as a whole, plays an integral part in keeping the audience's attention, as well as enhancing or supporting much of what the *imbongi* is saying.

In terms of what Opland (Opland 1983) refers to as „textual elements' (those

features which an audience can see and hear but which are not reflected in a transcribed text), some changes have taken place. Individual poets such as Sitole have adapted dress, in order to suit their particular power bases. Individual poets have therefore reacted differently over time to these „textual elements'.

Shouts of *Amandla!* accompanied by audience response were common in Sitole's poetry. This was once again an attempt to make *izibongo* relevant, as these utterances were integral to the political climate of the time. It was therefore important for the poet to make use of these utterances when *izibongo* were being performed, for example, at mass rallies. The use of such language further enhanced the *imbongi*'s position as a political commentator in the community. This again indicates the political power base from which Sitole sometimes operated as political commentator.

Sitole's role as political commentator was also clearly supported by the content of his poetry. In an interview in May 1990, Sitole stated that the *imbongi* would align himself with a policy with which he agreed. He stated that „*Kukho i-African National Congress and Pan Africanist Congress*, so I don't function with PAC, *andikholwa yisystem yayo*' (There is the ANC and the PAC, so I don't function with the PAC, their system does not agree with me).

Although he may not have been inspired to praise the PAC, he was still in a position to try to join the PAC and the ANC together, for example, he once said, „*Into endinokuyenza kukudibanisa i-PAC, ndibonise indlela emakuhanjwe ngayo*' (What I can do is join together the PAC and ANC, and show the road that should be taken). Sitole thus aligned himself with a particular power base in the 1990s with which he felt comfortable.

The dress of the *iimbongi* sometimes reflects the power base in which they operate. Contemporary *iimbongi* do not necessarily have a uniform dress, or any particular style of dress at all, for that matter. Zolani Mkiva, for example, wears a headdress made from porcupine quills and dresses in a dashiki. The attire worn by *iimbongi* depends entirely on the individual performer. The *imbongi* no longer

wears the traditional animal skin kaross and animal skin hat. Traditionally, *iimbongi* also used to carry a spear. However, one often sees *iimbongi* wearing remnants of the traditional dress, such as an animal skin hat, while dressed in a suit.

Cronin characterises the attire of the oral poet, and that of Sitole, in particular, as follows:

> „The clothing of the performer should … be noted. As often as not it is unexceptional. However, quite a few poets, especially those who adopt a more bardic tone, don dashikis as an integral part of their performance. The several trade union praise poets also tend to wear special clothing, traditional skins and ornamentation, or a modern-day facsimile ….Sitole was more traditional in his dress. Sitole chose to wear a fully fledged traditional animal skin and animal hat. He also carried a knobkerrie. The only difference was that the skin was braided with the ANC colours whilst the stick was beaded in ANC colours. In an appropriate gesture, these skins were finally placed alongside his coffin and buried with him' (Cronin 1989:42).

The poetry in Sitole's book was initially recorded on tape and video, with more than 100 recordings made, which reflect the volatile pre-election period from 1990 to 1994. The poetry was then transcribed in isiXhosa by the performer. Co-author Mandla Matyumza, Sitole and I then worked together to translate the material into English. The book *Qhiwu-u-u-la! Return to the Fold!* – containing 15 selected poems in both isiXhosa and English – was then published by Nasou-Via Afrika in 1995, and re-issued in 2006.

e. Context and Analysis of Sitole's work

Sitole's poems provide valuable insights into the socio-political issues facing South Africans immediately prior to the first democratic elections of 1994. They represent a window, a „slice of life', at a time when South Africa as a nation found itself at a turning point in its history. Sitole's poetry was diverse and dynamic. Take the following extract produced at the reburial of Chief Sabata Dalindyebo, an opponent of the independent homeland system and paramount chief of the Thembu clan. He was deposed by K.D. Matanzima, who eventually became the first Prime Minister of the "independent" homeland of the Republic of Transkei in 1976, in terms of the apartheid government's divide-and-rule policy. Chief Sabata died in exile in 1986 in Zambia, during the Matanzima era in Transkei. When the paramount chief's body was brought back to Mthatha, it was forcefully removed from the funeral parlour by Matanzima's bodyguards and buried in a woman's graveyard, as a final insult to the king. This angered many people. Matanzima was ousted in 1989 by military leader Bantu Holomisa (now a parliamentarian and leader of the United Democratic Movement in the new South African democracy). Holomisa immediately allowed for Chief Sabata's exhumation and the king was buried at his rightful burial place at Bumbane Great Place, with his (Holomisa) blessing, who was pro-ANC at the time. It was the first time that revolutionary movements such as the ANC operated openly in the homeland. Also present was regional ANC representative for Transkei and councillor to the royal Dalindyebo family, A.S. Xobololo. The full version of this poem appears on pages 64 and 65 of *Qhiwu-u-u-la!! Return to the Fold!!* (2006).

1   *Amandla!*

    Uza kuphakam' umzukulwana kaXobololo,

    UXobololo uza kuxobul' ixolo emthini kuvel' iintlaka,

UXobololo uyaxoboloza,

5   *UXobolol' unesifo sombefu,*

Uxweb' impundu ngokuhlal' estoksini ngenxa kaDaliwonga.

1   Power!

The grandchild of Xobololo is going to stand up,

Xobololo's going to peel the tree bark until gum appears,

Xobololo's trying,

5   Xobololo's suffering from asthma,

His buttocks are chafed due to being jailed because of Daliwonga (Matanzima).

The *imbongi* introduces the poem by making use of the power salute *Amandla!* This was common in the performance of *iimbongi* during the time of the struggle for freedom in South Africa. In this poem the power salute creates a sense of unity and power within the organisation of the ANC and the people that support it. This is so because the audience would normally respond to this power salute with a suitable reply. This serves to integrate the audience with the occasion, the performer, and the subject of the performance. Sitole is also critical of Chief K.D. Matanzima, who is blamed for much hardship experienced by the ANC and its members in the Mthatha region during earlier days. By condemning the actions of Matanzima, the *imbongi* is emphasising the power base of the ANC. This is especially true if one bears in mind that Matanzima was never an ANC supporter and that he always aligned himself with leaders of the apartheid regime.

The following extracts are taken from poems performed during Mandela's first visit to Transkei after his release from prison. He was released from prison on 11 February 1990, and paid his first visit to his place of birth, Qunu, in the former Transkei, on 23 April 1990.

1   *Liphupha lamathongo,*

   Liphupha lamampunge,

   Isizalo sikhale sancama,

   Mingaphin' imiphefumlo ephantsi komhlaba?

5   *Zingaphin' izidumbu ngenxa kaMandela?*

   Mand-e-e-e-la! Mand-e-e-e-la!

   Mand-e-e-e-la! Mand-e-e-e-la!

1   It's a dream of the dead,

   It's a dream that people thought would never come true,

   People cried till they gave up,

   How many souls are under the ground?

 5   How many corpses because of Mandela?

   Mand-e-e-e-la! Mand-e-e-e-la!

   Mand-e-e-e-la! Mand-e-e-e-la!

The *imbongi* here is referring to those comrades who died in the struggle, in order to get Mandela released. The poet is also referring to those comrades who died, never thinking that freedom would be so near. In lines 6 and 7 the *imbongi* moves from one side of the stage to the other, shouting Mandela's name in a praising manner, and, in the process, emphasising Mandela's power and that of the ANC.

The poem continues as follows:

> *Bambiza bengamazi,*
>
> *Bambiza bengazange bambone,*
>
> 10 *Yiyo loo nto kufuneka sithozame sithozamelane,*
>
> *Kuba side sambona.*
>
> *Umzekelo kaYesu erhuq' abantu abaninzi indimbane,*
>
> *Weza nabo ngenyaniso nocoselelo,*
>
> *Kuloko sinokunqgina khona ke siv' amazw' akhe,*
>
> 15 *Kuloko amazw' akhe siwaqinisekisile ukuba ayinyaniso.*

> They call him even if they don't know him,
>
> They call him even if they've never seen him before,
>
> 10 That's why we need to be humble and respect one another,
>
> Because we have seen him at last.
>
> An example of Jesus, followed by many people,

He's come with them in truth and dignity,

That's where we can hear and witness his words,

15 That's where we've confirmed that his words are true.

The *imbongi* here is playing a mediating role, asking people to respect one another. An interesting metaphor is used, where Mandela is compared to Jesus Christ, suggesting that he is a leader, imbued with qualities of perfection and truth. Again, this creates an image of a powerful, mystical, spiritual person to which the poet is instinctively attracted. The integration of Christian mythology and imagery within contemporary political discourse is innovative and significant. Christianity is regarded as one of the corner-stones of Xhosa society. The church wields significant power within Xhosa communities. Many *iimbongi* also operate within the church, praising God in the same way that a chief would be praised. Hodgson (1982) notes that the first Christian *imbongi* to praise God using the traditional *izibongo* style was Ntsikana. The use of Christian mythology by Sitole is further proof of the adaptability of the tradition of Xhosa oral poetry.

The poem develops further:

Ziyace-e-e-engwa izinto,

Ziyacengwa izinto xa ziza kulunga,

Azenziwa ngobuxhiliphothi,

Azenziwa ngokungxanyelwa,

20 *Lithe chu-u-u-u*

UmntakaNgubengcuka kaNgangelizwe,

Uthe chu-u-u-u

Uhamba nabafundi bakhe,

NjengoYesu,

25 *Uhamba nooSisulu nooMbeki,*

Uhamba nooMhlaba,

Uhamba namadoda aphilileyo.

Things are approached with skill,

Things are approached carefully if they're to succeed,

They're not approached with vigour,

They're not approached with speed,

20 He's steady,

The son of Ngubengcuka of Ngangelizwe,

He's steady,

He's accompanied by his disciples,

Like Jesus,

25 He's accompanied by Sisulu and Mbeki,

He's accompanied by Mhlaba,

He's accompanied by worthy men.

This extract sees the Bible metaphor being extended, with Sisulu and others being described as disciples, in line 23. Mandela is again compared to Jesus, in line 24, leading his people and accompanied by his disciples. Again, this enhances the image of power within the ANC. There is also some reference to genealogy, namely „the son of Ngubengcuka of Ngangelizwe', in line 21. This is common in traditional Xhosa *izibongo*, and serves to strengthen the legitimacy of the individual being praised.

In another poem, Sitole comments on the relationship between ANC stalwarts Mandela and Walter Sisulu, from the early days up to the present. He also alludes to the Rivonia Trial of 1963, where Mandela was sentenced to life imprisonment on charges of attempting to overthrow the South African apartheid government and the law of the time. The poem reads as follows:

1   *Wayigqibezel' imfundo yakhe bayokudibana ngobugqwetha benyaniso,*

    Khumbula kaloku amagqwetha ukutheth' ityala lawo engagqwethanga

     kweliny' igqwetha.

    Asuk' ema amagqweth' azigqwethela,

    Kuba yayingagqwethw' inyaniso.

1   He finished his education and they joined in the law of truth,

    Imagine lawyers representing themselves.

    They just stood and defended themselves,

    Because the truth could not be perverted.

Sitole comments here on the early involvement of Oliver Tambo, erstwhile leader of the ANC, and Nelson Mandela in the legal fraternity in Johannesburg before the banning of the ANC. This extract makes an interesting play on the word - *gqwetha* („practise as a lawyer'), literally meaning „turn something inside out' or „turn around', bearing in mind that Mandela represented himself at the Rivonia Trial. Mandela is presented as a lawyer of truth, and not somebody that turns things around or inside out. The power base of the ANC and its leaders is portrayed as truthful. This serves to subvert the power which was implicit in the South African legal system during the 1960s. Reference to the Rivonia Trial can also be seen as an attempt by the poet to preserve aspects of history.

The poem continues:

5   *Asinakujika ndawo,*

ITshangane, uMsuthu, iNyasa, umXhosa, iVenda, umTswana,

Hayi madoda, nomZulu ngokunjalo,

Singabantu abamnyama.

Nce-e-da-a-ani!

10   *Nceda, mntakaMandela,*

Ncedani niyokuthatha uGatsha Buthelezi nimfak' estoksini,

Ingxak' ilapho.

5   We'll never change,

Shangaans, Sothos, Malawians, Xhosas, Vendas, Tswanas,

And Zulus as well,

We are black people.

Please!

10 Please, son of Mandela,

Please go and fetch Gatsha Buthelezi and arrest him,

The problem is there.

In this extract, Sitole appeals for unity. He calls for the arrest of Chief Buthelezi, in order to create a climate for unity in the struggle. Thousands of people died in clashes between the Inkatha Freedom Party (IFP) and the ANC just prior to the 1994 democratic general elections. It was later alleged that right-wing elements in the ruling National Party (NP) under the then leadership of F.W. de Klerk had formed a „third force', which reputedly armed IFP militants and incited violence. It is this tragedy that the poet is alluding to, at a time long before the true facts were revealed. This is an excellent example of where the poet juxtaposes two power bases, and, in turn, makes use of this opportunity to legitimise the ideological power base from which he is operating at the time, namely that of the ANC. At the same time, the poet avoids blaming „ethnic' differences for the violence and conflict, emphasising that Zulus, too, form part of a general unity among Black people in southern Africa. However, Chief Buthelezi is alienated and disempowered by the poet, distancing him from the Zulu people, thereby attributing blame to Buthelezi for the violence.

At the height of the violence, ostensibly between the ANC and the IFP, Sitole, in Mandela's presence at Bumbane Great Place, refers to the nation as follows:

Ndivumelen' ndizityand' igila xa kunje,

Ngoba lilengaleng' ilif' elimnyam' emaZantsi Afrika,

10 *Enzonzobileni yamanz' amdaka omntw' endinguye,*

Ngoba kaloku uRhulumente uyasizonzisa…

Yavel' into kaRholihlahla, madoda.

Lwakhal' usana, lwathi: Amandla-a-a-a!

Aqal' amaBhulu ajik' ebusweni ngob' ev' inyaniso,

25 *Amthath' ambek' esiqithini ngob' ev' inyaniso…*

Allow me to speak my mind at a time like this,

Because a dark cloud looms over southern Africa,

10 In the depths of the dirty waters of that which I am – human,

Because the government is destroying us…

Rholihlahla appeared, men.

And then a miracle happened,

The infant shouted and called out: Amandla-a-a! (Power!)

The Boers became afraid and their faces changed because they heard the

truth,

25 They took him and placed him in jail because they heard the truth…

The first part of the poem highlights the ongoing violence in 1992 and alludes to the frailty of human existence. The second part of the poem repeats the theme of Mandela having been imprisoned because of the „truth' that he represented. During the violence in the 1990s, the „truth', and the relationship between the IFP and the National Party (NP), was treated with suspicion. For this reason, the poet highlights the reality that the truth can be a dangerous notion to defend.

In another poem, performed in 1990, where Mandela summoned the Thembu chiefs to Bumbane Great Place, Sitole again refers to Mandela's quality of truthfulness. This quality is linked to his place of birth, thereby legitimising the people of Qunu and the qualities they represent, which have nurtured Mandela to be the person that he is.

The poem concludes as follows:

       Nawe Qun' akumncinc' ezizweni,

35   *Unenyhweb' umhlaba waseMqhekezweni,*

       Ngokukhulisa wondle uDalibhunga,

       Sinethamsanq' isizwe sabaThembu,

       Ngokuzalelwa uRholihlahla Mandela,

       Ngokuzalelw' igorha, ikroti, ikhalipha,

40   *Umafung' angajiki ekumnyam' entla.*

35   Even you, Qunu, are known among nations,

       The land of Mqhekezweni is fortunate,

In fostering and feeding Dalibhunga,

The land of the Thembu has been blessed,

With the birth of Rholihlahla Mandela,

By the birth of a brilliant, brave individual,

40   The one who swears an oath and does not turn back, even if darkness
      looms.

Mandela's birthplace, Qunu, is personified in this poem as a parent that fostered
and fed Mandela. Qualities of brilliance, commitment and integrity are attributed
to Mandela in this poem. These qualities are pursued metaphorically in another
poem performed in 1991 at Bumbane Great Place, where Mandela is referred to
as follows:

      Mhl' amaBhulu abek' iingxowa ezimbini,

25   *Ingxowa yomhlaba nengxowa yemali,*

      Kwathiwa ikumkani mayikheth' eyithandayo,

      Kulok' umntwana kaSampu wenz' isimanga,

      Yhini ukusuk' athath' ingxowa yomhlaba!

      Ingxowa yemal' ithathwe zezinye iinkosi,

30   *Andenzanga nto, mabandla akowethu!*

      On a particular day, the Boers put down two bags,

25   One containing soil, the other money,

        The king was asked to choose which bag he preferred,

        The son of King Sampu did a wonderful thing,

        Wow! He chose the bag of soil!

        The bag of money was taken by other chiefs,

30   I've done nothing, people of my home.

The bag of soil represents the South Africa that was being fought for, that is, the country, or the land. The bag of money represents those chiefs who were corrupted by the apartheid administration and took leadership roles in the homeland system. Again, the quality of integrity and standing up for what one believes in is ascribed to Mandela, in this powerful metaphor of the soil, or the land.

The leadership qualities mentioned above were also ascribed to other anti-apartheid leaders. At a South African Communist party (SACP) rally in Mthatha in 1991, Sitole performed a poem in honour of Joe Slovo, then leader of the SACP, and since deceased. Sitole likened Slovo to a bull, which symbolises strength and power.

  7   *Amncamile amaBhul' umfo kaSlovo,*

       Yinkunzi eqhuba kuqhum' uthuli kusiphuke iziduli.

       Mbuzeni kuFosta noVelevutha,

 10   *Bamshiya bemjongile nooP.W. Botha.*

Inkwenkwe yeLithuweniya ulushica.

Myeken' atheth' ophel' uJoe Slovo,

Kuba yinkunz' edl' iintloko neziny' iinkunzi,

Nditheth' uMandela xa ndisitsho.

7   The Boers have given up on Slovo,

He's a bull which kicks up dust and breaks ant heaps.

Ask Vorster and Verwoerd about him,

10   Even P.W. Botha and his peers just looked on and couldn't do anything.

This son of Lithuania is very strong.

Let Slovo speak as he pleases,

Because he's a bull which collaborates with other bulls,

I'm talking here about Mandela.

In a more celebratory tone, just prior to the 1994 general elections, Sitole praises Africa, South Africa and its transition to democracy. Again, the continent of Africa and country of South Africa are personified and depicted as individuals coming out of a period of mourning, similar to the Xhosa tradition of „releasing the widow', when black attire is replaced with white attire. The poem that Sitole performed has been transcribed as follows:

Nants' iAfrika,

Ikhulul' iimpahl' ezimnyama,

Ingena kwezimhlophe,

15   *Ifun' ukuqhaqhazela.*

Here's Africa,

Removing its black clothes,

Putting on its white clothes,

15   It wants to shine.

Stylistically, Sitole's poetry bears many similarities to traditional poetry produced in praise of chiefs. Stylistic techniques which are generally associated with the production of traditional *izibongo* include personification and the use of metaphors and similes (which are similar to each other and involve elements of comparison). Untermeyer (1968:225) argues that a metaphor is usually more effective than a simile, because a metaphor „makes an instant comparison and an imaginative fusion of two objects without the use of explanatory prepositions'. The devices are used by contemporary *iimbongi* as tools to create imagery, an important part of poetry. Examples of this would be where Sitole uses metaphors, invoking a comparison between Mandela and Christ, or between Mandela and a black bull, which is a symbol of power.

Cronin characterises the verbal stylistic features of oral poems as follows:

> The most notable verbal stylistic features are those commonly associated with principally oral cultures: the style tends to additive,

aggregative, formulaic, and „copious' … The repetitive and formulaic features assist the performing poet mnemonically. But these features also assist the audience to hear and understand the poem' (Cronin 1989:42).

The use of parallelism, or repetition, is an interesting and useful device. It allows the *imbongi* to develop a particular idea, by initial, final or oblique linking in a sentence. Such repetitions assist the audience in their understanding of the meaning of the poem. Through the use of repetition, the poet also reinforces the power base from which they draw.

Opland (Opland 1983) refers to elements associated with stylistic technique as „textual elements'. Clearly, certain of these textual elements have been retained over time, though they may have been adapted. The use of the power salute *Amandla!* as an opening formula is as example of such an adaptation. Again, the adaptation reflects affiliation to a particular power base, but at the same time is rooted within the tradition as it existed in the past. The use of animal metaphors and anaphoral repetition also reflects the retention of „textual elements' found in traditional *izibongo*. According to Opland (op cit 1983), metaphors using the word *inkunzi* (a bull) were often used traditionally to refer to chiefs. In a poem (1991) about Mandela which appears on pages 58-63 of *Qhiwu-u-u-la! Return to the Fold!* Sitole refers to Mandela in the following way:

> *Yinkunz' ethi yagquba kulal' amatye kusiphuk' iziduli,*
>
> *Ngusilo sijamel' isibhakabhaka*
>
> 5   *Ngobusuku zaw' iinkwenkwezi…*

He's a bull that kicks up dust and stones, breaking ant heaps

He's the wild animal that stares at the sky

5   Until the stars fall down...

Likewise, Masumpa (1991) makes use of this traditional animal metaphor to refer to Cosatu. This is clear from the title of the poem, namely *UCosatu Inkunz' Emnyama* (Cosatu, Black Bull). This metaphor is used throughout the poem. The past and the present stylistic techniques are therefore interlinked.

The tradition described above, together with the poet's stylistic techniques, have now been transferred into the realm of technology. This represents another leap in the revitalisation of the oral tradition. The tradition was initially liberated in the 1990s, with political liberation, and it is now being allowed to re-invent itself within the realms of technology such as the Internet and the World Wide Web. The digital imbongi is the next iteration of freedom as a vehicle for the globalisation of orality and oral traditions.

In late 2004, with a project team from elearning4Africa, a vision to collect, collate and digitise oral literature was developed, this led to the initiation of the Oral Literature Project (OLP) development plan. Through local, national and international linkages, it was envisaged that an open source platform would make the Sitole material accessible for the widest possible audience, from learners in schools across the country using the material as learning resources, to graduate students collecting oral material and developing teaching resources for post-graduate certificates and degrees, to tourists learning about the „real' history of the places they aim to visit.

Through this open source structure it was further envisioned that contributions would be made in the following areas: cultural identity; indigenous knowledge

systems archiving and development; the development of African languages and history for post-graduate study routes; the establishment of a vehicle for the development of other learning programmes (science, maths, etc); the development of linkages with citizenship training; the creation of a platform to support cultural tourism (initially in the Eastern Cape); the expansion of open source digitisation options across partner organisations; the creation of robust community-based initiatives to promote the ongoing development and sustainability of the platform the establishment of an international model for harnessing indigenous knowledge systems for the classroom and distributing learning material. The project is now being driven by the Rhodes University School of Languages, and particularly the African Language Studies: IsiXhosa Section, to ensure that all aspects of the platforms potential are firmly built within an institutional framework, to support replication and sustainability. This study forms a key element of this development process and the consolidation of the vision around a coherent and social and economically value based ethos. It is through this methodology that the team aims to build the next phases and attract the requisite funding that is essential if the vision is to be realised.

f. Sitole in the Classroom

Through a grant from the Foundation for Human Rights, the first project for the OLP project team has been the development of resources to support the praise poems of Bongani Sitole (2004-6). The project aimed to deliver the following: development of learning materials; uploading of resources to the OLP platform; donation of books to pilot schools (Qunu, Port St Johns, and Grahamstown); the creation of a download option for accessing the poetry book; international dissemination of the project; and the establishment of a network to support Phase 2 of the project.

The project team identified a basic lesson for each poem, produced in both isiXhosa and English, to ensure that the material was made accessible to the widest possible audience. Overleaf is an example of one such lesson plan.

Historically education has included poems as part of the curriculum for their art form in and of themselves, their focus being invariably of an existential and/or social commentary nature. The work of an imbongi has this aspect but has a much wider resonance, as the material covered in previous sections demonstrated. Sitole's work offers a very unique window into understanding the socio-political realities of a South Africa emerging from under the yoke of Apartheid.

As indicated earlier in the short extract (pg 79), the poem which the lesson plans below accompany is a praise of the life of Mr Xobololo who was an advisor to the late Paramount Chief Sabata Dalindyebo, king of the Thembu tribe of the Xhosa people. He was an ANC supporter, and he was opposed to the system of the homelands. His relationship with Chief K.D. Matanzima, the Transkei homeland leader who eventually forced the paramount chief into exile in Zambia, is explored in this poem.

Lesson Plan

Poem 11: Izibongo zikaXobololo

  Xobololo's praises

National Curriculum Statement	Life Orientation: It guides and prepares learners for life and its possibilities.. Life Orientation specifically equips learners for meaningful and successful living in a rapidly changing and transforming society. The Life Orientation Learning Area Statement purports to develop skills, knowledge, values and attitudes that empower learners to make informed decisions and take appropriate actions regarding: • Health promotion • Social development • Personal development • Physical development and movement • Orientation to the world of work Together, these five focus areas of the Life Orientation Learning Area Statement address the human and environmental rights outlined in the Constitution.
Cross-curricular links	Life Orientation links the learning areas of History, Politics, Arts, Culture , Language Literature.
Learning outcomes	At the end of this lesson you will: • Understand the role of *iimbongi* as critics, and not just as poets that praises in South African society; • Recognise that Matanzima (President of the Transkei at the time) was viewed

	a traitor by the community; • Recognise how traitors were viewed by the community; • Recognise the importance of strong leadership in the face of adversity; • Be able to assess the support that Bantu Holomisa gave the ANC after the coup that brought him to power in Transkei; • Be able to engage with your peers in debates on unity, human rights and the effect of apartheid on the peoples of South Africa; • Recognise the role that *iimbongi* play in reflecting the communities approach human rights and leadership.
"How to" tutorials	Read the poem, looking for any of the following themes or issues: • Leadership, and standing strong in the face of adversity; • The suffering that leadership must endure; • Proof that Matanzima betrayed the community; • Awareness that the end of the struggle is in sight; • How the community valued the leadership of Xobololo; and • Evidence that Bantu Holomisa was a young and unknown leader.
Top Tips	• Read through the poem once before you look for themes. • Try and briefly discuss the poem with one or two of your peers. • Seek out one theme at a time. • Make notes in the margin of the poem. • Compare your notes with those of your peers.
Interactive challenge	With your partner or fellow group members, discuss the elements of the poem, and select themes for each of the stanzas. Try identify at least two themes for each stan: Once your group has completed the task, then your teacher will ask the groups to re back to the class in turn.

Reflection	How well were you able to identify themes? Did you miss any of the themes? Did your group find it easy to identify themes?
Review	Revisit the learning outcomes and identify those outcomes that you feel you have achieved in this lesson.
Output	Produce a small table showing which themes are covered in each stanza. This must submitted to the classroom facilitator

Umbongo 11: Izibongo zikaXobololo

Inkcazelo yekharityhulam yesizwe	Isifundo sobomi- Esi sifundo sikhokelela sikwalungiselela abafundi ukuba babulungele ubomi kunye namahla ndinyuka obomi. Esi sifundo sobomi sixhobisa abafundi ukuba bakwazi ukumelana nobomi obuguquguqukayo nobutshintshayo. Isifundo sokuziqhelanisa nobomi sikhulisa isakhono, ulwazi, ixabiso kunye nemo enceda abafundi ukuba bakwazi ukwenza izigqibo ezizizo baze bathathe amanyathelo angawo ngokubhekiselele: - kwimpilo - kuphuhliso lwezentlalo - ukukhula komntu - ukukhula kwamalungu omzimba nokushukuma kwawo - ukuziqhelanisa nelizwe lengqesho

	Zontlanu ezi nkalo zigxininiswa yile nkcazelo yesifundo sobomi, zithetha ngamalungelo omntu kunye namalungelo okumngqongileyo njengoko ecazululwa kumgaqo siseko.
Unxibelelwano lwekhariyhulam olunqamlezileyo	Lunxibelelanisa ezeMbali, Upolitiko, Ubugcisa, Inkcubeko, Ulwimi noluncwadi
Isiphumo sesifundo	Emva kwesi sifundo uza • Kuyiqonda inxaxheba yembongi njembombo wezopolitiko eMzantsi Afrika • Uyazi inxaxheba eyadlalwa nguMandela kumzabalazo wamalungelo abantu eMzantsi Afrika • Kubabona abo babebandakanyeka kundyhasho lwamalungelo oluntu phambi ko1994 • Kuyiqonda indlela amalungelo oluntu aphambili ngayo kwisizwe esimanyeneyo • Kuqaphela indima edlalwa bubunkokheli obububo ekunyangeni uluntu oludlakazwe kukundyhashwa kwamalungelo alo • Kukwazi ukuxoxa noontanga bakho ezingomanyano, amalungelo, iziphumo zenkqubo yengcinezelo kuluntu loMzantsi Afrika. • Kuyiqaphela indima yembongi ekuvezeni indlela uluntu oluyibona ngayo umba wamalungelo

	nobunkokheli.

Indela yokufunda	Funda umbongo ukhangele le mixholo okanye imiba elandelayo
	
	    ○ Ubunkokheli obuhlala buluqilima nokuba sebujongene nobunzima
	    ○ Ungcikivo olwathi lwafunyanwa ziinkokheli
	    ○ Ubungqina bokuba uMatanzima waluthengisa uluntu
	    ○ Ukubona ukuba ukuphela komzabalazo kuyabonakala
	    ○ Indlela uluntu olwalubuxabise ngayo ubunkokheli bukaXobololo
	    ○ Ubungqina bokuba uBantu Holomisa……..

Iingcebiso	• Wufundisise umbongo phambi kokuba ukhangele imixholo • Zama ukuwuxoxa umbongo kunye nomhlobo wakho okanye ababini • Khetha umxholo ube mnye ngexesha • Bhala amanqakwana owafumanayo apha ecaleni kombongo • Thelekisa anqakwana akho kunye nalawo abahlobo bakho
Ukusebenza neqela	Kunye nabahlobo okanye iqela lakho xoxani ngemiba yombongo, khethani imixholo

	kumhlathi ngamnye, zamani ukukhangela imixholo ibe mibini. Lakuba iqela lakho liwugqibile umsebenzi, utitshala uza kucela amaqela ukuba anike ingxelo eklasini emana ukunikana amathuba.
Ukuziphendla	Nenze njani ukuze nikwazi ukufumana imixholo? Ingaba ikho imixholo eniyiphosileyo? Ingaba iqela lakho likufumene kulula ukufumana imixholo?
Ukuphononga	Phindela kwakhona kwezaziphumo zesifundo uze ukhethe ezo ozichanileyo kwesi sifundo.
Iziphumo/imiphumela	Bhala phantsi ubonisa yonke imixholo oyenzileyo kumhlathi ngamnye walo mbongo, uze use kutitshala.

A total of 15 lesson plans were created and are accessible for downloading at Oral Literature Project. The Oral Literature Project (OLP) project team aims to continue the work with local, national and international partners to expand and develop these resources to promote the harnessing of the human rights theme for wider audiences across the world. One of the essential objectives of the *imbongi* tradition is to highlight issues within the community; this includes a socio-political commentary, which often highlights human rights challenges.

By the very nature of the historical experience of South Africa's transitional experience this material's innate value to culture and cultural understating of the South African context makes it of immense social and economic value. To ensure that this is captured and utilised effectively and offers future generations a window into the South Africa political landscape it is imperative that this model becomes part of the pedagogic environment in schools. Similarly, indigenous

knowledge systems that have their manifestation within an oral or orally based structure can be utilised in this fashion as they are embraced within technauriture paradigm.

g. Creating a context

Context presents problems for all secondary experiences, and while not being unique to orality, as we have seen, „born digital material' is also vulnerable to these problems. Creating a context is an essential ingredient associated with secondary orality, and if this is not effectively addressed, can result in a continued marginalisation of any oral and oral traditions. What relevance does an *imbongi's* uttering have for a young Afro American boy growing up in inner city St Louis?

At the time when Sitole's work was being performed, South Africa was undergoing extensive political and social transformation. Much of the behind-the-scenes activity was not accessible, in any conventional sense, to the media, and the concept of a praise poet was to the mainstream media very much of a novelty. Consequently, for the material to have any significant resonance within a classroom environment, the role of the teachers in creating context is essential if the potential impact of the poems is to be carried into the secondary environment of the classroom. This represents one of the most telling challenges highlighted by technauriture, namely the interface between primary and secondary orality.

The Oral Literature Project (OLP) project team attempted to support teachers by including comprehensive notes for supporting the development of a contextual framework to locate the production of Sitole's poems. An example of these contextual notes begins overleaf:

TEACHER NOTES – Qhiwu-u-u-la!! Return to the Fold!!

Political Context

Developing an effective poetry lesson can be challenging, no matter the level of the learners or their experiences. Obscure references, oxymoron and other concepts can cause learners to switch off or, at best, to appear completely confused. Engaging learners effectively is the biggest challenge in any poetry lesson; the resources associated with this book have been designed around a human rights theme, which will assist the teachers in harnessing initial learner interest and ensuring learner involvement.

The political context and framework in South Africa and the Transkei (an area of South Africa that was part of the so-called Bantusans – regions that were for all intents and purposes „independent' from White rule) at the time that these poems were preformed or first uttered is an integral part of every lesson. Five to seven minutes should be spent as an introduction, where the political context during the period of apartheid is described.

Apartheid was the policy introduced by the Nationalist government when it came to power in 1948; it was so called because of its objectives of separate development for the different race groups in South Africa. The population was classified as White, Black, Coloured or Indian, the latter three groups seen as „inferior' and entitled to fewer public resources and varying degrees of restriction of movement and access to job opportunities, for example, people classified as „Black' were required to carry a *dompas* – a type of internal passport which had to be presented at any time on request by a person classified as White – invariably the police – and people classified as Indian were not permitted to live or work in the Orange Free State, etc. Many other such rules and restrictions were enforced, which made life very difficult and unfulfilling for the oppressed groups.

Things were no more egalitarian in the education sector, with White pupils enjoying up to 20 times more state support than their Black counterparts. The state of education during the heyday of apartheid can be best summed up by the speech made by Verwoerd, who later became Prime Minister (Lipton 1986:24)

> There is no place for [the Bantu] in the European community above certain forms of labour... it is of no avail for him to receive a training which drew him away from his own community and misled him by showing him the green pastures of the Europeans, but still did not allow him to graze there... [This led to] the much discussed frustration of educated natives who can find no employment which is acceptable to them... it must be replaced by planned Bantu education... [with] its roots entirely in the Native areas, and in the Native environment and community.

This speech goes to the heart of the apartheid regime and shows the second-class status that the government had afforded to the oppressed communities. Opposition to the government was brutally crushed, most notably at **Sharpeville** in 1960. In the winter of 1976, the government attempted to introduce Afrikaans as the medium of instruction in Black schools. This led to what became known as the „**Soweto riots**' and was the beginning of the end for the apartheid regime. The period after the Soweto riots was characterised by extensive civil and political unrest, and declarations of states of emergency, detentions without trail, disappearances, state assassinations, etc. – standard types of actions that are associated with a totalitarian government anywhere in the world.

Towards the end of 1989, the National Party government started to experience internal strife. The then State President, **P.W. Botha,** was ousted and a new era for the party dawned, as F.W. de Klerk became the leader of the party and of the country – note that P.W. Botha has claimed that he was instrumental in initiating the changes that followed. On 2 February 1990, at the opening of Parliament, **F.W. de Klerk** opened a new era for the South African political landscape and opened the door for freedom. The government had decided to lift the ban on all

political parties, most notably the African National Congress (**ANC**), to release **Nelson Mandela**, and to start negotiations for a free and democratic South Africa.

It is within this political framework, as South African society moved towards free and fair elections in April 1994, that the poems in this book were articulated by Bongani Sitole.

In April 1994 all South Africans went to the polls, and the first ANC government was elected by an overwhelming majority.

_____

End of teacher notes

Each of the highlighted terms were hyperlinked to suitable sources to assist those teachers who had access to the Internet to widen their knowledge base and draw on other resources to assist in the creation of the contextual framework. For example, clicking on the word „**apartheid**' took the teacher to the website: http://www.africanaencyclopedia.com/apartheid/apartheid.html, and by clicking on the word „**Sharpeville**', teachers accessed the website: http://www.guardian.co.uk/commentisfree/2006/mar/20/sharpevilleturningpointfor.

Although the material supports teachers, the obvious shortcomings are clear; the only major advancement from the use of texts is that the teachers are able to access the support materials via the net. The context-creating challenges remain, and it is these challenges that need to be addressed through the emerging Semantic Web and multimedia experiences.

Within the context of the case study, it is clear that much of Sitole's material offers a perspective on South Africa's transitional phase to democracy that few beyond the Xhosa communities around Mthatha at the time were aware. All

Sitole's work is non-rivalrous and non-exclusive, although exclusivity is a factor for anyone who was not in earshot at the time of his performance or conversant in isiXhosa. Consequently, it is public good as per the definition from chapter 2. However, this characteristic coupled to its undoubted value terms of the socio-political understanding did not lead to it attracting the requisite investment that it would warrant. The limited financial support that the project received was secured through non commercial sources. Nevertheless, this case study shows how technauriture can be used in order to serve as a platform for the collection, preservation and dissemination of indigenous knowledge in the form of oral literature, via modern forms of technology such as the Internet.

Chapter 5

The technical landscape

'Digital content is short-lived, yet may prove to have value in the future.'
(Becker et al. 2010:24)

Technauriture offers an attempt to establish a coherent framework for the challenge of technologising orality and oral traditions. Implicit is that the technological infrastructure exists, or will soon exist, to make it feasible to capture, develop, nurture and utilise the store of human knowledge that is embodied in indigenous cultures. Technauriture presents a significant foil to the concept of „born digital' knowledge, in other words, knowledge that only exists in digital form. Currently, resources are being applied to ensure that such material remains accessible for future generations. Digital preservation (DP) is becoming a relevant issue for ensuring the future accessibility and usability of knowledge, information and data that only exist in digital formats (Hemmje & Riestra 2010). That „born-digital' material is receiving such attention is due, in no small measure, to the innate value placed on the content.

Indigenous knowledge systems have received less attention, due to, inter alia, the fact that the transmission problem is key to effective capturing, secondary experiences, and mobilisation. Fortunately, one of the key elements of DP includes the need to capture the emotions and nuances of digital performances. This chapter will address some of these developments and identify how such developments could support the challenges raised by technauriture in the previous chapter.

a Drivers for digital preservation (DP)

„One of the ironies of the information age is that keeping information has become more complex than it was in the past.' (Manson 2010:3)

The pressure to address the need for digital preservation is mainly driven by institutions having a legal mandate to handle the preservation of society's collective memory and the records of science and government bodies (Hemmje & Riestra 2010:13). Complementing the legislative mandates are initiatives such as the Digital Preservation Coalition (WR: DPC) and Digital Preservation Europe (WR: DPE) According to DPE, digital preservation is „a set of activities required to make sure digital objects can be located, rendered, used and understood in the future' (WR: DPE). The DPE lists three other definitions, namely:

- „Digital preservation combines policies, strategies and actions to ensure access to reformatted and born-digital content, regardless of the challenges of media failure and technological change. The goal of digital preservation is the accurate rendering of authenticated content over time' (American Library Association 2007:2).

- „The act of maintaining information, in a correct and independently understandable form, over the long term' (Consultative Committee for Space Data Systems 2002:1-11).

- „All activities concerning the maintenance and care for curation of digital or electronic objects, in relation to both storage and access' (Research Councils UK 2008:6.)

This mix of legal requirements and social drivers is underpinned by the obvious economic value ascribed to digital content and material. According to Hemmje and Riestra, the most important application domains that are relevant to this problem are the many different types of information-dependent industrial sectors that generate business value from their specific knowledge applications and, at the same time, cater for the various demands of our society (Hemmje & Riestra 2010:13). With overt drivers, without any obvious political or epistemic agendas, the process is relatively uncomplicated.

Another key area of debate in the digital context is time frames. The Keynesian aphorism „In the long run we are all dead' (Keynes 1936) requires a digital twist, namely „In the long run all is forgotten', in the digital context, the „long run' is five years or more (Verheul 2006). According to The Research Councils UK data accessibility time frames:

> „Data should normally be preserved and accessible for not less than 10 years for any projects, and for projects of clinical or major social, environmental or heritage importance, the data should be retained for up to 20 years, and preferably permanently within a national collection, or as required by the funder's data policy' (Research Councils UK 2008:6).

These time frames are minute when the longevity of indigenous knowledge systems comes into consideration.

The various issues pertaining to digital preservation offer much scope for analysis. However, the key to any preservation exercise is what needs to be preserved. The DPE outlines three key considerations (WR:DPE):

- The lowest level of preservation requirements includes preservation of the bit stream. This does not, however, ensure understandability, readability or usefulness of the digital object. The biggest risk in terms of understandability is that the meaning (and even the names) associated with values in a dataset, although known to the data producers, is not available to the users; without this, the data is essentially useless. Another aspect is that, even for users within the same sub-discipline, terminology drifts, and meaning is lost. Consequently, users in different (sub-)disciplines will require even more help with the semantics of the data;

- A more complex approach may strive to preserve not only the 1s and 0s, but also the meaning, so that it remains readable and understandable.

Such an approach requires the preservation of additional information, such as representation information, technical metadata, etc; and

- Even more ambitious preservation approaches try to preserve understandable content in such a way that the provenance and source of the digital object also remains clear. Thus, the users can have faith that the object is authentic, accurate, complete, etc.

Despite the technical nature of these considerations, they do offer insight into the amount of detail that is required to support a suitable preservation exercise such as that of the Sitole project. Developing a similarly granulated structure will be essential to effective digital engagement and capture of oral material.

At this point the inevitable question arises, one that is also heard from some quarters when addressing aspects of indigenous knowledge systems, namely „Digital preservation: why should we care?' According to Waller and Sharpe, digital preservation has implications for a much wider group of participants than is the case with printed materials. The fact that digital materials are less stable than hard copies, coupled with the extensiveness of accessibility issues and the ballooning of digital material, makes addressing digital preservation an urgent consideration (Waller and Sharpe 2006).

Cohen and Rozenzweig observe in terms of the instability of electronic resources:

„Electronic resources are profoundly unstable, far more unstable than … paper records. On the simplest level, many of us have experienced the loss of a floppy's or hard drive's worth of scholarship. The foremost American authority on the longevity of various media, the National Institute of Standards and Technology (NIST), still cannot give a precise timeline for the deterioration of many of the formats we currently rely on to store precious digital records' (Cohen and Rozenzweig 2005:2).

The exact degree of fragility of born-digital material is not known. Cohen and Rosenzweig cite the example of CD and DVD base material, where the longevity is put at anything between 20 and 200 years. „The Library of Congress, which holds roughly 150,000 CDs, estimates that between 1 and 10 percent of discs in their collection already contain serious data errors (op cit:2). Fragility is an issue that is paramount when it comes to addressing indigenous knowledge systems, as the media in which they are stored is biologically based, that is, human memories.

Accessibility is another significant area of concern for digital preservation, perhaps more relevant in terms of the fact that digital material requires various layers of technological mediation before they can be accessed effectively (WR: DPE). DPE offers the following example:

> „One scratch on a CD-ROM containing 100 e-books can make the content inaccessible, whereas to damage 100 hard-copy books by one scratching move is – fortunately – impossible. A flash memory stick can drop into a glass of water or get magnetised, a portable hard drive or laptop can slip from your hands and get irreparably damaged in a second' (WR: DPE)

The most cited example of accessibility problems is the Domesday Project (WR: Brown 2003). The project was a consortium led by the BBC, and it was conceived as a celebration of the 900th anniversary of the UK's earliest public record. This modern Domesday Book was intended to be digitally based. According to Brown, the Domesday multimedia application software was written in a language called BCPL, and the product was radical and prescient. The material is now largely obsolete, as the videodisc players on which the material was recorded are no longer in use. It was this experience that acted as the initiator of the concerns for digital preservation. Brown makes the following observation:

„After over nine centuries, the original Domesday Book can still be consulted (provided you can decipher the hand-written Latin); the modern multimedia digital equivalent was unreadable after a mere decade and a half' (WE: Brown 2003).

Coupled with these considerations is the digital explosion of the last decade. In 2007, according to the International Data Corporation (IDC), the size of the digital universe was approximately 161 billion gigabytes, or 161 exabytes. This figure reached around 281 exabytes by 2008 (IDC 2007). Obviously much of the material will have little or no value. However, there are obvious areas of critical importance in terms of additions to the knowledge base, for example, „A study in 2004 suggested that in epidemiology alone it would take 21 hours of work a day just to stay current' (The Economist February 27, 2010:15). Against this significant and important knowledge base increase are the millions, perhaps billions, of exabytes that are of a social and individual nature, as people increasingly convert their lives into digital experiences for sharing and posterity.

Given the focus on digital preservation, there will be suitable models developed to preserve that which is deemed valuable. However, these models will not necessarily lend themselves to application within contexts of indigenous knowledge systems and orality and oral traditions. But any efforts in this regard can harness the momentum associated with digital preservation activities, to ensure that the sum total of human knowledge that is still accessible is captured and nurtured. The Sitole project hopefully supports this process.

It is essential that this focus on the preservation of material that „is born digital' is infused with issues pertaining to disappearing knowledge and orality in general. In effect the incorporation within the debates of technauriture is critical to move and widen the focus. This will ensure born digital is simply an iteration of the myriad of cycles of human knowledge development. From the earliest accessible human expressions, rock art through oral traditions via the written word to the

digital swarm that now pervades the human condition.

b   The SHAMAN Project

**'True shamanism is characterised by access to other realms of
consciousness.' (Drury 1982:1)**

The SHAMAN project (Sustaining Heritage Access through Multivalent Archiving)
is co-funded by the European Union (EU) and „will develop a next-generation
digital preservation framework' (Borbinha 2010:17). The irony of the
nomenclature of this project should not be lost in terms of the topic being
explored in this study. The study seeks to find a suitable mechanism for
supporting the capturing of indigenous knowledge systems. In a similar fashion,
the SHAMAN project has the following objectives:

> „[It] involves developing the relevant preservation tools for analysing,
> ingesting, managing, accessing and reusing information objects and data
> across libraries, archives or any other deployment scenario in which
> SHAMAN Theory of Preservation proves to be relevant' (Borbinha
> 2010:17).

This offers a coherent modelling structure, albeit only half the structure, for
addressing the issues pertaining to indigenous knowledge systems and
highlighting the technical challenges facing the researcher in terms of the
digitalisation of these knowledge systems.

Unlike digital material, where the issue of initial capture is not relevant, the
problem with indigenous knowledge systems is that they are predominantly
manifest in orality and context. This is the key initial challenge when addressing
indigenous knowledge systems material. Although the SHAMAN project is not
confronted by significant issues pertaining to the production of the digital objects,

there are lessons that should inform any attempts to establish a suitable framework for effective development of the digital *imbongi* within a technauriture paradigm. The SHAMAN Theory of Preservation makes claims about the ability to maintain the context, arrangement and management of information objects, and the preservation environment itself (Borbinha 2010). Against this backdrop, the project also considers the following factors (op cit:17):

- Authenticity (the provenance of objects);

- The arrangement of objects;

- Integrity (the management of objects);

- Chain of custody (ownership of objects); and

- Context of production (preservation, access and reuse).

The above considerations have the following implications in terms of the digitisation of indigenous knowledge systems:

- **Authenticity**: Here the term needs to be fairly widely applied in terms of criteria pertaining to production and preservation. In the production phase, for example, an oral poetry context, the material needs to undergo an authentication process to identify its currency, that is, its value, and the material needs to be subjected to a feedback loop process overseen by suitable social and cultural moderation structures.

- **The arrangement of objects**: By nature, much of indigenous knowledge systems are unstructured, and not suitable for seamless application beyond their immediate context, and any such knowledge that does resonant within obvious economic parameters has been appropriated for commercial purposes. Therefore, arrangement is important, to avoid perpetuating the marginalisation of valuable material.

- **Integrity**: How any digital indigenous knowledge systems are managed

will have a central impact on the transmigration from context to wider application. A digital indigenous knowledge systems platform will depend on its integrity, as the material will initially have to be „pushed out' to potential users. The philosophical aspects of this characteristic also need to be recognised. It is imperative that the material is afforded similar status to other knowledge bases.

- **Chain of custody (ownership of objects)**: This represents one of the key elements associated with indigenous knowledge systems, especially when there are obvious commercial possibilities, such as rooibos tea, biopiracy, etc.

- **Context of production (preservation, access and reuse)**: Here the term „production' relates to the post-production of the digital material, that is, preservation, access and reuse. These post-production issues are, however, as important as other production issues, and should inform any activities associated with the capture of indigenous knowledge systems. The issue with *in situ* contextual issues has been mentioned above. However, taking lessons in terms of the context of production from SHAMAN will ensure that the model does not have any weaknesses in this regard.

While these broad characteristics represent the general focus of the SHAMAN project, the key goals of the project are as follows:

> „[I]ntegrating data grid, digital library and persistent archive technology; developing support for context representation and annotation, with deep linguistic analysis and corresponding semantics; and modelling of preservation process' (Borbinha 2010:17).

Despite the technical nature of the goals, the overall objective is „to deliver a reference architecture for the design and development of solutions for distributed

scenarios' (op cit:18). Developing a coherent interface between the digital *imbongi* and the SHAMAN project is beyond the present study and will be developed in the next phase. However, in a technological sense, the SHAMAN project constitutes the back-office considerations for the process that supports the digital *imbongi*. In effect, the interface between the digital *imbongi* and the SHAMAN project is the key characteristic of technauriture, namely the three-way dialectic between primary orality (*imbongi*, oral poet, orality, etc), secondary orality (digital users, virtual reality, etc), and technology (the SHAMAN project).

c   An Ontology for Preservation of Interactive Multimedia Performances

'Digital media and technology are becoming increasingly important for the performing arts, particularly with regard to technology-enhanced performance.' (Ng 2010:32)

Building on the issues raised and being addressed by digital preservation initiatives, issues pertaining to the capture and preservation of performing arts are most relevant. In a simplistic sense, this study is endeavouring to develop a suitable framework for the development of ontologies for digitisation of indigenous knowledge systems, with special focus on orality and oral traditions, in effect the challenges of the digital *imbongi*. Consequently, existing work on ontology for digital performing art will offer a suitable starting point, in a general sense. In this section, a brief assessment of the progress in this development will be explored.

With orally based performance, the initial challenge is how to retain the integrity when converting the performance into digital media. Consequently, the issue at hand is the conversion to digital material. Therefore, the situation facing interactive media performances has many of the necessary but not sufficient

conditions and processes for achieving this objective. Key to the relevant ontology in this regard is the management of metadata, or representation information. Metadata can be defined as information about information (Caplan 2003). Some may refer to metadata as tags. Effectively, what metadata does is to make accessing information more efficient, through an effective ontological framework. For example, a digital photograph may contain metadata that includes size, colour, date of creation, or an oral recording may contain the name of the performer, the length of the recording, the location of the recording, etc. Critical to the consideration of any metadata and ontological structure for orally based knowledge is the recognition that „representation information needs to be connected to the knowledge base of the designated community' (Ng 2010:32). Here the term community needs to be seen in the broadest context, from user communities though production to those entrusted with preservation and nurture.

With regard to interactive multimedia performances (IMPs), the European Union is presently running a test bed project, called CASPAR (WR: Cultural, Artistic and Scientific Knowledge for Preservation, Access and Retrieval). Again, the focus is strictly digital and carries little obvious focus on the preservation of indigenous knowledge systems. However, there are clear lessons that can be extracted for the issues at hand. The CASPAR framework is based on the Open Archival Information System (OAIS) reference model, providing a consistent set for concepts and terminology and a framework for the development of archival information and related standards (Ng 2010).

At this juncture, it would behove the discussion to evaluate the similarities between the definitions (as used by the CASPAR project) and to compare them with the definitions of a strictly orally based performance. Ng defines an interactive multimedia performance as follows:

> „[O]ne or more performers who interact with a computer-based multimedia system, making use of multimedia content that may either be pre-prepared or generated in real time, including music, manipulated sound, video and

graphics' (Ng 2010:32).

If this definition were expanded to carry a greater orality bias, it would read: A performance which is generated in real time with dynamic feedback loops from the recipient, with the addition of computer-based multimedia systems for recording and dissemination. The oral performance is *de facto* identical, in a generic sense, to an interactive multimedia performance. Consequently, the CASPAR framework will have lessons that need to be mobilised to support and address the challenges identified by the issues associated with the development of the technauriture paradigm.

Due to multiple dependencies, the preservation of an interactive multimedia performance requires a robust representation and association with digital resources. This can be achieved with an ontological approach that describes an interactive multimedia performance and its internal relationships in such a way that they support the preservation process (Ng 2010). Here again, the innate value of the digital creation process is seen as valuable in itself. The obvious question of what needs to be preserved is not addressed. This is a luxury that cannot be dismissed for indigenous knowledge systems. It is essential that any ontological developments address the creation of a suitable process for the valuation of knowledge.

According to Ng (2010), the capture representation information plays a significant role in providing access to an interactive multimedia performance (IMP), as it encapsulates the semantic information needed for the reproduction and comprehension of an IMP. Thus, the user has the ability to retrieve the digital files of an IMP, as well as comments and additional information on the IMP, for re-performance (Ng 2010). Here, in a sense, Ng is hinting at the key interface issues that are the focus of the technauriture paradigm. Secondary orality requires significant contextual metadata if the re-performance is going to approach an experience that will have a resonance beyond the real-time original

creation process.

It is clear that the issues regarding the creation processes share certain common elements between an essentially digital process and the oral performance, where the digital medium is often treated with superstition. A southern Siberian storyteller, Shoydak-ool a Tuva, is reputed to have said, „But I can't tell my story to that thing … I got to have an audience – I only tell my stories to people' (Harrison 2007:141). This feedback loop is an inherent challenge to the effective development and conceptualisation of the technauriture paradigm.

d   Digital Archiving Lessons from the Open Archival Information System (OAIS)

'As we move into the electronic era of digital objects, it is important to know that there are new barbarians at the gate, and that we are moving into an era where much of what we know today, much of what is coded and written electronically, will be lost forever.' (WR: Kuny 1998)

The irony of Kuny's sentiment is that as he talks of the „digital dark ages', he continues, „[I]nformation age technologies are essentially obsolete every 18 months' (WR: Kuny 1998). This short obsolescence cycle must be juxtaposed against the longevity of indigenous knowledge systems, which are handed down and evolve through countless generations. To a degree, the neglect of these indigenous knowledge systems reflects a particular type of opaque age, perhaps less dark, but considerably more naive.

As has been demonstrated above, extensive resources are being allocated to the problem of moving out of this digital Dark Age. Projects such as CASPAR, SHAMAN, CEDARS, PANDORA, and others are built on a critical reference

model. The Open Archival Information System (OAIS) reference model has been defined as follows:

> „[A] conceptual framework for an archival system dedicated to preserving and maintaining access to digital information over the long term. The purpose of the reference model is to increase awareness and understanding of concepts relevant for archiving digital objects, especially among nonarchival institutions; elucidate terminology and concepts for describing and comparing data models and archival architectures; expand consensus on the elements and processes endemic to digital information preservation and access; and create a framework to guide the identification and development of standards' (WR: Lavoie 2000)

According to Lavoie (WR: Lavoie 2000), an OAIS-type archive is expected to meet certain minimum responsibilities, namely:

- to negotiate and accept appropriate information from information producers;

- to obtain sufficient control of the information, to ensure long-term preservation;

- to determine the scope of the Designated Community;

- to ensure the information is understandable by the Designated Community, without the assistance of the information producers;

- to follow documented policies and procedures, to ensure that the information is preserved against reasonable contingencies, and to enable the information to be disseminated as authenticated copies of the original, or as traceable to the original; and

- to make the information available to the Designated Community.

The above offers a suitable structure for addressing the information cycle pertinent to orality, namely creation, acquisition, cataloguing/identification, storage, preservation, and access. Technauriture straddles all of these aspects through the three-way dialectic as indicated in the work of Bongani Sitole.

e   Accessing the Past from the Future

'Everything expressed by humans, in whatever form, arouses emotions in everyone who witnesses that expression.' (van der Sluis & Schouten 2010:45)

The essential ethos of the digital preservation movement is the need to ensure those future generations, and perhaps future *E-generations* especially, are able to access and use digital objects forever, effectively accessing the past from the future. Scholars from many disciplines have endeavoured to create suitable structures to allow contemporary humans to see as far back as possible, anthropologists and archaeologists being the most obvious. Already it is possible to pursue courses in digital anthropology (WR: University College London), and a quick search of words 'digital archaeology' on Google returns approximately 300,000 hits. The ubiquitous nature of the digital world is creating a new existential paradigm and changing the general focus of many disciplines. How long will it be before the traditional scholarly phenomenon of the field trip goes totally digital? In November 2008, a consortium of universities partnered with Google to re-launch the Rome Reborn project, „a digital version of ancient Rome as it appeared during the reign of Constantine the Great, specifically on June 21, A.D. 320' (WR; Powell 2009). Effectively, a representation of Rome at the height of the Roman Empire is now accessible at Google/Rome. However, although digitally impressive this three-dimensional portrayal of imperial Rome is culturally

barren, giving dominance, as it does, to the visual experience. Is this a suitable exemplar of the concept of accessing the past from the future?

Information activities have always tended to follow the path of least resistance. Recreating the way Rome may have looked is considerably easier than to re-enact the cultural cauldron that may have complemented these structures. Here, it is necessary to rely on the oral-to-text activities over the ages. The oral residue in many societies is being diluted (Metting 1994). It is imperative that the accessing of the past from the future effectively expands to include all aspects of human history.

Once abstract thinking became prevalent, the need arose for human beings to communicate across the ages. Until now, the accepted view has been that our ancestors underwent a „creative explosion' approximately 30,000 to 40,000 years ago, when they suddenly began to think abstractly and create rock art (Ravilious 2010). Using early rock art and other manifestations of abstract thinking, anthropologists tended to focus on the details of the drawings. Ravilious observes that the evidence of humanity's early creativity, namely their thought, was clear in the elaborate drawings. This bias on the visual appearance of the art resulted in the original discoverers ignoring some of the accompanying symbols. In fact, it is not hard to imagine that this oversight could have appeared totally acceptable at the time. As Ravilious observes, „When faced with such spectacular beauty, who could blame the visiting anthropologists for largely ignoring the modest semicircles, lines and zigzags also marked on the walls?' (Ravilious op cit:30)

Ravilious offers a coherent summary of the research undertaken by Genevieve von Petzinger, who set out to „compile a comprehensive database of all recorded cave signs, from 146 sites in France, covering 25,000 years of prehistory, from 35,000 to 10,000 years ago' (Ravilious op cit:30). What her research showed were 26 different symbols. As she observed, this is „pure fluke' (WR: McCulloch 2010). Von Petzinger commented as follows on her findings:

„It wasn't until I ran the data at the end, that I got shivers down my spine, because almost 70 per cent of the signs were being used 30,000 years ago. This whole theory of it starting out simply and getting more complex is wrong' (op cit WR).

The task of postulating even earlier dates for the emergence of abstract thinking among humans indicates how much there is still to be accessed from the past. It is imperative that all human history is linked into digital preservation activities to ensure that all that is still available and accessible is captured, as a matter of urgency.

The capturing, nurturing and harnessing of orality and oral traditions is a central tenet that the digital preservation discourse has yet to embrace effectively. Through the mainstreaming of technauriture the appropriate dialectic paradigm can facilitate the integrating of all things oral coherently into the debates and offer a suitable academic cloak for allowing orality to move beyond nostalgia and moving further to the periphery of human cultures. Mainstreaming the digital *imbongi* is essential to the embrace of humanity's past and sustainable future.

f   Software Preservation as Metaphor for IKS Preservation

'Software has many characteristics that make preserving it substantially more challenging than many other types of digital objects.' (Matthews et al. 2010:39).

The issues pertaining to software preservation offer many similarities when considering the preservation of indigenous knowledge systems. Software is, in effect, the language of the digital age. Hence, any attempts to address software preservation are effectively aiming to keep the digital languages alive. Consequently, software is the medium through which digital objects will be

115

accessed and secured for future generations. Software is similar to human languages, within all of the indigenous knowledge systems are embedded. But software is different from human languages in the following significant ways:

> „[S]oftware is inherently complex, normally composed of a very large number of interdependent components, and often forbiddingly opaque for people other than those who were directly involved in its development' (Matthews et al. 2010:39).

In terms of development issues, language and software share little in common. Language has evolved dynamically, while software development activities have, first and foremost, been built on overtly structural principles, and can generally only be accessed by the application of basic Boolean logic. So, in this sense, a „non-speaker' of software languages can negotiate the minefield of acquisition without any contact with people or persons „conversant' in the software languages concerned. In the case of a human language, learning a „dead language' presents the person attempting to acquire it with considerably more obstacles. However, it must be recognised that if a language has been documented, it is easier to recreate the language, than it is to recreate software from partial information, which can be a near-impossible task (Matthews et al. 2010).

With regard to complexity, human languages are perhaps less complex than software, given the wide operational and functional roles that software programs perform. Notwithstanding, both human languages and software have significant complexities, which are a focal aspect of the technauriture debate. When addressing the life cycle from oral performance to capture to digitisation and user experience, the full interface between language and software becomes a central tenet. Therefore, in the context of the present debate, technauriture effectively traverses the concepts of indigenous knowledge systems and software preservation.

Another aspect that links factors pertinent to the indigenous knowledge systems

debate and software is the issue of context. Much of the innate value of indigenous knowledge systems is inexorably linked to the context within which these knowledge systems exist and are applied. Similarly, software is highly sensitive to its operating environment. Preserving a piece of software therefore involves much of its context as well (Matthews et al. 2010). Therefore, for both indigenous knowledge systems and software, recognising the importance of context is essential for the preservation of these knowledge systems, since software embodies significant knowledge relevant to a specific operating context.

In the case of software, recreating context is a fairly static exercise with regard to tools, as the major issues pertain to „discussing the stages of retrieval, reconstruction and replay which need to be passed through to reproduce a usable performance of a software product' (Matthews et al. 2010:39). In a sense, it is a case of reverse engineering, assuming that the initial software development and utilisation process was not characterised by a preservation ethic. In the case of orally based indigenous knowledge systems, the challenge pertains to forward engineering of the context that is recreating the context of the oral experience at some future date.

g   Knowledge Management: Digital versus Indigenous

'The preservation of information in an unstable and rapidly evolving technological (and social) environment is a problem of great importance.' (Tzitzikas & Christophides 2010:41)

The forces driving digital preservation and knowledge management are purely economic. Modern economies are digital-dependent; knowledge workers across the globe are tethered to their digital accoutrements. Consequently, the management of digital knowledge is not a normative option, but an essential of the modern economic mosaic.

Such economic drivers are less obvious when it comes to indigenous knowledge systems. Commercial possibilities are embraced by the market and, in some cases, generate returns for the communities that embodied the relevant knowledge (Brush 1993). However, in many cases, the relevant knowledge is developed into profitable businesses for the multinationals that secure the rights. While this is a problem for the communities concerned, the overriding issue at hand is, partly relevant to matters pertaining to commercialisation but are predominantly related to knowledge which has resonance for general human well-being.

The CASPAR project identifies four focal topics regarding knowledge management, namely:

- **Intelligibility**. Here the issues of what is knowledge and how to preserve it are addressed. To tackle this issue, and to preserve the meaning of digital objects, CASPAR formalised the notion of intelligibility and provided guidelines, methodologies and components that can aid human beings in preserving information and knowledge (Tzitzikas & Christophides 2010:41).

- **Semantic Web evolution**. Evolution is central to any issues of preservation. The world evolves, and software and hardware evolve. This change presents several challenges for Semantic Web repositories (op cit:42).. In this context, the evolutionary characteristics of the Web need to be factored into the management of digitised and digital indigenous knowledge systems.

- **Provenance modelling and querying**. This presents perhaps the greatest challenge for the digitisation of indigenous knowledge systems; the CASPAR project recognises that this area presents a challenge too for material that has been „born digital'. „There is a need for a comprehensive and extensible conceptual framework that will allow provenance information to be integrated, exchanged and exploited within and across

digital archives' (op cit:42). Provenance is defined as „the place of origin or earliest known history of something, or a record of ownership of a work of art or an antique' (http://oxforddictionaries.com). Key to digitisation of indigenous knowledge systems, and consequently, central to the technauriture paradigm.

- **Automating the ingestion of metadata**. Creating suitable metadata is essential to the effective use of artefacts or digital material. Creating such metadata can be a laborious and time-consuming process. CASPAR has developed PreScan, which is a tool for automating the ingestion phase (op cit:42).

Each of these topics presents different challenges when it comes to the effective modelling of indigenous knowledge systems for digital development and manipulation. While technauriture addresses the overall dialectic, each of these topics will have to be addressed effectively to support a coherent and effective model for the digital *imbongi*.

The central theme of this study is harnessing the opportunities associated with the contemporary technological developments within a sustainable digital paradigm. This implies certain assumptions regarding the scope of the technological frameworks. Some would argue that this requires a comprehensive treatment of all things technical, with associated structures and architectures. These aspects are beyond the scope of the present material. However, it is necessary to offer some insight into the impact of technological developments on the coherence of oral traditions and oral transmission processes of indigenous knowledge systems.

It is customary to see all technological developments as advances. One of the most significant technological advances was the invention of the alphabet. Eric Havelock maintained that this was „one of the great leaps, a stroke of genius, like

the invention of fire or the wheel', and that it ensured that life in the Western world would never be the same again (Man 2000:20). Man (2000) maintains that it was the alphabet that allowed the ancient Greeks to lay the foundation of civilised discourse, as Europe and its descendent cultures came to know it. Man, in his embrace of the positive impact of all things alphabetic, tends towards hyperbole when he observes that the alphabet „springs from almost every aspect of the culture of advanced societies'. He crowns his veneration of the alphabet with the suggestion that „we should really declare ourselves to be a new sub-species: *Homo sapiens literariensis*' (Man 2000:25). Man's observations are, without doubt, accurate when addressing the contemporary situation in developed societies, but a balanced view needs to inform a longitudinal analysis of the impact of the alphabet on human society in general.

Abram offers a different perspective. He argues that „[w]ith the advent of the *aleph-beth*, a new distance opens between human culture and the rest of nature'. Although pictographic and ideographic writing „already involved a displacement of our sensory participation from the depths of the animate environment', the direct relationship between the images and what they depicted remained. The writing „still referred, implicitly, to an animate phenomenon, of which it was a static image' (Abram 1996:100).

Implicit in the difference between these types of perspective is the role that technology has played in the development of and the general well-being of human societies. How the alphabet emerged may hold key lessons for the manner in which technological developments could be used to address problems associated with disappearing languages, and the wider problem of indigenous knowledge systems.

Man, in his work on the emergence of the alphabet, offers three, as he calls them, Working Theories of Script Evolution, namely (Man 2000:82):

- In a writing system, complexity knows no bounds, and imposes none.
- A writing system will last as long as its culture lasts, unless changed by

force.

- New writing systems emerge only in new young ambitious cultures.

The evolution of the alphabet was not characterised by a coherent structure of social engineering, intellectual management and policy development. However, this organic process should be juxtaposed against an example of overt action in mid-fifteenth century Korea. Man (2000) recounts the story of Sejong, who ascended to the throne in 1418. Sejong was a benign ruler, who focused on the advancement of his people through the encouragement of scholarship and learning. However, he recognised that much of the material collected was not accessible to the general population (Man 2000). At the time, Korea had always been in the shadow of its more prestigious neighbour, China. Sejong observed that the sounds of their language differed from those of Chinese, and were not easily conveyed in Chinese writing. He was distressed by this, and designed a script of 24 letters, which he wished to have everyone practise at their ease and use to the advantage of everyday life. The system became known as *Hangŭl*, or the Great Script according to Man, there was „nothing like it in all the long and varied history of writing' (Man 2000:134).

The *Hangŭl* is used here to demonstrate that as early as the 15th century, an alphabet as a technology was developed and manipulated to serve as a tool for human development. Sejong had to overcome resistance from his Chinese-speaking „scholar-bureaucrats' (Man 2000:130), but he proceeded, and largely failed, due partly to a resistance from the conservatism of his society, as well as vested interests. Man observes:

> „Sejong was caught by a paradox. His alphabet was the brilliant product of a highly sophisticated society. But to succeed, it would have needed its society to be the exact opposite: a disadvantaged people with no conventions to reject' (Man 2000:134).

One of the obvious outcomes of the development of alphabets and writing was the marginalisation of all things oral by literate communities. Ong offers an interesting viewpoint of the historical relationship between orality and literature, with his disdain for the term „oral literature'. Ong observes:

> „[A] literate person cannot fully recover a sense of what the word is to purely oral people. In view of this pre-emptiveness of literacy, it appears quite impossible to use the term „literature' to include oral tradition and performance, without subtly but irremediably reducing these somehow to variants of writing' (Ong 1982:12).

Ong is correct in the essence of his thesis, and essentially this is a reality that the word is not an inherent part of the context of all human societies. It does serve to highlight the importance and relevance of the areas covered in the previous chapters. Ong effectively highlights the challenge that this study seeks to address through technauriture. In effect if the modern digital frameworks are to act as coherent vehicles for the mobilisation of orality and oral tradition it is imperative that oral material is applied in a productive and socially valuable manner that would support application of public resources.

Chapter 6

Copyright and Intellectual Property Rights Issues

This thesis shows that traditional knowledge including oral poetry and many genres of oral literature have been transported onto the global stage through the various developments of information and communication technologies (ICT) and the ubiquitous nature of the Internet. Essentially, this is a positive development, as it opens up many avenues for practitioners of indigenous knowledge. However, against these positive developments and opportunities there exist threats of abuse and the evaporation of the indigenous knowledge which has served human kind for millennia. These threats manifest through global dissemination that dilutes the role of context, which is an essential component of the knowledge in question, and the problems associated with the enforcement of copyright. In order to effectively address these threats, it is necessary to debate and negotiate rules of engagement which pertain to orality in the global technologized arena.

Despite the lack of obvious commercial value of much of the orality and oral traditions discussed thus far, the challenges associated with copying and copyright are essential if a suitable, viable and sustainable model is to be developed for the digital imbongi to find effective purchase. As has been demonstrated in previous chapters technauriture attempts to capture all the relevant issues and challenges associated with effective digitisation of orality. Not least issues associated with the protection of rights within that technological framework.

The term encapsulates the merging discourses related to technology, auriture and literature and consequently the copyrights frameworks. This merging represents itself through websites and the Internet, where one finds that the oral word has transported itself into literacy through book form, and then back onto

platforms that support performance and orality, allowing the book to be sold, and complemented by a performance by the author/performer, to advertise and demonstrate their skills through the use of appropriate websites and other electronic media.

The pervasive nature of technology is contributing significantly to a global culture of immediate access to information. In developed societies the consumption of information is contributing to „media overload', as the following can attest to: „I get sent a lot of music … I grab a lot of music from services … I stream radio … I run FreeDemon all day, and a Twitter desktop app. I catch something on iPlayer over lunch' (Ellis 2010:34) these media junkies are today's audience, pulling information towards them at an alarming rate. Within this cultural milieu, it is clear that orality, literacy and technology are developing a special relationship.

It can be argued that the original perspective of computers as machines is evolving to a view of computers as companions, facilitating the ability to speak, interact and even offer close to real-time language translation, thereby enabling communication to occur effectively. Already, the first generation of mobile dextrous social (MDS) robots, such as Nexi and KOBIAN, are offering new insights into the area of human-robot interactions (HRIs), which offers some sense of the transforming roles of computers (Sofge 2010). Early lessons from HRI studies have shown that „if you have a robot behave and move in ways that are known to enhance trust and engagement, the reaction is the same as it is with people' (Sofge 2010:26). The fact that the field of HRI is already receiving attention makes it even more important to enhance the focus of the interface between the performance poets and technology.

Even though the interaction of orality with technology is now firmly recognised, the notion of how copyright should be ensured in this global technologised arena has yet to be fully explored. The speed with which technology has developed has resulted in the cart being considerably ahead of the horse. For example, the lack of effective legal frameworks to address the introduction of technological

solutions for copying or tax regimes in virtual worlds has created a number of challenges. A similar situation is evolving in the field of robotics, where, as Sofge states, „the law is way behind' (Sofge 2010:27) While orality and the rights of performers may not present the wider and potentially more destructive issues pertinent to the field of robotics, the need to protect rights and harness the knowledge embodied within orally based cultures is as important to contemporary human cultures.

a. The Copyright Landscape

Any coherent debate regarding the phenomenon of copyright requires a brief scan of the wider debate regarding the copyright and creative artistic rights. The reality of the human relationship with information is captured well by Papworth:

> „Human beings take information and media. Consume it, mash it up, and spew it back again is what we *do*. We have a fine tradition of nicking each other's content, from the earliest times of tribal campfires, embroidering hunter and warrior stories and oral traditions, through to Plato deliberately putting his own words in Socrates' mouth' (WR: Papworth 2008).

Papworth's observation is an aphorism that could read „Ignoring copyright is what has brought humanity to its present place'. It is clear that the present digital copyright issues are not likely to disappear, and are likely to become even more widespread.

In fact, copyright is still in its infancy, and could arguably enjoy a very limited impact on the overall history of human society when compared to the history of copying. According to Tallmo (WR: 2005), the world's first copyright law was the English Statute of Anne 1710, with the heading „An Act for the Encouragement of

Learning'. In terms of this statute, the author enjoyed exclusive rights, which were limited to a maximum of 28 years from the date of publication. Tallmo observes that even 300 years ago, the debate was characterised by „a deep fundamental disagreement among the legislators' (WR: Tallmo 2009). Consequently, even at its birth, the phenomenon of copyright was an area for debate and contention, and continued to be over the centuries. Tallmo offers the following description of the role of copyright held by Abraham Kaminstein, a former head of the US Copyright Office:

> „The basic purpose of copyright is the public interest, to make sure that the wellsprings of creation do not dry up through lack of incentive, and to provide an alternative to the evils of an authorship dependent upon private or public patronage. As the founders of this country were wise enough to see, the most important elements of any civilization include its independent creators – its authors, composers and artists – who create as a matter of personal initiative and spontaneous expression rather than as a result of patronage or subsidy' (WR: Tallmo 2009).

What is clear from the definition is the focus is on protecting the rights of the creators, and their rights to independently earn a living from their intellectual endeavours, the essential nature of the need to embody these rights is beyond dispute. However, these rights need to be balanced in the face of the view that „information wants to be free' (Brand 1987:202) and the increasing desire on the part of users of information to ignore and violate copyright freely.

Given the areas covered above, it is hardly surprising that the phenomenon of copyright is characterised by debates and interpretations that are often in the eye of the copier or the artist being copied. In order to adequately locate the debate in the current context, Templeton (WR: Templeton) offers a coherent and succinct list of what he calls „the 10 big myths associated with copyright', namely:

1. If it doesn't have a copyright notice, it's not copyrighted.
2. If I don't charge for it, it's not a violation.
3. If it's posted to Usenet, it's in the public domain.
4. My posting was just fair use.
5. If you don't defend your copyright, you lose it.
6. If I make up my own stories, but base them on another work, my new work belongs to me.
7. They can't get me. Defendants in court have powerful rights.
8. Copyright violation isn't a crime or anything.
9. It doesn't hurt anybody – in fact, it's free advertising.
10. They e-mailed me a copy, so I can post it.

Although the list reads very informally, it does offer an effective summary of the general attitude held in many quarters towards the phenomenon of copyright. The copyright debate, at its core, is a minefield of contrary viewpoints. The material covered above offers only a small taste of this area. This material has been offered in an attempt to offer a sense of where orality is endeavouring to locate itself, when practitioners and researchers aim to wrap oral traditions in a blanket, that will protect any commercial returns that could and should, as with conventional material, flow to the performers. As Papworth contends, „A passive, rigid, copyright-controlled society not only goes against human nature, but stunts us as an evolving species in ways that we cannot yet possibly understand' (WR: Papworth 2008).

Papworth's observation notwithstanding, the digital environment has created new challenges in terms of copyright frameworks. This has raised the stakes in terms of legislative and industrial responses, most notably through the Digital Millennium Copyright Act in the USA. The act was the result of a treatise signed in December 1996 at the World Intellectual Property Organization (WIPO). The Digital Millennium Copyright Act (WR) has the following stipulations:

- It is a crime to circumvent anti-piracy measures built into most commercial software.

- The manufacture, sale, or distribution of code-cracking devices used to illegally copy software is outlawed.

- The cracking of copyright protection devices is permitted, but only for the purposes of conducting encryption research, assessing product interoperability, and testing computer security systems.

- Anti-circumvention provisions are exempted in the case of non-profit libraries, archives, and educational institutions under certain circumstances.

- Internet service providers are not liable for copyright infringement for simply transmitting information over the Internet. However, Internet service providers are expected to remove material from users' websites that appears to constitute copyright infringement.

- The liability for copyright infringement of faculty members or graduate students at non-profit institutions of higher education is limited when these institutions serve as online service providers, and under certain circumstances for example when material is used for limited pedagogic purposes only.

- „Webcasters' must pay licensing fees to record companies.

- The Register of Copyrights, after consultation with relevant parties, must submit to Congress recommendations regarding how to promote distance education through digital technologies while „maintaining an appropriate balance between the rights of copyright owners and the needs of users'.

- „Nothing in this section shall affect rights, remedies, limitations, or defenses to copyright infringement, including fair use.'

While the Act is biased in terms of software, it carries lessons that can be applied to the oral traditions and the digital *imbongi*, most notably the issue of

„webcasters', and the balance between owners of copyright, on the one hand, and users, on the other.

In terms of the context in South Africa, the country is a member of the International Convention on Copyright, which is commonly known as the Berne Convention, dating back to 1886. South Africa's membership of the Berne Convention has resulted in the creation of certain copyright laws. The South African Copyright Act No. 98 of 1978, with its 1984 and 1992 amendments, remains the basis of South African copyright law. This indicates that the South African legislative environment has yet to adequately tackle the new digital milieu, with its slew of issues.

b. From Copyright, to Copyleft, and Open Source

Effectively addressing the issues associated with embodying the rights that should accrue to the digital imbongi is fraught with many pitfalls that are common to all media forms, such as piracy, duplication for commercial use, etc. The dearth of suitable legal structures has largely been driven by the fact that orality, being sound-based, is transitory in nature, and, as Ong observed, „[s]ound exists only when it is going out of existence' (Ong 1989:32). While Ong is strictly correct, the existence of suitable recording technology at the time of his observation makes his observation largely irrelevant, at a time when many recording artists exist and enjoy significant incomes from their performances. In the case of orality and orally based performances, the *in situ* and contextually based nature of these performances has had little transmigratory value, as compared to, for example, a Rolling Stones or Beatles recording. It can be argued that Ong's observation implies the contextual aspects of sound production.

As addressed above, the changing technological milieu, with a greater scope to capture sound and context, coupled to a growing interest in and acknowledgement of the value of orally based knowledge systems, has changed the potential and currency associated with such systems. It is important to acknowledge the increasing consumption of indigenous cultural forms. In this regard, Thomas and Nyamnjoh contend as follows:

> „[E]ven sectors previously at the margins of the profit motive, such as indigenous cultural forms – music, weaves, symbols, artifacts, knowledge of natural resources, dance steps, motifs – are steadily becoming privatised and have become part of the circuits of knowledge production, distribution and consumption' (Thomas and Nyamnjoh 2007:14) .

Against this backdrop, the framing of rights, especially digital rights, becomes a significant hurdle for researchers to address, for academic purposes, and for supporting the effective commercialisation of performers' rights. Moreover, through the development of effective models and structures, both the innate social and commercial values of oral poetry can be extracted and developed to the benefit of all the relevant stakeholders. In order to promote this development, it is essential to interrogate customer strategies for the protection of the rights of performers, artists and writers. As outlined above, orally based performances shared many common elements with more „conventional' commercially based artistic activities. Further, many of the challenges pertinent to orally based material resulting from technological developments are now shared across all artistic areas. From peer analysis to digitisation of books by Google, the rights of the artists are under threat. The irony, of course, is that the oral traditions and practices that have supported humankind for millennia have only recently taken their place alongside more recent commercial performances. Effectively, the debate is now one that straddles all artists, irrespective of artistic genre, from Abba to oral poet Zolani Mkiva.

The pillar for protection of artistic endeavours has been the International Convention on Copyright. This legislation gave birth to the phenomenon of copyright. Copyright has been largely respected, due, in no small part, to the lack of effective technological structures that make copying an arduous task.

With the emergence of technologies that promote effective copying and easy dissemination, the debate around copyright has taken centre stage. Historically, the debate has been predominantly dichotomous; one was either a supporter of the development of copyright, or desirous of setting information free. Technology has fundamentally altered the landscape, and opened what could be classed as further grey areas, necessitating a widening of possible solutions, compromises and/or creative development strategies. The Digital Millennium Act is one example of the legislative response. However, as indicated, there have been varying reactions across stakeholder groups.

Similar to the situation that has dogged copyright, the concept of open source is also open to interpretation. According to the Open Source Organization (WR), the concept „open source' does not simply refer to making the source code freely available, but must also meet the following criteria:

- Free redistribution – there must be no restrictions on reuse or reselling
- Source code – the programme must include the source code
- Derived works – they must allow modifications
- The integrity of the author's source code – the author's source code must permit distribution of software built from modified source code
- There must be no discrimination against persons or groups.
- There must be no discrimination against fields of endeavour – the programme must be able to be used in any field.
- Distribution of licence – rights attached to a programme must apply across the board
- A licence must not be specific to a product.
- A licence must not restrict other software.

- A licence must be technology-neutral.

While some of these criteria may seem technical in nature, the overall sentiment is to support a process that promotes the development of software solutions, through harnessing the creative energies of the widest possible community.

Copyleft is a graduation on the open source concept, in that it aims to set information free, while ensuring that the original author receives the requisite credit. According to Copyleft (WR), „The Copyleft concept was originated by the GNU project', with an obvious play on the the word "copyright", with the phenomenon of copyright, in effect, restricting users' rights. By contrast, Copyleft has been designed „to maintain and protect a user's rights' (op cit). According to the definition, Copyleft essentially includes two freedoms, namely „the freedom to acquire the software without paying for it', and „the freedom to modify and redistribute software' (op cit).

Although the concepts of open source and Copyleft predominantly address software, their applicability to orality is important, as orality is, in effect, human cultural software, with a combination of human collective experience and performers' creativity. If a balance is to be struck, coherence will have to be developed between the commercial and social implications of the movement of orality into the technological environment. On the one hand, commercial implications need to be addressed, to ensure that the art of the oral performer continues and prospers. On the other hand, social implications need to be addressed, if the millennia of human knowledge and experience are to make an effective transition into the digital realm.

c.   **Case studies of Technologized Performers**

Although the challenges associated with the embracing of technology by oral performers are extensive (sound, context, feedback, etc), it has not prevented some from becoming adept at harnessing the innate potential offered by such technology. In South Africa, there are a number of examples where such an embracing has been effectively achieved. Examples include Zolani Mkiva, spoken word artist Lebo Mashile, and story-teller Gcina Mhlophe. Recently, Zolani Mkiva and Lebo Mashile enjoyed a central role in FIFA's World Cup draw in Cape Town (4 December 2009 – SABC 1). These artists have also made themselves available to perform at functions, and Gcina Mhlophe is very active in the production of stories and other media. The traditional payment of a cow and a bag of maize by the chief have now been replaced by contractual agreements and agents that represent performers.

Perhaps the most poignant example of the evolving nature of age-old art forms, such as storytelling, is evident when it comes to the Nokia Connected project (www.nokiaconnected.com), where the cellphone company Nokia encourages users from Nigeria and South Africa to upload stories that are related to the use of Nokia products. Users thus connect and share their experiences, much as our ancestors would have shared their stories, although, in this case, within virtual walls. It is, in effect, a virtual sharing of Nokia tales, while offering Nokia an innovative advertising outlet for their product suite. Goldstuck (1994) has also demonstrated, through his research of urban legends in South Africa, the movement of orality onto the information highway.

The opportunity for oral art to be commercialised is evident on some performers' websites, where the user is able to book performances, purchase books and related published material, or secure the artist's services as a master of ceremonies, or compère (see www.lebomashile.co.za and www.poetofafrica.com). This „genre-crossing', and what Veit-Wild (Veit-Wildl 2009:4) (citing Gehrmann/Pruschenck 2009) characterises as „transdisciplinary and inter-transmedial', is encapsulated in the introduction to Lebo Mashile, where she is referred to as a „poet, performer, actress, presenter and producer'. This is

also true of Gcina Mhlophe, who is referred to as „Poet, playwright, performer and South Africa's favourite storyteller'. This forms part of what Veit-Wild refer to as „a new global transmediatic culture' (Veit-Wild 2009:4). These websites all contain eclectic, cross-disciplinary approaches and technological innovations, from podcasts, visual performances, examples of poetry, information on publications and performances, and other material. The website is now literally the „window' through which we view oral poets, their lives, history, performances, and publications. It is, once again, through the technological page that the poet comes to life and offers him or herself for critique through the paradigm of technauriture, while exploring and developing his or her commercial viability. It is here that the digital imbongi is coming to life.

That the oral poets and their orality have gone global is evidenced by the awards garnered by Zolani Mkiva. These are listed on his website and are represented as milestones in his poetic career. His accolades include performances and awards in Germany, Libya, Ireland, Brazil, Turkey, France, and Uzbekistan. Much as S.E.K. Mqhayi became known as *imbongi yesizwe jikelele* (the poet of the whole nation) in South Africa in the early 1900s, Mkiva now refers to himself continentally, and perhaps rather ambitiously, as the „poet of Africa'. This self-proclaiming nomenclature is also evident in his Internet domain name, namely http://www.poetofafrica.com. If he is to graduate beyond this position, his next stop is likely to be „poet of the world'. This begs the question of what criteria such poets should be judged by when they assume titles such as these. Whichever criteria oral poets are judged by, there can be little doubt that a key criterion will be their audience.

Digital performers now have access to a worldwide audience, and perhaps through a new code-switching language idiom, namely globalese, they will become accessible to a growing swathe of digital users. In keeping with this new idiom, Mkiva's poetry can include up to seven languages in a single poem, to ensure that the local appeal also carries some accessibility to wider audiences.

c. The *Verba Africana Series*: Towards a Model?

From the last section it is clear that there is extensive potential to harness the digital technological frameworks to serve all stakeholders with an interest in the movement of orality into the new reality. However, the hurdles are many, and with the state of the various debates, no model has yet yielded a clear road to a possible solution. Perhaps the groundbreaking work in terms of the challenges of technauriture is the *Verba Africana Series* at the University of Leiden in the Netherlands, as part of the *Verba Africana: E-Learning of African Languages and Oral Literatures: DVD and Internet Materials*. This project aims to document African oral genres (poems, narratives, songs, etc) as a resource for both teaching and research. Through the project, a number of universities across the European Union have cooperated to develop a DVD and web resources, which include Ewe stories and storytelling from Ghana, combined with Taarab and Ngoma performances.

The technauriture being developed at Leiden therefore goes beyond the work of an individual performer and begs the question as to what the future holds for technauriture as an analytical framework. Technauriture is, by definition, dynamic, and unlike the static nature of the alphabet, offers a conceptual structure that can and does evolve with the changing nature of technology. For example, as greater value is ascribed to orality, more centralised sites are likely to develop across the world, at selected institutions which specialise in documenting, preserving and disseminating various aspects of material within the framework of technauriture. This will facilitate further interaction between local and global literatures within a coordinated system, with a concomitant recognition of the innate value of much of the local knowledges to the world community.

An example of research in this field is the comparative case study on creativity and the adaptation of new media in Southern and East Africa being undertaken by Veit-Wild (Humboldt University) and Fendler and Wendl (University of

Bayreuth). Essentially, this study addresses the artistic, cinematic and literacy practices in the digital age in terms of the creative framework in these regions. Furniss and Merolla have noted that there are currently only a small number of experimental projects where the new technological documentation and research methodologies are being explored (Furniss 2006, Merolla 2009).

The important issues that these digitisation initiatives do raise is that for the effective classification of oral material, it is necessary to not only capture the textual content, but also the visual performance, to ensure that the metadata fields are adequately able to capture all the relevant aesthetic qualities of the performance. In relation to this thesis and the work that has been completed at Rhodes University on the Bongani Sitole work, this would require the infusion of video material.

In terms of other initiatives in South Africa, there is clearly a slow maturing of the technauriture interface between national literatures and global literature, for example, www.litnet.co.za contains areas such as *Isikhundla Sababhali* (The Writers' Den) and *Phezulu* (From Above), which publish isiXhosa and isiZulu works, respectively. These areas include traditional poetry, but only in the written form. These all have the potential to develop the digital presence of African poets and offer a new channel for this expressive art form and give credence to the vision of effective location of the digital *imbongi*.

The growing recognition of the framework of technauriture is further evidenced by the incorporation of oral poetry into Microsoft programmes. This is a significant step towards the technological mainstreaming of orality, and should be embraced by researchers. In the case of Microsoft, the rights to a small selection of Sitole's work, namely a praise poem in honour of Nelson Mandela, were sold to the company for use within its software suite. The rights cost the company the „princely' sum of $350, but perhaps less significant than the low cost was the milestone of praise poetry finding a home in the behemoth that is MS Windows and MS Office.

Increasingly, technology is opening up the field of oral literature in terms of commercialisation of the discipline in relation to the emergence of the true global village. With technauriture as an analytical framework, it is important that the rights of the performers are protected contractually, while not detracting from the innate social and cultural value of their work.

e   Intellectual Property, Indigenous Knowledge, and Oral Literature

In order to develop suitable structures for effective valuation of oral material, it is imperative to address the wider philosophical question of intellectual property rights, and the relationship between such rights, indigenous knowledge, and orality. Despite the discussions above, which have covered general issues of copyright, Copyleft, and open source, and highlighted the experiences and examples of technauriture in action, it is necessary to briefly engage the question of why any of this material is of value.

Masoga (2007) quotes Clause 143 of the New Partnership for Africa's Development (NEPAD), which states the following:

> „[I]t is essential to protect and effectively utilise indigenous knowledge that represents a major dimension of the continent's culture, and to share this knowledge for the benefit of humankind. The New Partnership for Africa's Development will give special attention to the protection and nurturing of indigenous knowledge, which includes tradition-based literacy, artistic and scientific works, inventions, scientific discoveries, designs, marks, names and symbols, and undisclosed information from intellectual activity in industrial, scientific, literary or artistic fields. The term also includes genetic resources and associated knowledge' (Clause 143, p. 48 NEPAD).

This is a commendable objective, and unlikely to draw any opposition from any quarter. However, this must be contextualised in an environment where even „[c]ulture too has become fair game in the business of commoditisation' (Thomas & Nyamnjoh 2007:14). Although such rhetoric carries a pejorative underpinning, which inevitably accompanies the concept of commoditisation, the negatives should not be allowed to cloud the opportunities that are presented by the changing milieu. With such activities comes an opportunity for commercialisation, which must be embraced if certain cultural traditions and practices are to be maintained, or even flourish and grow. The colonial legacy, coupled with less than equitable exploitation of indigenous knowledge systems, does impact on how some choose to engage with opportunities. In the case of USAID activities in India, Thomas and Nyamnjoh make the following observation:

> „[T]he very fact that USAID has contributed to forty percent of the costs of setting it [the National Bureau of Plant Genetic Resources in India] up in return for which American scientists have access to seed and adapt for research … indicates the extent to which aid and bio-prospecting have reinforced the terms of neo-imperial conquest' (Thomas and Nyamnjoh 2007:15).

This example may represent a neo-imperial activity, but is really just a continuation of commercialisation. Aid has been widely criticised as being a vanguard of commercial activities (Perkins 2008) Rather than allowing ourselves to fall into political rhetoric and accusations, technauriture as a paradigm challenges practitioners to ensure that the dialectic can be managed to the mutual benefit of all relevant stakeholders. However, this observation should not be read as a dismissal of the sentiments offered by Thomas and Nyamnjoh (2007), but rather as a caution not to allow the debate on intellectual property to fall into the myriad of political discourses that surround the concept.

Technology tends to be politically neutral at least when it comes to the development of the next technological breakthrough. These developments must be mobilised to serve the interests of the wider community when it comes to the issues of orality. But Thomas and Nyamnjoh do offer the following succinct framework, which should inform thinking regarding intellectual property:

> „Not only does the current intellectual property regime championed by global capitalism privilege the individual over collective ownership, it is informed by a legitimacy predicated upon hierarchies of knowledge, creativity, values and humanity that, in the case of Africa, date back to the beginnings of unequal encounters with Europe' (Thomas and Nyamnjoh 2007:17).

In this context it behoves the discussion to address what it is that qualifies as intellectual property. According to Morolong, the World Intellectual Property Organisation (WIPO) states that intellectual property rights relate to the following (Morolong 2007:50):

- Literary/artistic and scientific works;
- Performances of performing arts, phonograms and broadcasts;
- Inventions in all fields of human endeavours;
- Scientific discoveries;
- Industrial designs;
- Trademarks, service marks and commercial names and designations; and
- Protection against unfair competition.

Historically an analysis of this list will see orality and oral traditions being limited to the performance arts with little value beyond this initial performance. This as

has been discussed is the kernel of the challenges associated with the digital imbongi. Again technauriture is a significant step in the process of widening the innate value of the orality and oral traditions.

Interestingly, Morolong captures some of the essential challenges that are raised in terms of orality, when he makes the following observation:

> „Folklore, unlike intellectual property, is designed not to confer economic benefits on individual creators, but intended to be exploited communally by the community which owns it' (Morolong 2007:64).

The community ownership issue opens a significant area of debate, which is central to the effective modelling of orality. Folklore represents one part of the wider genres that fall within the ambit of orality. A widening into the concept of indigenous knowledge systems adds to the challenges.

According to Moahi, indigenous knowledge has the following unique characteristics (Moahi 2007:72):

- Any one single individual does not own indigenous knowledge, because it is a product of the culture, tradition and way of life of a community. It is thus community-owned;
- It is usually passed on orally from generation to generation. It is not codified or documented anywhere, except in the minds of the community and the community's knowledge custodians, such as chiefs, traditional doctors, etc;
- It has the potential to provide economic returns, either to the community that owns it, or to the individuals who may have taken it away from the community for meagre economic gain, or through some other fraudulent means. It is thus a very valuable resource. This has promoted more debate on the intellectual property rights of indigenous knowledge.

In a sense, this captures the kernel of the matter at hand. Technauriture encapsulates a plethora of interfaces, as the oral word becomes the technologised word. The challenge lies not so much in the capture of the word, as it once did, but rather in the valuing and nurturing of the word from utterance to recording to the received experience, which may be far removed from the original context.

The transdisciplinary and transmedial may seem chaotic to the untrained eye, but it is incumbent on researchers to recognise that the challenge lies in the effective recreation of context, coupled to a coherent valuation model that will promote the technauriture paradigm, and establish the seamless interface between intellectual property rights, indigenous knowledge, and the world of the oral traditions. However, what is important to acknowledge is the inherent contradiction between intellectual property rights and indigenous knowledge, in that the former represents the manifestation of rights in the form of a „propertisation‟ sense, while the latter is, essentially, collective property (Moahi 2007).

These areas call for and have garnered much debate. However, what is pertinent to the present discussion is the need to balance the issue of intellectual property rights, either individually or communally, and indigenous knowledge, which, by definition, must be communally owned. In general, there is a pressing need to ensure that intellectual property rights are coherently developed for indigenous knowledge, since all communities must enjoy the following rights (Moahi 2007:73):

- The right to own and control one's own knowledge;
- The right to prevent and control commercial use of that knowledge;
- The right to benefit commercially;
- The right to be acknowledged and attributed to the knowledge; and

- The right to prevent derogatory, offensive and fallacious use of the knowledge.

Key to this is the role of orality and, more specifically, the oral performer/digital imbongi. Without performances, the ability to control orally based knowledge disappears. This points not only to the importance of the knowledge base *per se*, but to the key requirement, which is to ensure that there is a commercial element to maintaining the oral tradition as a vocation, or at least as a viable calling. This can only be achieved through the creation of suitable value systems that value both the product (the content) and the process of orality in indigenous communities.

f   Google versus the Rest

No discussion of contemporary copyright issues would be complete without a brief analysis of the Goliath-versus-Goliath fight that pits Google against the structures of what has been called „traditional media'. The key focuses of the battle are the scanning of books, the hosting of content on YouTube, and generally free access to the world's information. A full analysis of the arguments, legal actions and other results of these differences between large media players is beyond the scope of the present discussion. However, a summary of the book scanning issue will offer a suitable backdrop for locating and developing a model for oral poetry and orality in general.

In the case of books, Google has embarked on a project to digitise the world's books. This has obviously riled many with a commercial stake in the world of publishing. Google's defence has a ring to it that has accompanied the use of copyrighted material since its introduction, namely that of „fair use'. Google's

claim is that „it would merely show „snippets, which it claimed was permissible under the fair use clause of copyright law' (Auletta 2010:123).

Here the issue of what constitutes a snippet opens a fissure that is reminiscent of the cliché „How long is a piece of string?' It does not require a wide stretch of the imagination to envisage a snippet meeting the needs of an academic research investigation, or offering interested readers sufficient information to obviate the need to purchase the book. Google does not offer a clear definition of what constitutes a snippet, and, unfortunately, „the rule of thumb is fair use involves only enough text to briefly explain a book or briefly quote from an article or song' (Auletta 2010:123).

The issues at hand are myriad, from the economics of digitisation of the world's information, to the rights of publishers and authors, to the rights of users. Kevin Kelly of *Wired* magazine argues that authors and publishers have a „copyduty', which should allow their works to be searched. As Auletta observes, „Google was offering to pay the cost of moving and scanning the books; what publisher could refuse that offer?' (Auletta 2010:124). Key, of course, is the definition of a snippet. In the case of a novel, a snippet is unlikely to detract from the overall experience and value of the book in question. However, in the case of a reference book, it is obvious that a researcher can extract value from key snippets (op cit).

John L. Hennessy of Stanford University, who is a Google board member, holds the following view:

> „We need to rethink our copyright framework, which is still a remnant of the past. In the digital age … why should the library buy a physical copy of a book? ... [T]hey cost too much to store … and they're hard to search' (Auletta 2010:127).

The obvious between-the-line reading of this comment is Google's agenda. Tim Wu of Columbia University is more robust in his observations: „The Web is

always about copying, but copyright law is all about making copying illegal'
(Auletta 2010:127). This disjunction is the key area where a balance has to be
struck. Orality researchers are now required to effectively locate material
produced within immature technological contexts within the wider technologically
rampant infrastructure, which will invariably bring such material into the Google
debate.

g   Adapting Copyright Laws

Technauriture has created a dynamic analytical framework for conceptualising
and engaging the myriad of challenges associated with the technologised word.
Earlier an attempt has been made to offer the context within which the debates
are presently manifested. In order to support the evolution of a vibrant and viable
model for orality, the lessons from Copyleft and open source, while
predominantly focused on software and software development, must be
garnered, while at the same time tracking and engaging in the drive of Google to
make information readily available.

In effect, it can be hypothesised that any model will have to have a sort of
transdisciplinary, ambidextrous (copyright/copyleft) characteristic. Further
research in this regard is required. This will ensure that the model that is
structured will meet the individual needs of the artists, mobilise the innate value
of technauriture for the community concerned, and establish frameworks that will
allow technauriture content to be nurtured and developed.

h   Guilty as Charged: A Way Forward?

The current context is characterised by a sort of technological dissonance, from researchers who have recognised that there is extensive scope and opportunity to harness technological solutions, on the one hand, to oral practitioners, on the other hand, who are diverse in nature and have differing technological abilities. This shows the pressing need to develop a coherent and simple model. Here, „simple' means „with limited technicality'. The model should be predicated on the belief that all practitioners have limited technical expertise. The present dispensation is less than systematic, and has led to a situation where oral material has been used in a myriad of ways, leading to a situation where, in effect, many have been guilty of using material without ensuring that suitable compensatory structures have been in place and/or that the full commercialisation potential has been exploited. The former situation has implications for oral practitioners, and oral tradition as a calling or vocation, and the latter has longer-term implications for the nurturing and development of orality. This guilty-as-charged sentence is levelled, not because of suspicion of any rampant premeditation on the part of the protagonists, but rather as a rallying call for all to apply their minds to the development of a viable and effective model.

If such a model is to be created, it will need to have the following characteristics:

- It should have limited back-end technical requirements – oral practitioners should need limited technical skills to use the model;
- It should have suitable e-commerce structures;
- It should have effective methods for the valuation of uploaded material.
- It should have intuitive user interfaces – the material such be accessible to those who wish to make use of it, that is, teachers, librarians, etc.
- It should support material templates – to allow oral practitioners to add value to their material, that is, lesson plans, information sheets, etc.

- It should have audiovisual and other tools to as effectively as possible recreate the „in-situ' context.

The above list is unlikely to be exhaustive, and as other researchers engage in harnessing technology, the emerging model will, no doubt, start to approximate a structure that will best serve the requirements for orality to be effectively transported into the digital realm. The case study presented in chapter 4 serves as an example of how such a model could begin to develop.

Chapter 7

Conclusion

'Many thousand years of history of a culture are still to be told. This is only just the beginning. Now I guess we'll have to work it out.' (Freedom, Yothu Yindi – Aboriginal Band)

The study has attempted to capture the essence of the issues pertaining to orality and oral traditions and locate the digital *imbongi* within the technauriture paradigm. It is clear that it may be feasible to create a viable and effective model for the capture and dissemination of indigenous knowledge systems. As the case study has demonstrated, oral material can be adequately captured in two-dimensional ways, and through effective teaching, a shadow context or a limited recreation of the original context can be created. Further, it has been shown that other oral practitioners are developing their digital presence in a non-systematic manner.

Arguably, it is access to technology that creates and encourages a global culture of immediate access to information. From the above, it can be seen that orality, literacy and technology are developing a special relationship. Performance poets are taking advantage of this for technologized orality, thereby giving rise to what has been termed technauriture as it has been used in this thesis.

The interaction between orality and literacy is now more complex than one would expect. It would seem to be dependent on the individual performer and where they find themselves on the oral-literate continuum, as well as the extent to which they choose to allow these forms to interact with modern technology. Hofmeyr (1993) rightly points out that there is an ‚appropriation' of the oral into the literate, and the extent of this process depends on the individual performer. This ‚appropriation' is now often taken one step further, namely, into the arena of technology. In fact, those extralinguistic elements, which are often lost in the

transmission of orality into literacy, can be recaptured through technology, such as when sound bites or video clips are uploaded. The reaction of the audience, the performer's intonation, voice quality and emphasis, the effects of rhythm, context and speed of performance are lost in the written version, but can once again come alive through the technologised version. This renders a performance of differing impact and intensity, a performance based in technauriture.

The interaction between orality, literacy and technology is, then, more complex than meets the eye. It is dependent on individual performers and where they find themselves on the oral-literate-technology continuum, as well as the extent to which they are able to allow these forms to interact. The difference between individual poets further complicates the debate surrounding appropriate literary criticism of transcribed oral texts (Yai 1989). Added to this would now be a literary criticism which incorporates aspects of technology. The dialectic between print, popular performance, technology and primary orality differs, both in terms of individual performers, and in terms of the culture-specific community of, for example, Bongani Sitole's world, as described in this thesis.

In their attempts to remain relevant amid socio-economic, political, and recent technological changes in South Africa, many *iimbongi* have shifted away from those chiefs that were initially associated with apartheid, to those chiefs that remain relevant in the contemporary political South African landscape, for example, Nelson Mandela. Directly linked to these changes is the fact that the power bases from which the *iimbongi* drew in the past have changed. The modern *iimbong*i are attracted to power bases which represent the interests of the community, the ANC, President, Jacob Zuma, religious organisations such as the Zionist movement, as well as trade unions such as Cosatu. In research conducted by Vail and White (1991), the question of poetic licence in southern African poetry produced within differing power structures has been discussed. Vail and White conclude that it is not the poet that is licensed, but the poem. It is the poem that is able to defy authority and to criticise it. However, it would seem that if the power of the poet were curtailed, then so, too, would be the power of

the poem. The power of the *imbongi* should rather be given a holistic interpretation in terms of the tradition of oral poetry itself, with all its contextual and ever-changing technological facets, rather than in relation to one aspect of the tradition.

In adapting to changing power bases, *iimbongi* such as the late Bongani Sitole have proven the adaptability of culture and traditions in the face of drastic societal, political and technological changes in southern Africa. In the midst of societal change, the voice of the *iimbongi* links the traditions of the past to new directions and visions of the future. This evolving nature of the *iimbongi* offers a significant insight into the wider challenges that orality and oral traditions in general face, coupled to the fact that wide swathes of the human experience and knowledge continues to reside in societies that are still predominately orally based.

The need to develop and harness indigenous knowledge systems across the developing world is a central aspect for the maintenance of cultural identity, while widening exposure to the traditions and customs of indigenous societies through technauriture will ensure that the momentum of globalisation is of benefit to all the world's communities. The Sitole project has allowed the model to embark on a road that will see the creation of a vibrant and effective open source structure to support the collection, collation and utilisation of historical treasures. The work with Bongani Sitole, while honouring his life and his work, it also helps to bring back to life and to preserve, through technology and the written word, his life and offers a very important insight into the South African socio-political history for future generations to access.

In this study, the term technauriture has been used to highlight the complex nature of oral literature in the contemporary global reality, as indicated, for example, in the *Verba Africana Series* being developed at the University of Leiden. No poet or oral performer remains untouched by the influence of radio, television, the Internet, and the constant interaction between the oral and written

word. In Africa, television and radio remain the driving technological influences promoting the oral word. Increasingly, the Internet is also playing a pivotal role. This will follow on the emergence of technauriture as an established discipline in the rest of the world. There is no longer any society which is not affected by the notion of secondary orality, as postulated by Ong (1982). The influence of technology on both the oral and the written word has reached a point where both are inextricably linked, where both feed off each other in a symbiotic fashion. Hence, this thesis argues for the legitimisation of technauriture as a paradigm in its own right, worthy of analysis, study and critique.

Critical to this analysis is a key question: Is anyone interested in digitised indigenous knowledge systems? The short answer is yes. However, there is a caveat, in that simply documenting indigenous knowledge systems and oral material into digital form is a necessary but insufficient condition to the effective harnessing of the innate potential of indigenous knowledge systems. Firstly, it is imperative to undo the centuries of subjugation of knowledge emanating from societies that have been „studied' from idiographic perspectives. Secondly, digital indigenous knowledge systems have to become an integral part of the pedagogic environments in schools, universities, and societies in general.

Centuries of human existence preceded the inventions of the alphabet and the written word. It is critical that modern societies do all in their power to document and place equal value on all human knowledge. This study has attempted to establish a model that will promote this and allow the technological infrastructure to contribute to achieving this goal. However, digital and context-recreating opportunities notwithstanding, it is imperative that policymakers, classroom practitioners, parents and guardians all recognise the innate value of knowledge systems that do not immediately manifest their value in a short-term economic analysis. Our forebears saw the human condition as integral to their surroundings, and they saw that the preservation of all aspects of their lives was intertwined with their natural environment.

In order for this knowledge to be recreated and held as valuable by future generations, wanton individualism has to give way to a recouped sense of community, both locally, nationally, and internationally. An aphorism attributed to Edmund Burke states: „Those who do not learn from history are destined to repeat it.' The irony of Burke's view is the time frames in question. Human history far exceeds anything that has been written. However, for all literate cultures, the horizon of past history is limited to what has been recorded. Common social memory is limited to that which policymakers and educational structures deem necessary to fulfil the role of law-abiding citizens. As Winston Churchill said, „History is written by the victor.' This is never more relevant than when addressing the history that has and is being lost.

That there is a need to preserve all of the human experience may seem unachievable, and an unnecessary luxury. There is little doubt that the former is true, as much has been lost, due, in no small measure, to a lack of tools for effective capture. However, in terms of the latter, it is less of a luxury than a necessity. Firstly, those aspects of indigenous cultures that have not been captured, due to a lack of easily realised commercial potential, do hold much that is valuable for the sustained future of humans. Secondly, if humans learn from history, there is much that can still be learned from large swathes of human experience that are not part of the mainstream of the Western-dominated knowledge-based cultures.

Currently in developed countries, the information age is being lived, and the alienation from our natural surroundings is becoming more acutely felt. The always „connected' are experiencing fatigue, and longing for the simple things in life. This may one day lead a researcher to conclude, „We are all Luddites now.' This is highly unlikely, given the ubiquitous nature of technology, and the manner in which it has been embraced and the way it has become a central aspect of everyday life, such as with social networking forums such as Twitter. Continued advances in technology indicate that there will be wider opportunities for supporting the agenda promoted by this study.

The impact of technology on human existence has always been profound. From the use of basic tools, to intercontinental missiles and nanotechnology, each new development has opened new vistas, and created opportunities and threats to human well-being. Some inventions have been heralded as examples of humanity's dominion over nature. Witness the furore when other animals are found to be making use of basic tools. Some breakthroughs, such as nanotechnology, open a whole new universe. But other inventions, such as nuclear weapons, have done little to promote the general well-being of humanity.

The contemporary global context is on a technologising juggernaut. From „born digital' concerns, to „connected' two-year-olds, the nature and reality of the modern human lifestyle offers extensive promise and opportunities. These must be juxtaposed against the pitfalls of an over-connected, media-saturated population, alienated from their peers and unable to engage in effective social activities. Much of the hype surrounding the contemporary classroom is shaped to perpetuate an „epistemic community' (Dei 2005:14) and to promote an agenda that can be emotively referred to as „capitalist schooling' (McLaren & Farahmandpur 2005:50).

Complementing this contextual reality is a learning community striving for the reality lifestyle that is beamed in through television, and increasingly through other more interactive media. Against this, „indigenous knowledges and the immanent non-archived/non-partitioned structure can mobilize boundaries and disrupt the fixity of Eurocentric epistemologies (Sefa & Simmons 2009:25). Sefa and Simmons observe that „[s]chools need representation from different bodies of knowledge, and that the classroom teaching of educators must subvert the institutionalisation of Western dominance and intellectual hegemony' (Sefa and Simmons 2009).

If curricula are to effectively address these sentiments, it is imperative that oral traditions and orality are captured effectively and assume a role that allows them to be seen as necessary and sufficient conditions for knowledge and knowledge

creation. From Sitole's observation of South Africa's transformation, to proclamations made by shamans, to the life of the Piraha Indians (Everett 2008), it is only when oral material becomes regarded as a serious source of humanity's epistemological base that there can be a serious beachhead established against the rampant „knowledge based' hegemony that is characteristic of the present trend of globalisation.

With the growing technological infrastructure, and the development of digital tools and applications, through embracing technauriture as a paradigm, researchers can effectively mobilise the requisite cross-disciplinary approach that is a necessary condition for ensuring the migration of oral traditions and orality into a 21st-century context. This migration will promote and enhance the role that orality and oral traditions can play in modern-day society and promote the embrace of the wide swathe of human knowledge embedded in our traditional cultures, and allow them to resumed their important, if not arguably their essential, role in the ongoing story of humanity.

Bibliography

Abram, D., 1996. *The spell of the sensuous*. New York: Vintage Books:

Agatucci, C., 1998. *African storytelling*. [online] Available at:

    <http://web.cocc.edu/cagatucci/classes/hum211/afrstory.htm> [Accessed 18

    July 2009].

Agrawal, A., 2005. The politics of indigenous knowledge. *Australian Academic*

    and Research Libraries, 36(2),pp.73-85.

Ahamed, S.V. and Lawrence, V.B., 2005. *The art of scientific innovation*. New

    Jersey: Pearson Prentice Hall.

Alant, J., 2006. Oral people can be literate: Some reflections on aurally based

    literacy. *Acta Academica,* 381*,* pp. 200-232.

Alaska Native Science Commission, n.d. *What is traditional knowledge?* [online]

    Available at:

    <http://www.nativescience.org/html/traditional_knowledge.html> [Accessed

    27 February 2010].

American Library Association. 2007. *Definitions of digital preservation.* Chicago:

    American Library Association.

Auletta, K., 2010. *Googled: The end of the world as we know it*. London: Virgin

    Books.

Auron, Y., 2005. *The pain of knowledge: holocaust and genocide issues in*

    education. New Brunswick: Transaction Publishers.

Baron, N. S., 1981. *Speech, writing and sign: a functional view of linguistic*

    representation. Bloomington, IN: Indiana University Press.

Battiste, M., 2008. Animating indigenous knowledge in education: from resilience

    to renaissance. In: Wipce (*World Indigenous Peoples' Conference on*

    Education). Melbourne, Australia, December 11, 2008.

Becker, C. Kulovits, H. and Rauber, A., 2010. Trustworthy preservation and

    planning with Plato, *ERCIM News,* [online] Available at < http://ercim-

    news.ercim.eu/en80/special/trustworthy-preservation-planning-with-plato>

    [Accessed 12 Februray 2010].

Benz, B.F., Cevallos, E, E. Munoz M., & Santana M. 1996. Ethnobotany serving society: A case study from the Sierra de Manantlán Biosphere Reserve. *SIDA, Contributions to Botany* 17:1–16.

Berkes, F., 1999. *Scared ecology: traditional knowledge and resource managements*. Philadelphia, PA: Taylor & Francis.

Bodeker, G., 2009. Traditional medical knowledge and twenty-first century healthcare: the interface between indigenous and modern science. In: Paul Silitoe, ed. 2009. *Local science vs global science: approaches to indigenous knowledge in international development*. Biggleswade: Berghahn Books. Ch 2.

Borbinha, J., 2010. Shaman: sustaining heritage access through multivalent archiving, *ERCIM News,* [online] Available at <http://ercim-news.ercim.eu/en80/special/shaman> [Accessed 13 February 2010].

Bourdieu, P., 1996. *The state nobility: elite schools in the field of power*. Cambridge: Polity Press.

Boynton, R. S., 2004. The tyranny of copyright?, *The New York Times*, [online] 25 January. Available at: [http://www.nytimes.com/2004/01/25/magazine/25COPYRIGHT.html]. [Accessed 17 March 2010].

Brand, S., 1989. *The media lab: inventing the future at MIT.* New York: Viking Penguin.

Broadie, R., 1996. *Virus of the mind: the new science of the meme*. New York: Intergral Press.

Brown, D., 2003. *Lost in cyberspace: the BBC domesday project and the challenge of digital preservation*. [online] Available at: <http://www.csa.com/discoveryguides/cyber/overview.php> [Accessed 9 April 2010].

Bruner, J. S. Goodnow, J.J. and Austin, G.A., 1956. *A study of thinking*. New York: John Wiley & Sons, Inc.

Brush, S.B., 1993. Indigenous knowledge of biological resources and intellectual property rights: the role of anthropology. *American Anthropologist*, 95(3), pp. 653-671.

Caplan, P., 2003. *Metadata fundamentals for all librarians*. Chicago: American
Library Association.

Chandler, D., 1995. *The act of writing a media theory approach*. Aberystwyth:
The University of Wales.

Chesher, C., 1997. The ontology of digital domains. In: David Holmes, ed. 1997
Virtual politics: identity and community in cyberspace. London: Sage. Ch. 4.

Chinyowa,K.C., 2001. The undying presence. In: Russel .H. Kaschula, ed.
African oral literature – functions in contemporary contexts. Claremont: New
Africa Books. Ch 11.

Chisenga, J., 2002 Indigenous knowledge: Africa's opportunity to contribute to
global information content. *South African Journal of Libraries and
Information Science*, 68(1), pp.16-20.

Cohen, D.J. and Rosenzweig, R., 2005. *Digital history*. Baltimore: Hopkins
Fulfilment Services.

Consultative Committee for Space Data Systems., 2002. Reference model for an
open archival information system oais, [online] *Blue Book*, Issue 1.
Washington, DC US: CCSDS Secretariat. Available at: <
http://public.ccsds.org/publications/archive/650x0b1.pdf > [Accessed 21
April 2010].

Coplan, D., 1985. *In township tonight! South Africa's black city music and
theatre*. London/New York: Longman.

Coplan, D. 1994. *In the time of cannibals. The word music of South Africa's
Basotho migrants.* Chicago: University of Chicago Press.

Copyleft, 2006. [online] Available at: <http://what-is-
what.com/what_is/copyleft.html> [Accessed 9 Aptil 2010].

Cornes, R. and Sandler, T., 1996 *The theory of externalities, public goods and
club goods*. Cambridge: Cambirdge University Press.

Couldry, N., 2003. *Media, symbolic power and the limits of bourdieu's field
theory*. London: Media @lse.

Cox, P. 2000. Will tribal knowledge survive the millennium? *Science,* [online]
Available at: <http://www.sciencemag.org/cgi/content/full/sci;287/5450/44>

[Accessed 9 October 2009].

Cronin, J., 1989. „Even under the rine of terror…: Insurgent South African poetry'. *Staffrider* 8(2).

Cultural, artistic and scientific knowledge for preservation, access and retrieval, 2006. *Welcome to the CASPAR Preservation User Community!* [online] Available at: <http://www.casparpreserves.eu/> [Accessed 12 February 2010].

Davies, P., 1999. *The mind of God*. New York: Touchstone.

Debord, Guy., 1983. *Society of the Spectacle*. Detroit: Black & Red.

Dei, G.J.S., 2005. Critical issues in anti-racist research methodologies. In: G.J.S. Dei and G. S. Johal eds. 2005. *Critical issues in anti-racist research methodologies*. 1-27. New York: Peter Lang Publishing. Ch 1.

Digital Millennium Copyright Act, 2001. *The ucla online institute for cyberspace law and policy*. [online] Available at: <http://www.gseis.ucla.edu/iclp/dmca1.htm> [Accessed 9 April 2010].

Digital Preservation Coalition, n.d. *Our digital memory accessible tomorrow*. [online] Available at: <http://www.dpconline.org/> [Accessed 9 April 2010].

DigitalPreservationEurope, n.d. *Latest news* [online] Available at: <http://www.digitalpreservationeurope.eu/> [Accessed 28 February 2010].

Ding, Y. and Foo, S., 2002. Ontology research and development. Part 1 - a review of ontology generation. *Journal of Information Science,* 28(2), pp. 123-136.

Drury, N., 1982. The shaman and the magician. London: Arkana.

Earley, J., 1997. *Transforming human culture: social evolution and the planetary crisis.* Albany: State University of New York Press.

Earley, J., 2002. The Social Evolution of Consciousness. *Journal of Humanistic Psychology*, 42, pp.107-132.

Ellis, W., 2010. It's not about how much information you eat, but what you make of it, *Wired*, March, 18.03, pp. 34.

Everett, D.L., 2008. *Don't sleep there are snakes*. London: Profile Books Ltd.

Finnegan, R., 1988. *Orality and literacy.* Oxford: Basil Blackwell.

Fishman, T. C., 2005. *China Inc*. London: Simon & Schuster.

Floridi, L., 2007. A defence of informational structural realism. *Synthese*, 161(2), pp. 219-253.

Foundation for Human Rights n.d. *Foundation for human rights* [online] Available at: <http://www.fhr.org.za> [Accessed 27 July 2006].

Friedman, T., 2008. *Hot, flat and crowded*. London: Penguin.

Furniss, G., 2006. *Research database on Hausa popular literature and video film*. Electronic Project, SOAS.

Georges, R.A., 1969 .Towards an understanding of storytelling events. *Journal of American folklore,* 82, pp. 313–328.

Ghandi, K., 2007. *The transition to a global consciousness*. Mumbai: Allied Publishers.

Goldstuck, A. 1994. *Ink in the Porridge*: *Urban Legends of the South African Elections.* Johannesburg: Penguin.

Grenier, L., 1998. *Working with indigenous knowledge. A guide for researchers.* Ottawa, ON, Canada: The International Development Research Centre.

Gruber, T.R., 1993. A translation approach to portable ontology specification. *Knowledge Acquisition,* 5(2), pp. 199-220.

Gunner, E., 1986. „A dying tradition? African oral literature in a contemporary context'. *Social Dynamics: A journal of African studies,*12(2), pp. 31-38.

Gunner, E., 1989. „Orality and literacy: dialogue and silence'. In: *Discourse and its disguises. The interpretation of African oral texts*. K., Barber, and P.F. de Moraes Farias, eds. Birmingham: University of Birmingham.

Hagerty. L., 2000. *The spirit of the internet: speculations on the evolution of global consciousness*. Tampa: Matrix Masters.

Harries, E.W., 2001. *Twice upon a time: women writers and the history of the fairy tale.* Princeton: Princeton University Press.

Harrison, K.D., 2007. *When languages die*. Oxford: Oxford University Press.

Hemmje, M. and Riestra, R., 2010. Drives for digital preservation, *ERCIM News Online Edition* [online]. Available at: <http://ercim-news.ercim.eu/en80/special/drivers-for-digital-preservation> [Accessed 24 May 2010].

Hendler, J., 2001. Agents and the semantic web. *IEEE Intelligent Systems and Their Applications,* 16(2), pp. 30-37.

Hodgson, J., 1982. *The God of the Xhosa: A study of the origins and development of the traditional concepts of the supreme being*. Cape Town: Oxford University Press.

Hofmeyr, I., 1993. *We spend our lives as a tale that is told. Oral historical narrative in a South African chiefdom.* Johannesburg: Witwatersrand University Press.

Howes, M. and Chambers, R., 1979. Indigenous technical knowledge: analysis, implications and issues*. The IDS Bulletin*, 10(2), pp. 5–11.

Ina Hoi Riwa Foundation, 2000*. Indigenous knowledge*. [online] Available at: <http://www.geocities.com/yotowawa/indigenous_knowledge.htm> [Accessed 9 October 2009].

Ingold, T., 1992.Culture and the perception of the environment. Elisabeth Croll and David Parkin, eds. *Bush base: forest farm – culture, environment and development*. Abingdon: Routledge. Ch. 3.

International Data Corporation, 2007. *The expanding digital universe.* (IDC White Paper) [online] Framingham : IDC (Published 2007) Available at: <http://www.emc.com/collateral/analyst-reports/expanding-digital-idc-white-paper.pdf> [Accessed 24 June 2010].

Johannes, R.E., 1989. Introduction. In: Robert E Johannes, ed. 1989. *Traditional ecological knowledge: a collection of essays*. Gland, Switzerland and Cambridge, UK: IUCN, pp. 5-6.

Jones, M. E. and Hunter, J., 2004. Enshrining indigenous knowledge as a public good: indigenous education and the maori sense of place indilinga*. African Journal Of Indigenous Knowledge Systems,* 3(2), pp.103-113.

Jose, K, C., 2009. Culture dilution. *Bhutan Observer* [online] 20 March 2009. Available at: <http://www.bhutanobserver.bt/2009/letters/03/culture-dilution.html> [Accessed 27 February 2010].

Kaschula, R.H., 1991. *The transitional role of the Xhosa oral poet in contemporary South African society*. Unpublished PhD thesis.

Grahamstown: Rhodes University.

Kaschula, R.H., 1991. *Style, themes and the role of the contemporary imbongi in trade unions.* In Occasional Papers. No.1, Bureau of African Research and Documentation. Mthatha: University of Transkei. now Walter Sisulu.

Kaschula, R.H. Matyumza, M. and Sitole, B., 1996. *Qhiwu-u-u-la!! Return to the fold!!* Cape Town: Nasou / Via Afrika.

Kaschula, R.H., 1999. Imbongi and griot: toward a comparative analysis of oral poetics in Southern and West Africa. *Journal of African Cultural Studies,* 12(1) pp. 55-76.

Kaschula, R.H., 2002. *The bones of the ancestors are shaking: Xhosa oral poetry in context.* Cape Town: Juta & Co. Ltd.

Kaschula, R.H., 2004. Imbongi to slam: the emergence of a technologised auriture. *Southern African Journal for Folklore Studies,* 14(2), pp. 45-58.

Kaschula, R.H. ed., 2006. *Intambanane.* Cape Town: Juta-Gariep.

Kaschula, R.H. Mostert, A. and Ralarala, K.R., 2008. Communicating across cultures in South African law courts: towards an information technology solution. *Stellenbosch Papers in Linguistics PLUS*, 36, pp. 89-104.

Kaschula, R.H. and Mostert A., 2009. Analysing, digitising and technologising the oral word: the case of Bongani Sitole. *Journal of African Cultural Studies*, 21(2), pp.159–17.

Keynes, J.M., 1936. *The general theory of employment, interest and money*. Cambridge: Cambridge University Press.

Korin, Y.D. et al., 2002. Effects of prostratin on t-cell activation and human immunodeficiency virus latency. *Journal of Virology*, 76(16), pp. 8118-8123.

Kramsch, C., 1998. *Language and culture.* Oxford: Oxford University Press.

Kroma, S., 1996. The science of Pacific Island peoples. *Indigenous knowledge and development monitor* [online] 4(2) Available through: International Institute of Social Studies of Erasmus University Rotterdam [Accessed 12 June 2010].

Kuny, T., 1998. The digital dark ages? challenges in the preservation of electronic information, *International Preservation News,* [online] Available

at: <http://www.ifla.org/VI/4/news/17-98.htm#2> [Accessed 11 April 2010].

Langdon, J., 2009. *Indigenous knowledges, development and education: an introduction*. In: J. Langdon, ed. *Indigenous knowledges, development and education*. Rotterdam: Sense Publishers, pp.1-13.

Langill, S., 1999. *Indigenous knowledge: a resource kit for sustainable development researchers in dryland Africa.* Ottawa: International Development Research Centre.

Lavoie, B., 2000. *Meeting the challenges of digital preservation: the OAIS reference model*. [online] Available at: <http://www.oclc.org/research/publications/archive/2000/lavoie/> [Accessed 11 April2010].

Library of Congress, 1999. *The mission and strategic priorities of the library of congress*. [online] Available at: <http://www.loc.gov/ndl/mission.html> [Accessed 9 April 2010].

Lindh,K. and Haider, J., 2010. Development and the Documentation of Indigenous Knowledge: Good Intentions in Bad Company? *Libri,* 60(1), pp. 1–14.

Lipton, M. 1986. *Capitalism and Apartheid: South Africa, 1910–1986.* Aldershot: Wildwood House and Cape Town: David Philip.

Mafeje, A., 1963. A chief visits town. *Journal of Local Administration Overseas,* 2, pp.88-89.

Mafeje, A., 1967. The role of the bard in a contemporary South African community. *Journal of African Languages*, 6, pp.193-222.

Maffie, J., 2009. In the end, we have the Gatling gun, and they have not': Future prospects of indigenous knowledges. *Futures,* 41(1), pp. 53-65.

Man, J., 2000. *Alpha beta: how our alphabet shaped the western world*. London: Transworld Publishers.

Manson, P., 2010. Digital preservation research: an evolving landscape, *ERCIM News,* [online] Available at: <http://ercim-news.ercim.eu/en80/keynote> [Accessed 9 April 2010].

Martin, J., 2006. *The meaning of the 21st century – A vital blueprint for ensuring our future*. London: Transworld.

Masoga, M., 2007*.* Indigenous knowledge systems: issues and challenges. *Indilinga: African Journal of Indigenous Knowledge Systems*, 3(1), pp.iii-x.

Masumpa, M., 1991. UCosatu inkunz'emnyama. In: A Oliphant, ed. 1991. *Ear to the ground. Contemporary worker poetry*. Fordsburg: Cosaw/Cosatu publication.

Mathews, A.S., Bicarregui, J., Jones, C., Conway, E., and Woodcock, J., 2010. Considering software preservation, *ERCIM News,* [online] Available at: <http://ercim-news.ercim.eu/en80/special/considering-software-preservation> [Accessed 12 February 2010].

McBride, B., 2004. The resource description framework (RDF) and its vocabulary description languages RDFS. In: Steffen Staab and Rudi Suder, eds. 2004. *Handbook on Ontologies*. Berlin: Springer. Ch. 3.

Mcculloch, S., 2010. UVic researcher taps into cave language.Times Colonist. 22/2.

McLaren, P. and Farahmandpur, R., 2005. *Teaching against global capitalism and the new imperialism: a critical pedagogy.* Lanham: Rowman & Littlefield Publishers Inc.

Merolla, D., 2006. *Verba Africana. African languages and oral literatures:* [DVD documentation and digital materials]. Leiden: University of Leiden. Available at: http://www.let.leidenuniv.nl/verba-africana/swahili/> [Accessed 10 May 2009].

Metting, F., 1994. Exploring oral traditions through the written text. *Journal of Reading,* 38(4), pp.282.

Mignolo, W., 2000. *Local histories/global designs: coloniality, subaltern knowledges and border thinking*. New Jersey: Princeton Princeton University Press.

Misztal, B.A., 2003. *Theories of social remembering.* Maidenhead: Open University Press.

Moahi K. H., 2007. Copyright in the digital era and some implications for indigenous knowledge. In: I. Mazonde and P. Thomas, eds. 2007. *Indigenous knowledge systems and intellectual property in the twenty-first century*. Dakar: Imprimerie Graphiplus. Ch. 5.

Morolong, S., Protecting folklore under modern intellectual property regimes: Limitations and alternative regimes for protection. In: I. Mazonde and P. Thomas, eds. 2007. *Indigenous knowledge systems and intellectual property in the twenty-first century*. Dakar: Imprimerie Graphiplus. Ch. 4.

Mugabe, J., 1998. *Intellectual property protection and traditional knowledge: an exploration in international policy discourse*. [paper online] WIPO (World Intellectual Property Organization), African Centre for Technology Studies ACTS. Available at <http://www.wipo.int/tk/en/hr/paneldiscussion/papers/pdf/mugabe.pdf> [Accessed 17 March 2000].

Ng, K., 2010. Digital Preservation of Interactive Multimedia Performances, *ERCIM News*, [online]. Available at: <http://ercim-news.ercim.eu/en80/special/digital-preservation-of-interactive-multimedia-performances> [Accessed 22 April 2010].

Ng, K., Pham, T. V. Ong, B. Mikroyannidis, A. and Giaretta, D,. 2007. Ontology for Preservation of Interactive Multimedia Performances. In: MTSR (International Conference on Metadata and Semantics Research), *2nd International Conference on Metadata and Semantics Research MTSR '07.* Corfu, Greece 11-12 October 2007.

Norman, C., 1979*. Knowledge and power: the global research and development budget*. Washington: Worldwatch Insitute.

Ong, W., 1982. *Orality and literacy. The technologizing of the word.* London, New York: Methuen.

Open Source Initiative, n.d. *The Open Source Definition* [online] Available at: <http://www.opensource.org/docs/definition.php> [Accessed 9 April 2010].

Opland, J,. 2005. *The dassie and the hunter. a South African meeting.* Durban: University of KwaZulu-Natal Press.

Opland, J., 1983. *Xhosa oral poetry: aspects of a black South African tradition*. Johannesburg: Ravan Press.

Oviedo, G. Maffi, L. and Larsen, P., 2000. *Indigenous and traditional peoples of the world and ecoregion conservation: an integrated approach to conserving the world's biological and cultural diversity.* Switzerland: WWF International.

Papworth, L., 2008. *Oral tradition, pastiche, the mashup and copyright*. [online] Available at: <http://laurelpapworth.com/oral-tradition-pastiche-mashup-and/> [[Accessed 9 April 2010].

Perkins, J., 2008. *Confessions of an economic hitman*. San Francisco: Berrett-Koehler Publishers.

Posey, D., 2000. Ethnobiology and ethnoecology in the context of national laws and international agreements affecting indigenous and local knowledge, traditional resources and intellectual property rights, In: R. Ellen, P. Parkes, and A. Bicker, eds. 2000. *Indigenous knowledge and its transformations: critical anthropological perspectives.* Australia: Hardwood Academic Publishers. Ch. 1.

Powell, E.A., 2009. Digital Archaeology 2.0, *Archeaology,* [online] Available at: <http://www.archaeology.org/0901/topten/digitalarky.html> [Accessed 9 April 2010].

Premack, D. and Woodruff, G., 1978: Does the chimpanzee have a theory of mind? *Behavioral and Bran Sciences,* 1, pp. 515-526.

Progler, Y., 1999. Towards defining western research on indigenous knowledge. In: *What is indigenous knowledge? voices from the academy*. Ladislaus Semali and Joe L. Kincheloe, eds. 1999. New York & London: Falmer Press, pp. 381.

Qabula, A. Hlatshwayo, M. and Malange, N., 1986. *Black mamba rising. South African worker poets in struggle*. Culture and Working Life Publications. Durban: University of Natal.

Rains, F., 1999. Indigenous knowledge, historical amnesia and intellectual authority: deconstructing hegemony and the social and political implications

of the circular "other". Ladislaus Semali and Joe L. Kincheloe, eds. 1999. New York & London: Falmer Press.

Ramsey, M.K., 2003. Imagined realities: meaning and textuality in the middle ages. *Studies in the Literary Imagination*, 36, pp.i-iv.

Ravilious, K., 2010. Messages from the stone age. *New Scientist*, 205(2748), pp. 30-34.

Research Councils UK., 2008. *Code of conduct and policy on the governance of good research conduct: integrity, clarity, and good management.* Public Consultation Document. July – October 2008. Available at: <http://www.rcuk.ac.uk/cmsweb/downloads/rcuk/reviews/grc/consultation.pdf> [Accessed 1 August 2009].

Rifkin, J., 2009. *the race to global consciousness in a world in crisis.* Cambridge: Polity Press.

Robertson, R.T., 2003. *The three waves of globalization: a history of a developing global consciousness*. London: Zed Books.

Rouse, J., 1999. *Global dissemination of indigenous knowledge: contradictions, or the way forward?* Washington D.C.: World Bank.

Roymans, N., 1995. The cultural biography of urnfields and the long-term history of a mythical landscape. *Archaeological Dialogues*, 2, pp. 2-24.

Samson, P.R. and Pitt, D., 1999. Introduction: sketching the noosphere. In: Paul R. Samson and David Pitt, eds. 1999. *The biosphere and noosphere reader*. London: Routledge. Ch. 1.

Sefa Dei, G.J. and Simmons, M., 2009.The indigenous as a site of decolonizing knowledge for conventional development and the link with education: the African case. In J. Langdon, ed. 2009. *Indigenous knowledges, development and education.* Sense Publishers: Rotterdam, pp.15 -36.

Semali, L. and Kincheloe, J., 1999. Introduction: What is Indigenous knowledge and why should we study it. In: L. Semali and J. Kincheloe, eds. *What is indigenous knowledge: voices from the academy.* New York: Falmer Press.

Shiva, V., 2001. Genetic freedom. In: C. Petrini, ed. 2001 *Slow food: collected thoughts on taste, tradition and the honest pleasures of food.* White River Junction, VT: Chelsea Green Publishing. Ch. 10.2.

Slobin, D I., 1971. *Psycholinguistics*. Southern African Research and Documentation Centre SARDC. n.d. *Factsheet No. 9: Indigenous knowledge system* Glenview, Ill: Scott, Foresman & Co.

Smylie, J. Martin, C.M. Kaplan-Myrth, N. Steele, L. Tait, C. and Hogg, W., 2003. Knowledge translation and indigenous knowledge. *Proceedings 12th International Congress on Circumpolar Health*. Greenland Nuuk.

Sofge, E., 2010. Can robots be trusted? *Popular Mechanics* [online] Available at: <http://www.popularmechanics.co.za/content/general/singlepage.asp?fid=1887&pno=1> [Accessed 2 June 2010].

Street, B.V., 1995. *Social literacies. Critical approaches to literacy development, ethnography and education.* London & New York: Longman.

Tallmo, K. E., 2009. *What has copyright to do with democracy?* [online] Available at: <http://www.nisus.se/archive/090525e.html> [Accessed 9 April 2010].

Tallmo, K.E., 2005. *The misunderstood idea of copyright* [online] Available at: <http://www.nisus.se/archive/050902e.html> [Accessed 9 April 2010].

Taylor, C., 1982. Rationality. In: M. Hollis and S. Lukes, eds. 1982. *Rationality and relativism.* Cambridge: MIT Press, pp. 87-105.

Templeton, B., 2008. *10 Big Myths about copyright explained* [online] Available at: <http://www.templetons.com/brad/copymyths.html> [Accessed 9 April 2010].

The Bhutan Observer. 20 March 2009. http://www.bhutanobserver.bt/2009/letters/03/culture-dilution.html [Accessed 27 Feb. 2010].

The Economist., 2010. A Special Report on Managing Information. *The Economist,* 394(8671).

Thomas, P. and Nyamnjoh, F.B., 2007. Intellectual property challenges in Africa: Indigenous knowledge systems and the fate of connected worlds. In: I. Mazonde and P. Thomas, eds. 2007. *Indigenous knowledge systems and*

intellectual property in the twenty-first century. Dakar: Imprimerie Graphiplus. Ch. 2.

Thompson, John. 1995. *The media and modernity: a social theory of the media*. Cambridge: Polity Press.

Tzitzikas, Y. and Christophides, V., 2010. Knowledge management for digital preservation, *ERCIM News* [online] Available at <http://ercim-news.ercim.eu/en80/special/knowledge-management-for-digital-preservation> [Accessed 14 March 2010].

UNESCO, n.d. *Activity 1: the wisdom of the elders*. online] Available at: <http://www.unesco.org/education/tlsf/TLSF/theme_c/mod11/uncom11t01.htm> [Accessed 9 April 2010].

United Nations., 2001. *Leaflet No 10: indigenous peoples and the environment*.. (UN publication) [online] Washington D.C: United Nations-Office of High Commissioner for Human Rights Available at: <http://www.ohchr.org/Documents/Publications/GuideIPleaflet10en.pdf> [Accessed 18 November 2007].

University College London, n.d. *Digital Anthropology MSc*. [online] Available at: <http://www.ucl.ac.uk/Anthropology/digital-anthropology/about.php> [Accessed 9 April 2010].

Untermeyer, L., 1968. *The pursuit of poetry.* New York: Simons & Schuster.

Vail, L. and White, L., 1991. *Power and the praise poem. Southern African voices in history*. Virginia: University Press of Virginia.

Van den Bergh, C.J.M., 2009. The GDP paradox. *Journal of Economic Psychology,* 30, pp.117–135.

Van der Sluis, E.L. and Schouten, T.E. 2010. User centred digital preservation of multimedia. *ERCIM News* [online] Available at: <http://ercim-news.ercim.eu/en80/special/user-centered-digital-preservation-of-multimedia> [Accessed 22 February 2010].

Veit-Wild, F., 2009. *Artistic, cinematic and literary practices in the digital age*. Working Document.

Verheul, I., 2006. *Networking for digital preservation: current practice in 15*

national libraries. Munchen: K.G. Saur.

W3C, n.d. *About W3C.* [online] Available at: <http://www.w3.org/Consortium/> [Accessed 9 April 2010].

Waller, M and Sharpe, R., 2006. *Mind the gap:assessing digital preservation needs in the UK.* York: The Digital Preservation Coalition.

Wallerstein, I., 2000. *The essential wallerstein.* New York: The New Press.

Weinberg, S., 1996. Sokal's hoax. *The New York Review of Books*, XLIII (13), pp.11-15.

Wilkinson, R, and Pickett, K., 2009. *The spirit level: why more equal societies almost always do better.* London: Allen Lane.

Woodley, E., 2004. *Indigenous knowledge: a conceptual framework and a case from Solomon Islands.* The International Development Research Centre [online] Available at: <http://www.idrc.ca/institution/ev-85050-201-1-DO_TOPIC.html> [Accessed 11 February 2010].

World Bank, African Region., 1998. *Indigenous knowledge for development: a framework for action.* Washington: Knowledge and Learning Center.

World Health Organisation(WHO)., 1978. *Traditional medicine.* Geneva: World Health Organisation.

World Health Organisation, 2000. *General guidelines for methodologies on research and evaluation of traditional* medicine. [online] Available at: <http://www.who.int/medicines/areas/traditional/definitions/en/index.html> [[Accessed 11 Februray 2010].

Yai, O., 1989. Issues in oral poetry: criticism, teaching and translation. In: K. Barber and P.F. de Moraes Farias, eds. *Discourse and its disguises. the interpretation of African oral texts.* Birmingham University African Studies Series 1. University of Birmingham: Centre of West African Studies, pp.49-56.

Zipes, J., 1998. *Fairy tales and the art of subversion.* New York: Heineman.