

**POST AFRICAN FUTURES: Decoloniality and Actional
Methodologies in Art and Cultural Practices in African
Cultures of Technology**

by

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A thesis submitted to Plymouth University in partial fulfilment for the degree of Doctor of
Philosophy

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A handwritten signature in black ink, appearing to read 'Tegan Bristow', written over a horizontal line.

Signed by Author, 25th January 2018

Abstract

This thesis addresses the presence and role of critical aesthetic practices by cultural practitioners and creative technologists in addressing cultures of technology in contemporary African societies. Nairobi and Johannesburg are used as primary case studies through which a closer understanding of these unique cultures of technology are unpacked.

The learning established from the findings of the cases is applied to understanding the concerns of cultures of technology within these and other African contexts. In this, attention is placed on latent neo-colonialism found in the relationship between African cultures and the networked global information economy being led by technology practices.

This research starts by responding to a paucity of prior investigation in the field, and thereby aims to identify an ontological framework for Africa's cultural engagement with technology. The primary research is preceded by an introductory chapter that draws on African knowledge theory and a critique of historical scholarship that exists on African experiences with technology. The primary research is predicated on this critical framework and uses it as a foundation from which to address concerns around contemporary digital and communications technologies and an African cultural encounter with a networked and globalised system.

Due to the paucity around scholarship on Africa within this field, the methodological approach evolved as an iterative development between theoretical and empirical research. This methodological development was informed by the theory of decolonising methodologies and was led by culturally responsive methods. Through thematic content analysis of the fieldwork, the identification of key themes impacted the theoretical framing of the research. Not only were new concerns identified, but particular aesthetic mechanisms became apparent in the practices of those interviewed. These brought to light the importance of decolonising methodologies within a cultural practice. This importance led to the development of a responsive exhibition, also titled *Post African Futures*. The exhibition was held at the Goodman Gallery in Johannesburg in May 2015.

Post African Futures as both a framework and an exhibition is central to this thesis's contribution of new knowledge. This exhibition develops the propositions of the primary research and is therefore instrumental in strengthening a context-sensitive critical position that affords Africans the privilege of contributing to and providing insight into a globalised technology culture and its futures in relation to regions in Africa.

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Author's Declaration

This thesis submitted for the degree of Doctor of Philosophy at Plymouth University has been composed by the author, and has not been submitted for any other degree or professional qualification. The research conducted herein is the work of the author and has not formed part of any other research degree programme either at Plymouth University or at any other establishment. At no time during the registration for the degree of Doctor of Philosophy at Plymouth University has the author registered the research for any other University award without prior agreement of the Graduate Committee. The research was partially financed with the scholarship granted by the South African National Research Foundation's Thuthuka Fund. Research has been published in the following journals:

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Bristow, T. (2014). Cultures of Technology: Digital Technology and New Aesthetics in African Digital Art. *Critical Interventions: Journal of African Art*, 10(3).

Bristow, T. (2015). From Afro-Futurism to Post African Futures. *Technoetic Arts: Journal of Speculative Research*, 12(2 & 3).

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Bristow, T. (2016). Access to Ghosts. In L. O. T. Hiendrich, Sean (Ed.), *African Futures*. Germany: Kerber Verlag.

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Signed: Tegan Bristow



Chapter 1

ubumnyama bufihla muvhubu

Zulu proverb. Translation: Darkness conceals the hippopotamus (large things).

1.1 Introduction: A Guide to Post African Futures

Post African Futures is a framework woven from research, fieldwork and critical aesthetic practices concerning digital and communication technologies in contemporary Southern and East Africa.

The following five chapters present the development of *Post African Futures*. This thesis draws on African scholarship; anthropologies and philosophies of technology; histories of art and culture which pertain to the relationships between technology and Africa; critical theory pertaining to the Global South; decolonial theory; decolonising methodologies; and new communications technology within contemporary culture in South African and Kenya.

Post African Futures identifies a future for critical aesthetic engagement that responds to the neo-colonialism found within a globalised information economy. It takes a post futures position and its naming references the failure of *Afro-Futurism* and its extension *African Futures*¹ adequately to contain the critical aesthetic practices that relate to technology and culture in Africa today. *Post African Futures*, by contrast, goes beyond these terms, to include an interrogation of scholarship on Africa and positions on Information and Communication Technologies (ICT) that are being evolved for, rather than by, Africa – the latter having an underlying impact on how technology and culture are both interpreted and engaged in different regions of Africa.

A pre-requisite to understanding African concerns is context. One aim of this thesis is to bring the African context into the histories of technology – more specifically the context of regional cultures within Africa. Together with the research methods, this process of contextualisation builds the framework that is *Post African Futures*. Drawing on the principles of decolonising methodologies² and identifying through this what are termed *actional* methodologies in the practice of artists and creative practitioners (a term from the

¹ African Futures refers to an African version of Afro-Futurism, the latter being of African-American origin.

² See Chapter Two on methodologies for more full definition.

decolonial theory of Walter Mignolo³ (Mignolo, 2012), *Post African Futures* as a framework has been constructed in a response with a community of practitioners across the continent. The path towards *Post African Futures* is therefore built on repercussions and interactions.

Decoloniality is referred by Nelson Maldonado-Torres as the “decolonial turn”; in this he indicates that it cannot be described as a field per se. In *Thinking through the Decolonial Turn: Post-continental Interventions in Theory, Philosophy, and Critique* (Maldonado-Torres, 2011) Maldonado-Torres states:

Different from these other turns, however, the decolonial turn has long existed in different ways, opposing what could be called the colonizing turn in Western thought, by what I mean the paradigm of discovery and newness that also included the gradual propagation of capitalism, racism, the modern/gender system, and the naturalization of the death ethics of war. [... the] premise or fundamental hypothesis is that the decolonial turn is anchored in specific forms of scepticism and epistemic attitudes out of which certain critical questions and the search for answers are generated. [...] Arguably, because of its emancipatory goals and its suspension of method, the decolonial turn cannot be fully contained in single units of study, or captured within the standard division of labour between disciplines or areas in the traditional arts and sciences. What is at stake is the larger task of the very decolonization of knowledge, power, and being... (1)

Maldonado-Torres goes on to explain:

Anti-colonial and decolonial political, intellectual, and artistic expressions existed before, but not necessarily in the same amount, or with the same degree of self-awareness and regional and global exchanges as in the twentieth-century, when one can refer to an increasingly self-conscious and coalitional effort to understanding decolonization, and not simply modernity, as an unfinished project. (2)

Decolonisation, as Torres states, has been in effect for quite some time; the decolonial turn, however, is newer and is particularly focused on shifting epistemic attitudes. In this thesis I

³ The term “actional methodologies” is used by Walter Mignolo in identifying locations for knowledge construction and transfer outside structures of Western scholarship.

engage the principles of decolonising methodologies and point at instances of alternative forms in extension of the decolonial turn.

Demonstrating the presence of actional methodologies,⁴ *Post African Futures* was also the title of both a conference panel held in late 2014 and an exhibition held in early 2015. The conference panel was an early interrogation of *Post African Futures'* presuppositions. Following this, the exhibition was designed as a mechanism for practitioners from across the continent to respond to the developing positions of *Post African Futures*. The exhibition participants (artists and creative technologists) thereby contributed to *Post African Futures* as a framework, many doing so by actional means. The exhibition, held at the Goodman Gallery in Johannesburg in May 2015, was therefore in its own right a culmination of findings, which contributed to the overall outcomes of the research.

I developed the pre-suppositions for *Post African Futures* through a series of investigative interviews in Johannesburg and Nairobi in the lead-up to the conference and exhibition. I used the interview findings to cement an understanding of unique *African cultures of technology*, on which the pre-suppositions were built. Content analysis of the interviews assisted in identifying crossovers between Nairobi's and Johannesburg's cultures of technology. Comparing the regional trends of each allowed for an understanding of actions that attempt an ideological decolonisation of the digital, and thereby offer a firm critique of the globalised information economy.

The primary concern of *Post African Futures* is a jettisoning, in contemporary scholarship, of Africa's critical creative position on technology and its speculated upon future. The research and methods presented in the chapters that follow will show that *Post African Futures* represents a new wave in contemporary African culture and scholarship. By extension *Post African Futures* holds in its form a critique both scholarly and methodological of the globalised West and its adjunct in the digital and technological.

⁴ Again in extension of Walter Mignolo and the identification of alternative knowledge construction and transfer.

1.1.1 Structural Outline

The thesis is organised into four primary chapters; each progressively maps a path towards *Post African Futures*.

The first chapter acts as an extended introduction and to situate the research within a history of scholarly engagement on Africa. It goes on to locate the origins of the research and how I position myself and my interests in the project in a South African academic context. The chapter is thereby made up of two primary parts: *1.2 Situating the Research* and *1.3 Situating the Author in the Research*. In the former, I frame research within a narrative of scholarship on Africa, and follow this by positioning the histories of technology and culture in Africa in relation to this tradition. The aim of this is to highlight concerns around knowledge and ownership. Much like an architectural foundation, the first chapter creates a foundation onto which the body of research is critically and contextually built.

The second chapter describes the methodological frameworks. This chapter has four parts: *2.1 Introduction*, followed by *2.2 Decolonising Methodologies*, which explains the methodological principles. This is followed by two primary methodological divisions in the research: *2.3 African Cultures of Technology: Knowledge from the Field*, which describes the fieldwork and initial research enquiry and *2.4 Post African Futures: Critical Responses*, which describes the call for responses and the exhibition as a research method in light of decolonising methodologies.

Chapter Three focuses specifically on the outcomes and analysis of *African Cultures of Technology* – the part of the research that focuses on fieldwork. Focusing entirely on fieldwork conducted in Nairobi and Johannesburg. In this chapter there are three primary sections: *3.1 Fieldwork Introduction: A Guide to Nairobi and Johannesburg*, in which I describe why these cities were chosen as cases. In this I additionally position each city within the framework of ‘African Urbanism’ as a scholarly engagement with African cities. *3.2 Fieldwork Findings: Themes, Trends and Relational Maps* explores the outcomes of the fieldwork in each city. *3.3 Shared Trends, Actional Methodologies and Misplaced Afro-Futurism* comparatively explores the findings and shows how they led to understanding and

identifying actional methodologies (in line with decoloniality) and the development of the premises of *Post African Futures*.

The fourth chapter focuses on the actions and outcomes of the responses in the *Post African Futures* conference panel and exhibition. In this there are two primary sections: 4.1 *Introduction: Guide to Actional Methodologies in Post African Futures*, which sets out the actional methodologies and where they are present in both the research and community practice. The second, 4.2 *Post African Futures*, address the development of *Post African Futures* both as a notion and a framework, focusing on the contributions towards it from the conference and the *Post African Futures* exhibition.

The fifth and final chapter is a concluding chapter in which I formalise the contribution of *Post African Futures* to new knowledge.

1.2 Situating the Research

As previously identified it is important that this project be situated within scholarship on Africa. This has been made particularly evident to me when I have had the opportunity to present the project's initial precepts in Euro-America. An advantage of the Planetary Collegium⁵ is the three annual presentations at international conferences of research in progress.⁶ On almost all of these occasions (and others), I have, however, found there to be a great deal of misunderstanding and misconception about Africa, its regions, peoples, cultures and consequently its contemporary societies in relation to technology use and technology culture. This, as will become more apparent, is the consequence of the positioning of Africa and its cultures into Western scholarship historically through colonialism. The unfortunate result being that non-Africans rarely look beyond a limited conception of the continent, its knowledge systems and philosophies of culture.

The limiting perspectives encountered when presenting at international conferences did, however, help formalise an approach to positioning this research alongside Western scholarship, rather than in it. It will therefore be necessary to pull apart what Africa is perceived to be, before being able to adequately present what it is. This chapter acts to locate this research in this manner and thereby identify where misconceptions arise.

This first chapter is made up of the following sub-sections: *1.2.1 Framing the Research within a Narrative of Scholarship on Africa*, in which I engage the views of African critical theorists Achilles Mbembe and Sarah Nuttall in an exploration of the concerns of Africa's is positioning in scholarship. *1.2.2 Questions on the Position of Technology and Culture in Scholarship on Africa*, in which I discuss more closely the positioning of historical scholarship on Africa in relation to technology and culture. Both these act to contextualise and do not directly address the development of *Post African Futures*, but rather lay the groundwork for what is to come.

⁵ The PhD programme in which I am enrolled and through which I am writing this research.

⁶ See section *1.3 Situating the Author* for a full list of conference presentations.

1.2.1 Framing the Research within a Narrative of Scholarship on Africa

Ultimately the instigation and development of this research, its project and ongoing trajectory were driven and formed by need – a golden thread⁷ that has been woven through the research from its inception, through the development of its methods, the establishment of its defining theory and finally in addressing the consequences of its implementation. It is the need for context specificity and sensitivity. This thread, as well as the importance of local knowledge systems, is not the principal subject of this research, but is essential to its development. Through this chapter I identify this thread and how it weaves through the project; not only through its content, but more strategically through its methods. It's golden yellow reflective glint is ever in sight; when not in keen focus, it will certainly be in this thesis's peripheral vision.

Africa, its countries, people, cultures and histories are all too readily defined in generalisations, and particularly those affirmed by the globalised histories of Euro-American perspectives on Africa. Therefore writings on contemporary Africa pivot against the writing of Africa by colonialism and what has now evolved as neo-colonialism in globalisation. In consequence, African scholarship is dominated and corralled by the post-colonial, in which there is a tendency, as in most rebuttals, to circle in on itself and not easily evolve new scholarship. Achille Mbembe and Sarah Nuttall, in "Writing the World from an African Metropolis" (Mbembe, 2004), state that "Africa as a name, as an idea, and as an object of academic and public discourse has been, and remains, fraught"(348). Mbembe and Nuttall affirm that in contemporary scholarship, Africa can no longer be thought of in terms of the orientalism framed by Edward Said as West versus non-West. Of this they state:

So overdetermined is the nature of this sign that it sometimes seems almost impossible to crack, to throw it open to the full spectrum of meanings and implications that other places and other human experiences enjoy, provoke, and inhabit. The obstinacy with which scholars in particular (including African scholars) continue to describe Africa as an object apart from the world, or as a failed and

⁷ The golden thread is a metaphor for the continuous focus and assessment of context sensitivity in this research.

incomplete example of something else, perpetually underplays the embeddedness in multiple elsewheres of which the continent actually speaks. (348)

The primary problem lies in the epistemological and ontological, in which forms of scholarly analysis and frameworks of African scholarship do not adequately contain the subject. The consequence of this is an underplaying and simplifying of the subject through inadequate comparisons and incomplete histories. This is certainly the situation I have encountered in trying to adequately write on and from an African perspective. There is an interstice between what is observed and the ability to sufficiently write it within existing frameworks.

It is from these concerns that a need has arisen, a first recognition of that golden thread, a need to adequately contain a solution towards context specificity and sensitivity in the frameworks and methods of my research; for frameworks and methods that more adequately contain the African subject. As a way to better explain these same concerns, I refer to and draw on Mbembe and Nuttall who have by way of analysis pointed to particular failures that indicate scholarship's inability to contain and represent the subject's complexity; to give, in their words "sufficient attention to that which is unknown about it" (348). In this section I use their analysis to frame the position that I have found myself in, which will assist in explaining the particular trajectory I have taken in the development of my research.

Mbembe and Nuttall (Mbembe) point to what they claim to be a number of failures in traditional scholarship. The first being the inability in traditional scholarship to acknowledge the creativity of practice present in a society's construction. The constant act of understanding and imagining of itself. This they term as society's undergoing an "act of composition", which Mbembe and Nuttall explain is always ahead of knowledge being produced on the object (348). They describe this "act of composition" as "the capacity to continually produce something new and singular, as yet unthought, which cannot always be accommodated within established conceptual systems of knowledge" (2004: 349). A situation particularly pertinent to Africa, which has long been written about and studied largely from the perspectives of Western epistemologies.

The first failure that Mbembe and Nuttall describe leads to the second. This they identify as a reliance on anthropology and development studies as a locus for scholarship on Africa (349). Again, this is something I, too, have battled with in the development of this research – a presumption that research in Africa should be grounded in an anthropological encounter with African culture. Mbembe and Nuttall state:

In spite of recent efforts in anthropology, in particular, to use concepts that allow for a creative tension between subject and object (the reflexive turn), these two disciplines' foundational assumptions are still the unconscious belief that particular modes of describing reality are appropriate to "modern" societies, on the one hand, and to nonliterate, underdeveloped, and "residual" worlds, on the other hand. In this view, there can be no authentic description of Africa that does not touch on witchcraft, kinship, poverty, or chieftaincy. This compartmentalization of knowledge undergirds the obsession with Africa's uniqueness, and it feeds the overwhelming neglect of how the meanings of Africanness are made. (349)

The reader will find, in the progression of this research and the evolution of its methods, a distinct sensitivity to the positions of anthropological and developmental studies and their effect on how Africa is understood. This sensitivity is again a glint of that golden thread.

For example, in South African and Kenya I found myself more than once led to the influence of an African urban youth. A generation of influencers at the forefront of how technological, aesthetic and cultural engagements are being formed in relationship to older African traditions. This group are essentially engaging an "act of composition" that is changing the way African societies define themselves in the state of technological globalisation. Scholarship on Africa fails to contain their context or their intentions, viewing instead the relationship to African traditionalism through the lens of colonial anthropology, or the relationship to technology through the lens of First World development studies. Furthermore, the activities of these groups are located in two African urban metropolises, both of which are complex cosmopolitan assemblages in their own right, that are more often than not addressed through the lens of Euro-American urbanism rather than

interrogated for the complexities of the spaces themselves.⁸ My reading and inclusion of Mbembe and Nuttall act to help me define and supporting an understanding of the crisis in scholarship on Africa, and what they claim to be its inability to contain that which “binds societies made of multiple assemblages and disjunctive synthesis” (349).

Due to the above concerns, a theoretical analysis of the dangers of what Mbembe and Nuttall refer to as the “compartmentalization of knowledge” was part of the process of developing this research. Mbembe and Nuttall’s accuracy in identifying how this “feeds the overwhelming neglect of how the meaning of Africanness are made”, resonates with my own findings and research development. An acknowledgement of these concerns is thereby made in the methods of my research and the exploration of a situated knowledge. Within a situated knowledge there exists the possibility for a better understanding of the construction of meaning and, with this, its course towards becoming instrumental.

The third and last failures presented by Mbembe and Nuttall concerns the crisis of representation (2004: 350). Representation is dealt with in my research in two forms. The first concerns what Mbembe and Nuttall address as questions of scholarship and the human sciences in Africa. They state,

As far as the nature of theory and the nature of Africa are concerned, functionalism and instrumentalism have always been the order of the day. At no time have the analytical and normative strands of functionalist, neoliberal, and Marxist political economy been eclipsed by cultural studies, postcolonial, or postmodern criticism. As the African predicament becomes ever more complex, the manifestations of the crisis are to be found in a loss of the virtues of curiosity and astonishment at what the (African) world might be. (350-351)

For Mbembe and Nuttall, the concern is that for too long Africa has been addressed in the light of what they term “difference” and they follow with an entreaty to rather understand Africa within a “mutual sharing of the world”. This is not, however, as they state, with the intention to diminish its originality or its historical distinctiveness (2004: 350), but to better

⁸ A closer look at African urbanism is taken in Chapter Two, where the two primary research locations are explored in more depth from this perspective.

frame writing about Africa in light of Western scholarship. It is no simple task to write outside of the functionalism they refer to, which as they imply, has long been an un-eclipsed method of performing scholarship on Africa. What Mbembe and Nuttall refer to is the consequence of there being no distinct framework for what may be termed 'African Knowledge' or 'African Philosophy' in traditional scholarship.

A great deal of work has been undertaken in the last ten years to begin to formalise what may be termed African philosophy(s). These studies largely explore philosophies that come from Africa as a location or the notion that African thinking is distinct from other thinking. Much of this pertains to the public and political function of African philosophical thought and the strong role of communality in African ways. The former arising from the fact that some of Africa's greatest thinkers have been revolutionary leaders, and the latter drawing on older African thinking towards socio-cultural organisation. In this research, and in support of a particular critical trajectory in positioning African knowledge against Western knowledge systems I have found it hard to draw on this largely new field. I have however adhered to the frameworks established by Valentin Mudimbe in the books *The Idea of Africa* (Mudimbe, 1994) and *The Invention of Africa* (Mudimbe, 1988) in which he carefully positions African systems of knowledge within and against knowledge systems that have grown from a Western ontology. An ontology that has been posited as foregrounding and leading since Western Enlightenment.

In some ways Mudimbe presents what Mbembe and Nuttall have described as "differencing". Mudimbe's contribution, however, is to help understand African knowledge systems in the context of Western constructs. In so doing he also critiques traditional scholarship; highlighting the crisis of representation within it. The purpose of exploring these views is not an attempt to interfere with the Western construct, but rather, as the Comaroffs state in their proposal for a theory of "Afro-modernity"⁹ (Comaroff, 2013) to allow for an addition to a world-historical process. An addition which more adequately keeps in sight the golden thread of context specificity and sensitivity.

⁹ This will be addressed further against Walter Mignolo's theory for the methodologies of the decoloniality.

As mentioned previously, this research deals with the crisis of representation from two perspectives. The first, as presented above, is that of representation within traditional scholarship. The second is the question of what it means to be African, from the perspective of the artists and creative technologists working outside of scholarship (although affected by it). Of particular concern is what it means to be African within a globalised media culture. One of the challenges of this research has been to adequately write on a situation that vacillates between an outmoded, potentially failed scholarly response and new positions within cultural globalisation that have been contingent on that response. Both are intertwined, though they occupy different strata of engagement. This brings us back to Mbembe and Nuttall's first point of failure, the failure to contain an "act of composition" from the perspective of the African subject. This for me underlines the importance of method. In Chapter Two I unpack these in some detail, focusing on the role of community responsiveness and decolonising methodologies in extension of this concern.

The exclusion of an interweaving golden thread of context specificity is unfathomable when engaging African concerns, and the concerns of a Global South, in a globalised information culture. The golden thread is therefore paramount to the construction of the *Post African Futures* framework. *Post African Futures* interrogates these histories while keeping the golden thread in sight, all the while unravelling unwritten histories and finding new voices. Mbembe and Nuttall state:

The refusal to recognize that all knowledge is contingent on other knowledges has left the continent at the mercy of stolid analyses on the one hand and rapid surveys, off-the-cuff remarks, and anecdotes with sensational value on the other. (2004: 351)

The question I have asked myself with regard to the development of both the method and the content of this research, is how this project can be performed to help meet the challenges that I have encountered in scholarship, and those laid out by Mbembe and Nuttall.

There have been points in this research process when I have seen the methodological process as the primary contribution to new knowledge. For a non-African reader or a reader

unfamiliar with the continent's concerns, this would seem plausible as I have chosen to evolve my methods in response to very particular position. But this approach would not be new to an African researcher or scholar. The three failures presented by Mbembe and Nuttall quite clearly emphasise that a sensitive methodological approach is required. Or, at very least, they call for a constant consideration that traditional scholarship has a contingent relationship to Western knowledge systems and ontologies. This necessity does not, however, qualify the methodological process to be a primary contributor; in fact it suggests the opposite. If I were to focus primarily on the methodological process I would fall into the trap that the Mbembe and Nuttall's list of failures make so abundantly clear; that such a focus makes for a tendency to favour knowledge about Africa versus knowledge for Africa. It is clear that African researchers are compelled without question to both produce new research for Africa and simultaneously deal with inconsistencies of historical scholarship. What is presented going forward in this thesis is therefore not only a sensitive and evolving methodological approach, but interlinking research that is able to describe the critical intersection of contemporary African culture and technology in a time of a globalised information economy.

The following sub-section *1.2.2 Questions on the Position of Technology and Culture in Scholarship on Africa* continues in this vein as an introduction to existing frameworks in scholarship on technology for Africa and its regions, with a particular focus on histories of the social sciences. It presents a critical view that addresses concerns about representation; dealing with the second and third failures identified by Mbembe and Nuttall: a reliance on anthropology and development studies as a locus for scholarship on Africa; and the over-use of functionalism and instrumentalism when positioning Africa in the light of difference.

1.2.2 Questions on the Position of Technology and Culture in Scholarship on Africa

1.2.2.1 A Question of Knowledge Systems

In a search of historical positions particularly on technology and culture within scholarship on Africa, I was not surprised to find that most of what exists is either archaeological, anthropological or falls within anthropologically-led African art history. All of

which, apart from being written from mostly Euro-American perspectives, is predominantly empirical and largely non-theoretical. The situation is of some concern as it means that foundational views in scholarship on traditions of cultures of technology are probably limited in relation to understanding African knowledge systems.

In this sub-section I give a quick review of the historical scholarship on culture and technology in Africa. This will make it clear that only research done in the last fifteen years begins usefully reflecting African knowledge systems in relation to technology. This only reiterates Mbembe and Nuttall's criticism of scholarship on Africa and the difficult position from which we work.

In my research, I found that archaeological and anthropological scholarship that predates 1995 deals with a narrow band of subjects in relation to technology in Africa; these are grouped into two main areas. The first is a body of writings on metal smelting in the early iron age; which is largely due to the archaeological excavation and 'discovery' of many iron age smelting sites across the continent. Written from an archaeological perspective, it aims to emphasize the significance of the sites on the continent, as a sign of technological ability. In this there is unfortunately very little attention paid to socio-cultural or socio-political events or concerns around their presence. One does, however, find related research that explores large twelfth and thirteenth century African kingdoms¹⁰ found across Southern Africa that concur with the history of these smelting sites. These are of particular interest due to their use of gold amongst the metals. The various speculations about the role of these kingdoms, however, rarely speaks to what role technology had in the societies.

The second body of writing relates to a much later and very different history, and is situated mostly in the anthropological social sciences and media studies. This addresses the role of broadcast media as an appropriated technology in the movements and organisation of people in the various African wars of independence. The writing deals predominantly with radio, referring mostly to the struggles in the 1960s and 1970s in Kenya, Zimbabwe,

¹⁰ Includes research on the Mapungbwe and Great Zimbabwe sites, well known for their stone construction and indications of gold and ivory trade between these inland sites and the Swahili and East African / Arabic coastline.

Angola and Mozambique – countries that gained independence much later than those in Central and West Africa.

This history is of some significance to a contextualisation of contemporary media practices in the focus regions. I will therefore look at it in more detail alongside the findings of the fieldwork in Chapter Three. Its particular relevance to the fieldwork is in its comparison of the media histories of Kenya and South Africa. The differences in these histories has a major impact on understanding a difference in ‘cultures of technology’ between the two nations, and helps to build *Post African Futures*. More generally and in relation to Mudimbe (and not the writings in media studies), ‘modern’ media histories of different African nations are useful to Mudimbe (Mudimbe, 1988) when he attempts to define an African ontology. In this he urges the reader to see the potential of rebellion and resistance to be an African knowledge system. In this he presents an insurrectionary form of knowledge that carries with it philosophical weight.

The value of both instances mentioned above (mine and Mudimbe’s) are in reflection, however. Earlier scholarship in the anthropological social sciences and media studies didn’t deal with the subject from an African ontological perspective. Rather its position was generally one of ‘technology appropriation’, that is, the appropriation of technology from the West to perform actions similar to those enacted in the civil rights movement, which are also perceived to have been appropriated from the West.

In addition to these two primary groupings of scholarship – that deal with Africa, and the history of culture and technology – African art history makes an attempt to speak to technologies via the making of cultural objects. Prior to the 1980s, however, this took a similarly anthropological form and dealt with technology as a cursory part in the construction of cultural objects, without delving into knowledge systems that might include technology. In African art history the analysis of decorative forms takes precedence over addressing the epistemological concerns of objects even as ‘cultural technologies’ within a larger technology integrated knowledge system.

In scientific scholarship, moreover, the combination of empirical methods and an overwhelming focus on Western science makes views on the history of technology or technical cultures in Africa similarly rare. In the last ten to fifteen years, however, there has been a growing interest in mathematics and complex systems in non-Western cultures. This move has contributed to opening up the doors of exploration for philosophical and epistemological concerns with technology. Ethno-mathematics is a forerunner in this field and has transformed the view of African knowledge systems in relation to technology and culture.

A good example of this can be found in *African Mathematics: From Bones to Computers* (Bangura) by Mamokgethi Setati and Abdul Karim Bangura. In this, the authors explore Africa as the home of some of the earliest mathematics in human history. The Lebombo Bone being a case in point. This is a bone marked with counting marks dated to around 35,000 BC, which was found in Swaziland. The book explores a number of instances of historical mathematics specific to the continent, such as: the knowledge that helped ancient Egyptians to track the Nile; the Maghrebian contribution to mathematics in inheritance division, water table calculations and the composition of medicines; and mathematical structures found in geometric forms in African art. In the latter, knowledge of fractals, combinatorics, bifurcation, tiling and tessellation are found in their decoration and reflect an extended knowledge system. What is most significant about these particular findings is that the forms are found not only on cultural objects, but also in religious activities, games and communal organisation systems (Ezeanya, 2014), thereby indicating the importance of mathematics to a broader configuration of African cultural practices.

The growing popularity of historical instances of African mathematics was instigated through a book titled *African Fractals: Modern Computing and Indigenous Design* written by Ron Eglash¹¹ (Eglash). Eglash is perhaps the most quoted Ethno-mathematician on Africa. His research describes the presence of mathematical forms, evolving largely from self-organising systems, that are found in almost everything from traditional African methods of constructing homesteads to religious rites. In *African Fractals*, Eglash draws not only on

¹¹ Who gained fame for his well-known 2007 TED Talk on *African Fractals*: https://www.ted.com/talks/ron_eglash_on_african_fractals.

mathematics but also on political, cultural, religious and computational disciplines to describe his findings and their implications. Eglash additionally presents a clear trajectory of the transfer of these methods: moving from Africa to the Arab world, through Spain and eventually forming part of what is known to be the dominant trajectory of European mathematics.

What is most significant from Eglash's study is that he describes these forms and their function as being led almost entirely by egalitarian concerns. An emphasis that evolves from understanding their use through a social rather than a purely material culture. Eglash's study therefore shows that the approach to studying African mathematical forms has a major impact on how they are understood. Historically these forms were studied and understood through a narrow lens that assumed basic material interests and organisational principles that reflected those of the West.

A case in point is a comparison Eglash makes of the fractal-like structure of pre-colonial African cities to that of grid system of European and American cities. He states that Euro-American cultures are organised by what anthropologists call a "state society", indicated by a political hierarchy and labour divisions (2002: 39). While pre-colonial African societies are organised through smaller, decentralised groups in a hierarchy dictated by a Chief. This organisation is reflected in the architecture of the respective communal living spaces. In African architecture, Eglash points to the presence of fractals rather than a grid system. He indicates two primary types, one that orientates in a circular construction growing larger towards the house of the chief and his family (Figure 1) . And a second that orientates around a symbolic and spiritually significant 'altar' as a representation of the house. This is then contained by a house structure, which is then contained by a compound, which is then contained in a larger compound that holds iterating houses and so on (see Figure 2).

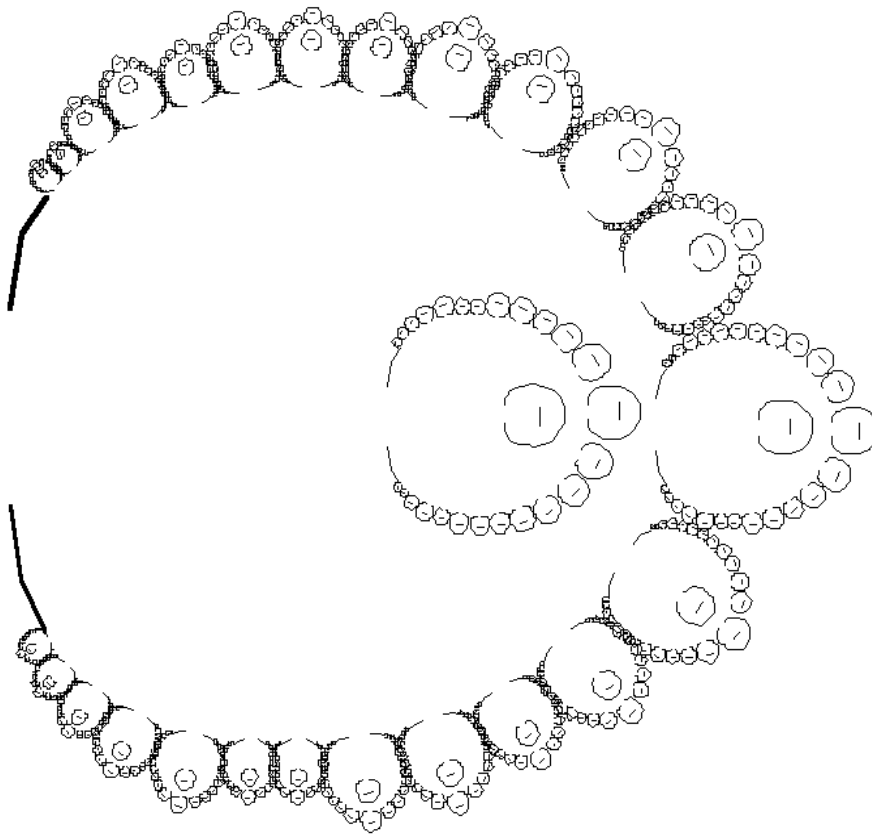
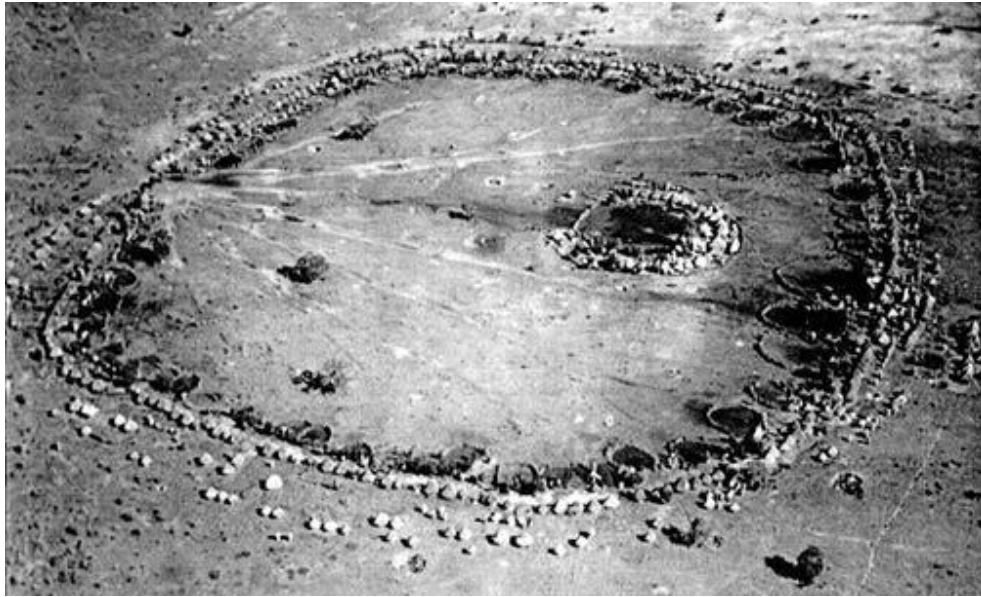


Figure 1: Aerial photo of Ba-ila settlement, before 1944 & fractal model for Ba-ila village.
Source: Eglash, African Fractals website (http://csdt.rpi.edu/african/African_Fractals/)
accessed July 2017: Muse de l'Homme, Paris.

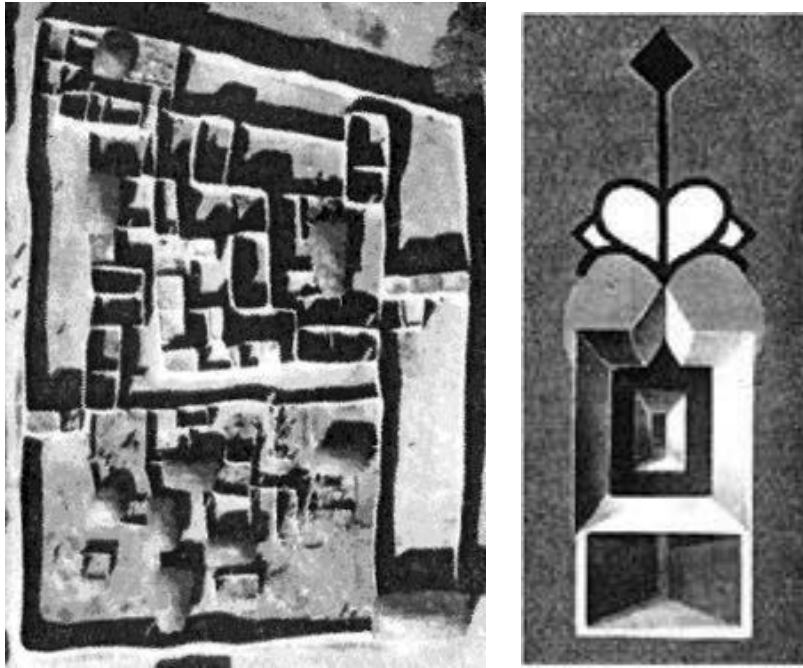


Figure 2: An aerial view of the city of Logone-Birni in Cameroon. This is the largest building complex, the palace of the chief, alongside an image of its Royal insignia. Source: Eglash, [African Fractals](http://csdt.rpi.edu/african/African_Fractals/) website (http://csdt.rpi.edu/african/African_Fractals/) last accessed July 2017: American Geographic Institute.

Eglash finds that these patterns allow for easy and organic construction that does not disturb or interfere with a natural hierarchy and the subsequent growth of that family or community. Eglash further points out that this organic construction allows both men and women to build and maintain homes, as there are no strict top-down labour divisions.

Eglash additionally puts great emphasis on doubling: a base two numeric system, which he states is very prevalent in almost all African mathematics and can be further seen in doubling as a cultural theme: “the sacredness of twins [in some cultures], spirit doubles, and double vision with material objects”. Eglash, like Setati and Bangura, makes reference to the Lebombo Bone, but with particular emphasis on the presence of doubling in its markings (2002: 91). Doubling is identified as being particularly significant in divination and as part of an esoteric knowledge system. Divination and mathematical prediction also contains doubling. It is through divination that Eglash then traces the foundations for what is now known as the binary system. Eglash shows that logic and predictive systems in African mathematics are the cultural origins of digital computing today (2002: 101). Eglash further shows that African pattern making and performed number systems (as in the Lusona, described below) reflect an integrated knowledge system. This knowledge system,

he states, is present in too many instances of African culture to not be observed as African (2002: 118). An important point, that helps to distinguish the possibility of a unique African way of thinking about technology and the technical.

Another area of investigation with regard to the histories of mathematics in Africa can be found with *Drawings from Angola: Living Mathematics* by Paulus Gerdes (Gerdes). Gerdes writes on the Lusona (plural), mathematical drawings produced by the Chokwe of Angola. A Sona is a procedural drawing, drawn in the sand in a cultural story telling rite. Eglash refers to the Lusona, identifying them in the language of European mathematics, as recursively generated Eulerian paths (2007 68). They are complex procedural drawings that are constructed around a grid like pattern of dots, and can essentially be understood as performed algorithms that follow a narrated path. As a cultural rite, the Lusona challenge the computational skills of the narrator, and are generally performed as an initiating rite between different age groups. Eglash states that as geometric algorithms, “a Eulerian path provides a means to compare designs within a single framework, to show how increasing complexity can be achieved within the constraints of space and logic” (2002: 68). Gerdes’ *Drawings from Angola* presents these in the context of the Chokwe culture, along with three stories associated with three Eulerian drawings.

Outside of their significance in presenting African mathematics in a performed and complex cultural engagement, the Lusona have an interesting history in terms of how they have been documented. This makes the Lusona an important contextual case showing how African knowledge was represented in colonialism and consequently how this is translated into scholarship. This case, which I address fully in the following section, returns our focus to the golden thread and helps present the knowledge ecology around contemporary technology and cultural practices in relation to Africa. It is additionally important to note that Bangura, in a review of Eglash’s *African Fractals*, states that its “scientific work contributes significantly towards shattering long-held myths and misconceptions about Africans (both on the Continent and in the Diaspora), the most pervasive and pernicious of which is the notion of Africans as inactive agents in history – a people devoid of writing systems, technological background and culture” (Bangura, 2000).

These cases contribute to this research by showing what opportunities lie in investigating African knowledge systems when addressing technology. There is often a misconception that the contemporary use of digital technologies in Africa can only be viewed from the perspective of appropriation or adaptation of Western technology and Western knowledge. What this chapter will begin to show is that important regional experiences and positions should not be overlooked in favour of Western thinking and Western positions on technology.

1.2.2.2 The Question of Historical Positions on Technology

The Lusona are referred to in a paper written by Delinda Collier titled “From Hut to Monitor: The Electrification of Chokwe Wall Murals, 1953-2006” (Collier). In this paper Collier revisits the book *Paredes Pintadas da Lunda* (Painted Walls of Lunda) published in 1953 and written by the Portuguese anthropologist José Redinha. Colliers deals in this paper with Redinha’s interpretation of the Lusona, which he interestingly calls ‘wall drawings’, for the primary reason that the static form of the drawings was the only manifestation he saw and was allowed to access. Redinha encounters these drawings in his position as ‘museum’ director for the Diamang company compound in Angola. Of Daimang, Collier states:

In 1957, the Companhia de Diamantes de Angola [Diamang] completed a hydroelectric dam in north-eastern Angola, in the Lunda North province. [...] Diamang was a mammoth diamond extraction company in Angola during the zenith of Portuguese colonial rule. [...] It was a “state within a state” with its own police force, radio station, museum, health services, and agriculture. Eighty percent of Diamang’s workforce in the Lunda region was made up of the ethnic Chokwe group, a once powerful state that was defeated as the Portuguese made their final push into the interior of its massive colony. (online, n.p.)

In her paper, Collier explores the position of the anthropologist / curator Redinha, his representation of the Chokwe drawings and his inability to see them outside of a decorative function. Additionally and more importantly she uses this as an opportunity to explore what she calls a “scientific colonialism” performed by the Daimang company.

Reinha who was commissioned by the Daimang company as a cultural anthropologist, to document and engage local cultures, decided to engage the community by building a 'living' museum of Chokwe culture in the Daimang compound. As can be imagined this was met with resistance from the Chokwe community, who participated as little as possible in the construction of the museum and refused to give Reinha any insight into how the Lusona are performed. Collier takes Reinha's *Paredes Pintadas da Lunda* (Painted Walls of Lunda) and a 2006 revised edition of the book (presented at the 2006 Trienal de Luanda) as an example of the mediation of African cultures when aligned to Westernised media practice.

Collier states “[i]n colonial situations, the abstraction of information that develops with mediation is inextricably bound up with extraction of materials such as diamonds, achieved as it was most often through coerced labour and societal violence” (n.p.). Reinha, in his role as pseudo anthropologist and curator, constructed what he understood to be a 'real' presentation of Chokwe culture using audio recordings, film and the construction of the 'living' museums. This 'realness', Collier states, was supported by the assumed superiority of the logic of the media. Collier states:

The conditions that Daimang established were coterminous with the electrification of production and the ephemeralization of information. In the case of colonialism in Africa, the ghosting of indigenous media practices was not an unfortunate consequence of colonial rule, as most scholars of the time understood it, but rather an intentional divestment of indigenous populations of power by participation. The now common knowledge that Europe created the notion of Africa as practicing unchanging traditions amounted to the limited definition of medium in Africa to that of objects and performances as emblems of superstitious practices. Under that logic, they had to remain static. (online)

This “intentional divestment of indigenous populations of power of participation” did not allow those documented to participate in the media ecology of the time; rather it established through media a hierarchical separation of forms – something done in the practice of domination.

Through the case of the Chokwe people and their Lusona drawings, Collier critically explains the reasons behind the revisitation and renegotiation of older and traditional knowledge systems by contemporary African scholars and artists. This Collier describes as the “the continuous re-inscription of protocols of access to ghosts”, and introduces us to a level of concern around what does exist in scholarship and how as a resource, it is tainted by a different sort of violence.

As is becoming clear in this chapter, there is a paucity of plausible research in this area, most of which may be dominated by positions that present a rather serious and uncomfortable relationship between empirical research and historical approaches to African subjects. However before going forward it is important to complete this locating discussion by addressing the inherent consequences of Western philosophies of technology in relation to scholarship on Africa.

In a short editorial for *Society, Culture, and Technology in Africa*, S. Terry Childs (Childs) attempts to deal with cultures of technology in Africa from an archaeological perspective. Childs suggests the need to study the African subject as a socio-archaeological rather than a purely archaeological encounter. Childs puts particular emphasis on the importance of an integrated perspective, referring to this as a “sociotechnical system”,¹² stating:

[T]echnology is completely interactive with the socio-cultural context in which it is developed and changes. Local social relations, economics, politics, and ideology impact and help structure the behaviour involved in technological process and vice versa. (1994: 8)

Childs’ socio-technical system is a direct reference to an earlier article by Bryan Pfaffenberger, titled “Fetished Objects and Humanised Nature: Towards an Anthropology of Technology” (Pfaffenberger, 1988). Pfaffenberger proposes, within a framework of the philosophy of technology, an opposition to the two dominant Western definitions that

¹² It is important to note that while Childs’ editorial calls for well considered and more theoretical explorations, the papers that follow in the journal do not contain any theoretical explorations and rather impose a framework of empirical analysis.

contain technology; namely technological determinism and technological somnambulism. Pfaffenberger proposes in his influential paper to “illuminate the unreliability of the culturally-supplied Western notion of technology” (1988: 237). A notion of technology he believes has its roots in Christian metaphysics. He states that this can be seen in its positioning of technology as a domination of the natural world, rather than as an integrated and evolving socio-cultural construct. For Pfaffenberger, the definitions of technological determinism and technological somnambulism show an underlying unity stemming from the roots of Christian metaphysics. He states,

What is so striking about both naive views of technology, the view that emphasises disembodied ways of making and doing (technological somnambulism) and the other that asserts technology’s autonomy (technological determinism), is that they both gravely understate or disguise the social relations of technology. (1988: 241)

Technology, in his view, is shaped from interaction within a network; a network of interrelated components that include economics, politics, culture and society. Pfaffenberger believes that technology should be studied as a product of human choices and social processes. This social construction of technology being the consequence of the weight of particular social groups in selecting one technology over competing forms. Pfaffenberger states:

The social construction of technology, in sum, occurs when one set of meaning gains ascendancy over other ones, and wins expression in the technical content of the artefact. A technology is thus [...] ‘hardened history’ or ‘a frozen fragment of human and social endeavour’ (Nobel, 1986: xi). (1988: 240)

For African research, Childs encourages Pfaffenberger’s approach to better perform socio-archaeology. For Childs it is a view that assists a non-Western perspective on African culture in relation to technology and how it is perceived in a largely Western field. And yet while this view may offer alternative views on the African subject, it fails to unveil the consequences of the determinist position.

Pfaffenberger proposes that technology should be seen in a system of related social behaviours that, like cultures, are passed through a knowledge system. When we look at Eglash's findings, which see pre-colonial technology systems as embedded in socio-cultural forms and the subsequent influence of colonial knowledge systems on how technology is understood in Africa, we see not only an interstice between knowledge systems, but a domination of one over the other.

Pfaffenberger states,¹³ “[t]echnology can be defined as a set of operationally replicable social behaviours: no technology can be said to exist unless the people who use it can use it over and over again” (1988: 241). Essentially, knowledge and knowhow of technology require codification or verbalisation in order to be effectively transmitted. This same line of thinking should be applied not only to understanding the pre-colonial and colonial systems, but also to how these systems have been maintained or lost. What the histories very quickly reveal are the consequences of imposing a knowledge system. Where cultures and societies have not evolved that knowledge system themselves, they battle against it. This makes the evolution of a contemporary and African cultural of technology as a ‘system of knowledge’ that much more worthy of attention.

Pfaffenberger highlights *systems of knowledge transfer* as a key concern for the socio-cultural integration of technology. This sentiment is shared by W.K. Omoka in an article titled “Applied Science and Technology: A Kenyan Case Consideration for their Interrelationship” (Omoka, 1991). The article is found in a small collection of papers titled *Culture, Gender, Science and Technology in Africa*. Omoka's particular argument is that the view of technology as an applied science is a distorted principle when addressing the relationship between science and technology for regions of Africa. Like Pfaffenberger, Omoka's in-depth argument primarily criticises the deterministic view of technology, which is further distorted when addressing technology as an applied science.

Omoka's more contemporary and somewhat politicised position is that a much deeper interrogation of a society's culture, histories, traditions and subsequent systems of

¹³ In relation to Layton in “Technology as Knowledge” (1974).

knowledge transfer is needed to understand the role of technology in Africa. The article argues from various positions against the increased dependence on the relationship between science and technology to erroneously foster, as he states “[...] a societal technologism *a priori* that tenaciously precludes people from the raw material of technology in respect of the instrumentation of reason as one of the pre-requisite conditions to the development of the nation” (he refers here to Kenya) (1991: 15). Omoka is speaking here of the trend among African states to place an excess of value on the notion of “development” established by Western nations. A position he believes disenfranchises people from technology and appropriates it rather for a race for acknowledgement within Western research norms.

Pfaffenberger states:

Technology, defined anthropologically, is not material culture but rather a total social phenomenon in the sense used by Mauss, a phenomenon that marries the material, the social and the symbolic in a complex web of associations. A technology is far more than the material object that appears under the sway of the Western penchant for fetishism, the tendency to unhinge human creations from the social relations that produce them. (1988: 249)

Pfaffenberger’s reference to Western fetishism derives from the Marxist framework, in which the fetishisation of commodities sustains capitalist systems.¹⁴

In Childs’ editorial, the existence of a long-standing acceptance of the intimate relationship between technology and society in Africa is explained. In the tradition of archaeological research, Childs presents proof of this relationship between technology and society as found in two instances. The first appears in ethnographic record keeping:

¹⁴ To be clear, this is not to be confused with fetishised or ritualised objects written about in African art history. African fetishisation is the imbuing of the socio-cultural and mystical through ritual to perform knowledge through cultural objects, and not the “tendency to unhinge human creation from the social relations that produce them”(249).

[E]xplorers, missionaries, administrators, and anthropologists [...] defy any notion that necessity was a driving force behind the material and behavioural choices made during the technological observations observed or that technology dictated social life in Africa. The social political relationships between the participants, as well as the significance of taboo's, control over technical and esoteric knowledge, scheduling other activities, and ritual were much more evident than basic necessity. (8)

The second, Childs states, is the opportunity that African scholars have to “witness and experience the operation of pre-industrial technologies in their social and natural contexts” (8). It is interesting to me not only that both of these demonstrate the limited resources on which research is based, but also that the latter, importantly, draws attention to tradition as a location for the transfer of knowledge.

It is important to note at this point that ‘tradition’ in contemporary Africa does not hold the same rather reduced significance as it does in contemporary Euro-America. In many contemporary African cultures the ‘traditional’, also referred to as ‘indigenous culture’, is still very much entwined with the present as a continuation of the socio-cultural, and acts to transfer a knowledge system. Its significance however, may well be the result of the deteriorating influences of colonialism on African cultures. At this juncture however, rather than dwell on the causes, it is important to emphasise the existence of this system of knowledge transfer and that it is strongly socio-cultural. In light of Pfeffenberger and in going forward, the presence of a strongly socio-cultural knowledge system and the opportunities it offers should not be read – as they are in the capitalist scheme - as ‘underdevelopment’. Rather, what needs to be read is the potential of a culture of technology that evolves differently. One that contains the possibility for a distinction from determinist and material orientations, or that is, as Eglash identifies, egalitarian at its core.

Since the focus of this study is contemporary practice, the intersection between contemporary African engagements with technology and contemporary Euro-American positions are of some importance. Since colonialism and Apartheid have ended and the societies of Kenya and South Africa have begun to define their own contemporaneity, it is evident that they may not necessarily follow a ‘modernist’ trajectory as it occurred or is

defined in the West. Additionally, modernity is a difficult notion in African histories. Walter D. Mignolo makes a very good argument, showing that for African history coloniality and Western modernity are one and the same. Comparing Western modernity to development in Africa only addresses the West's development and is not valid for Africa (Mignolo, 2012).

Returning to Childs, we see that an over reliance on historical anthropological and archaeological for addressing African positions can lead down many difficult paths. An example of this is presented by Childs as the occurrence of particular trends in the field. One particular trend, one that has been quite influential in creating a lens through which African cultures are most often viewed, is the significance of style. This is when pattern making and decoration that accompany technological artefacts are given more prominence than the processes and meaning behind them. Childs states that this trend is advocated as contextual to understanding how social, material and symbolic factors influence stylistic choices. Childs' concern is that while the resultant research may begin as theoretical discussion, it can never be fully theoretically contained as it too closely deals with trends and fashionable issues. It thereby excludes a formulation of related experiences such as "politics, marking ethnic identity, structuring social status and age, or constructing social values". This may have value in bringing African into a global conversation, but all too often important experiences and positions are overlooked.

This is a good point to move this contextual discussion understanding some concerns about how African art history has seen African art and culture from a predominantly Western perspective. A large part of what I am about to present can be predicted based on what I have presented above. Yet it is important to point to these concerns in order to further locate this research.

1.2.2.3 The Question of African Art History

African art history has been influenced by the ways in which archaeology and observational anthropology are conducted. The dominance of these methods has been challenged in recent years and their consequences addressed in light of growing criticism evolving from subaltern studies. The historical concerns are, however, still significant.

Classen and Howes, in “Museum as Sensescape: Western Sensibilities and Indigenous Artefacts” (Classen, 2006), refer through the history of the museum to the concerns presented by African art history as a field. In this sub-section I briefly review key aspects of this history in light of what I have already indicated about historical anthropological research on Africa. Again this is an act of locating the research within a history of scholarship on Africa. I will, in later chapters, look more closely at the concerns of contemporary African art with particular focus on Johannesburg and Nairobi.

Classen and Howes indicate that the origins of the museum are found in eighteenth century collectors’ rooms. They state:

Artefacts from exotic lands offered Europeans the possibility of experiencing a safe but nonetheless potent contact with the “other world” from which they sprang. It mattered little in many cases what the actual uses and meanings of their artefacts were in their own societies; what mattered was rather the ways in which they confirmed Western representations of non-Western cultures and serve as a spring board for Western imaginations. (203)

They go on to describe how early museums were rooms for curiosity, in which objects could be touched and worn. The rooms were designed specifically to elicit visceral sensations, often of horror and disgust. Classen and Howes state that in these rooms lay opportunities for Europeans to enact an imagined life in a time when in Europe there was a growing split between reason and the romantic.

The construction of the museum was the result of Europeans beginning to distinguish reason and sensibility as opposing ways of being; in consequence this included a sense of superiority over the ‘other’ put into place to depreciate sensuality over reason (Classen, 2006). In this, Classen and Howes point to collecting and colonisation, in which artefacts and artworks became material signs for conquest and in so doing furthered the support of colonialism. Museums became in this manner politicised, acting under the guise that the museum played a role in protecting objects that were required for scientific

research (211). The implications of this are clear from Collier (in the previous section), who presents this same thinking as implicit in later instances of media and scientific colonialism.

Classen and Howes move on to point to a growing trend in African art history and cultural studies that, since the 1990s and the rise in subaltern criticism, has been exploring a return to an acknowledging alternate knowledge forms residing in African art and cultural objects. They explain that this movement away from ocularcentricism is a movement towards understanding the object and artworks in practice. This includes not only the meaning imbued in a performance of the artwork (a mask for instance), but also the opportunity to understand the environmental 'patinas' of the objects. For example, viewing layers of encrusted sacrificial blood and the residual smell of smoke on the masks of a secret society, presents an understanding of the environment in which the mask would have been used (Blier, 2004). This is a clear attempt at locating a sense of place and experience around objects that have been physically and ideologically separated from their origins. Classen and Howes, however, state that, "it is impossible to create a museological model which is free of issues of domination and misrepresentation" (219). And as much as African art history has recently begun to be written about from African perspectives and by African practitioners, the rules of practice and epistemological frameworks within the field are hard to transform.

Even Eglash, when exploring the politics of African fractals, indicates how aesthetic trends in Euro-America drive how African cultural contributions are viewed. Eglash's particular investigations centre around the dialectic of the digital versus analogue, and on this he expands:

When I spoke to chaos theorist Ralph Abraham, for example, he explained that analogue systems were in his view the realm of spirit, the vibrations of Atman. Postmodern theory maven James Clifford, to the contrary, insisted that only digital representation is capable of the flexible rearrangements that constitute human thought. This same battle has been played out in the history of African cultural studies. During the 1960s, realism was in vogue, and what could have been a wonderful exploration of the analogue representation techniques in African culture was reduced to romantic portraits of the "real" and "natural," while African symbol systems suffered from neglect. During the late 1970s, this began to reverse itself –

with the advent of postmodernism, African cultural portraits became increasingly focused on discourse and symbol systems, even at the expense of ignoring analogue representations.

It is important to be cognisant of the affect these trends have had on scholarship on Africa.

There is a sudden and growing interest in contemporary African art and contemporary African positions, not unlike the spike in interest for Chinese contemporary art in the early 2000s. The appointment of Okwui Enwezor as the first African curator for the Venice Biennial is evidence of this (in 2015 Enwezor curated the 56th Venice Biennial with the title *All the World's Futures*). This shift emphasises how interest in contemporary African art is largely driven by a growing Euro-American interest in a *new world* view. I have found that this interest, as I will address in more detail going forward, is based on envisioning a post-industrial and post-utopic Western world rather than a need to rectify or clarify histories (Kholeif, 2012).

1.2.3 Conclusions on Situating the Research

Sensitive contemporary scholarship on Africa unravels other histories. Unfortunately, therefore, contemporary research on the African subject rarely reaches the goal of adequately writing on its own contemporaneity; writing and theorising from Africa seems to be a game of sorting and making sense. This section of the first chapter therefore acts as an introduction to concerns around how Africa, as an object of research, has been dealt with and historically positioned.

Presenting this discussion has additionally allowed me to situate the research as a response to a very particular scholarly context, which helps to contain the positions I take going forward. These positions emphasise the importance of context specificity and sensitivity as an interwoven golden thread. Furthermore this emphasis allows me to explain why I am required to circumvent Western theory in this thesis. In so doing I will be finding ways to understand and describe the activities I have observed and participated in from a strongly African perspective. A particular aspect that grew out of this was the need to re-address methodological approaches, and focus on decolonising methodologies and

community responsive research. The contextualisation of this chapter therefore play multiple roles in helping to unpack the processes that led to *Post African Futures*.

At times, the need to frame the research in this way was frustrating, as it started to take precedence over the findings themselves. Yet it did act to reveal a very particular critique of Western knowledge systems present in contemporary African cultures of technology. The presence of this critique becomes more pronounced over the research, and the reader will see that it becomes a consequential part of the contribution of this thesis.

In the following section *1.3 Situating the Author* I continue to locate the research, but in relation to myself and the context in which I am working.

1.3 Situating the Author in the Research

As is clear, an increasingly important part of this research is the position from which it is written. It is for this reason that I find it necessary to briefly outline my own position as an artist and researcher in South Africa,¹⁵ alongside the impetus for this research.

In this it is important that I introduce the influence of working from the University of the Witwatersrand in Johannesburg. Not only does this help identify the motivation behind the research, but it also shows how the research becomes instrumental in this context.

1.3.1 Within a Personal History

I grew up in a rural region in the north of South Africa known as Limpopo, where I grew up alongside a group of peoples known as the VhaVenda. My upbringing included an active awareness of the socio-cultural traditions and spiritual-cultural formations inherent in some traditional African cultures. Communal ceremonies, age-grading ritual, plant lore, traditional music and ceremonial dance were central to how people in the region conducted themselves.

There are eleven tribal groups in South Africa, which in urban centres have become homogenised by the influence of Western and commercial cultures. Though I lived happily alongside TshiVenda culture, I am a great-grandchild of British colonialism and hold this as part of my cultural history. I grew up during Apartheid, and though my family did not support it, and acted against it, I have always closely interrogated my own privilege in South Africa's recent histories. In South Africa, Apartheid left deep wounds, caused not only by racial segregation but also by cultural disenfranchisement.

This short personal history gives some context to my motivation for undertaking this research, in addition to highlighting the changes underway at present in South Africa. My personal history allows me a first-hand perspective on the ideologies that grew from

¹⁵ Though I am taking the PhD in the United Kingdom, I am South African and have actively worked from South Africa throughout the research.

colonisation and developed into Apartheid. It additionally allows me a perspective on the ways in which African cultures act against old and new forms of colonialism, to both retain cultural relevance and maintain systems of knowledge.

1.3.2 Within an Academic and Intellectual Climate of Change

The reason for taking on this research was largely driven by my teaching experiences at the University of the Witwatersrand. What I experienced and saw in our programmes was a fundamental lack of academic and scholarly engagement with how South Africans and Africans understood and engaged new or communications technologies outside of a Western cultural and theoretical construct.

I started teaching at the University in 2007, as lecturer in the Division of Digital Arts in the Wits School of the Arts. At which time I took over the Master's degree in Interactive Digital Media and developed two undergraduate courses in digital and technology arts. The curriculum I inherited followed a model is similar to that of the ITP programme at New York University, but on a much smaller scale. I worked with candidates from various backgrounds and expertise, all of whom worked together to learn and develop in a 'laboratory' style teaching environment. The programme, however, contained only Euro-American theory in media, digital media and digital art. While the subject matter was internationally relevant and competitive – covering Euro-American histories of computing, hacking, cybernetics, cyber-feminism, systems theory and media art history and theory – it lacked African content.

The lack of regional content was for many difficult political reasons associated with the colonial origins of the university, which meant that most curricula emulated Euro-American and British trends in scholarship. Along with this and the general dominance of Western knowledge systems, there also was the assumption that the Euro-American perspectives were inclusive and comprehensive. It is for this reason that regional African positions on technology and culture are often considered in extension of Euro-American perspectives – thus uniquely African positions are not addressed outside of their direct application or thought of as appropriate.

As I taught and engaged students in this curriculum, its practice and methods, I became increasingly concerned with how little relevance my inherited curriculum had to how new technologies were being engaged and used in a local cultural practice. Additionally, attempts to apply Euro-American theories to a South African context only reiterated the same cycle of engagement. As case of critical technology practice, Stelarc, for instance, not only seemed irrelevant to students living lives labelled 'under-developed', but also difficult to contextualise. In this case, the need for access and adequate representation far out-weighed the concerns of the heterogeneous white male body cyborg in a network that is itself an extension of that heterogeneity.

One would imagine that perhaps Roy Ascott's views on cybernetics or Donna Haraway's positioning of cyber-feminism could legitimately be relevant in cultures politically and economically disenfranchised in globalised networks; and yet without a strong intellectual understanding of how South Africans or Africans are positioned within these globalised networks, it is near impossible to adequately claim the relevance. McLuhan's theory on media is also reliant on an assumption that a philosophy of technological determinism could be grounded in a local context. I therefore began this project as an attempt to write a contextual history for contemporary cultures of technology in South Africa. The project however became a much more interesting exploration of what is criticality present in African aesthetic and cultural practice concerning technology, thus leading to *Post African Futures*.

My need to decolonise scholarship is not new to South African universities. In the last few years and predominantly since 2013 there has been a larger movement taking place at universities across the country: a call to transform the curricula of South African universities to one more relevant to and critically engaging with African concerns. The movement is being seen as a moment in history to write, in the minds of students and broader scholarship, the frameworks of African theory and philosophy.

The above-mentioned movement is certainly not the first on the continent. In Nigeria, amongst other North and West African nations, the same occurred in the 1950s and 1960s, at the height of post-colonial scholarship. The same in East Africa, in the 1960s, as Kenya

won its independence from Britain. South Africa in 2015 on the other hand, has only been free of Apartheid for twenty years (unrelated but interesting, this is almost the same length of time as the existence of the Internet). The process of transformation in South Africa has therefore been much delayed, but comes at an interesting time: a time in the world of networked global communications when there is a strong shift from post-colonialism towards decoloniality in African scholarship. I personally see the two as connected, as it is at this instance that the Global South can more adequately critique a growing globalisation of imposed knowledge systems.

Twenty years on in South Africa, a new generation known as “born frees”¹⁶ are finding their voices through networked media. This is also a moment at which a younger generation of Africans on the continent at large are questioning what their parents and grandparents were promised at liberation and may not have received. In this is a questioning of the position of Africa in the world; a questioning that requires a revisiting of African knowledge systems within a globalised information economy. This is a conversation between a generation of young Africans, who were not part of the old guard of post-colonial revolutionaries; the first to openly challenge the implications of globalised, networked media from an African perspective. These positions are reflected in how the artists and creative collectives I engage in *Post African Futures* have positioned themselves and their work.

2015, however, was the year in which the debate on the decolonising of the academic space became most prominent and publicly visible. The #RhodesMustFall movement that took place at the University of Cape Town (UCT) in early 2015 is a clear example. The #RhodesMustFall protests, which looked to question the celebration of British coloniser Cecil John Rhodes¹⁷ by the University, elicited massive public support and were used to pose

¹⁶ “Born Free” is a term used to refer to South African’s born towards the end or after the end of Apartheid, essentially 1990 onwards. This is considered the generation untainted by Apartheid and not overly influenced by the political weight of the liberators of post-Apartheid leadership.

¹⁷ Cecil John Rhodes was a British Imperialist businessman in South Africa during its British colonisation. Rhodes not only claimed South Africa and most of Zimbabwe as British (continued) territory but also worked at its capital development in diamond mining and

questions about the state of South African universities; both to the University senates and national government. The following excerpt from a national online newspaper, the *Daily Maverick*, describes its impact:

In contrast to media portrayals, and to the movement's self-styling, Rhodes Must Fall never garnered unanimity among students, staff, or even its own members. It has, however, tapped into a deep seam of anger over the lack of transformation in the South African academy, stoking fresh and fervent debates about vexed issues of curricula transformation, race-based admissions, and, perhaps most controversially – identity and authority: in essence, who should be permitted to speak, and who should be silenced. (Hodes, 2015)

Not many months after #RhodesMustFall and as I first wrote these words (14 October 2015), the University of the Witwatersrand was shut down for the week following five days of student protests against an annual increase in fees. The #WitsFeesMustFall protests then spread into a #NationalShutDown and a more general #FeesMustFall movement on campuses across the country. The protests were brought on by the announcement (on 11 October 2015) of an 11% fees increase at public universities and by the low level of support and bad management of funds by government and university senates for underprivileged students. The #FeesMustFall movement has since grown and again brought universities across the country to a standstill towards the end of 2016. While formally directed at readdressing financial support for the poor, the protests are, however, understood as an expression of more general discontent by young people with where the allegiances of knowledge lie. The protests have had a direct bearing on research in this field and draw attention to the climate in which knowledge production is being developed. I cannot deny their influence in my own trajectory.

1.3.3 On a Wave of Development

agriculture. He is best known for ushering in the race and labour acts that would later form the foundations of Apartheid and the further exploitations of indigenous peoples of South Africa. His statue was prominently displayed at UCT, as he helped found the institution and the industries that supported it.

As must be clear, despite my initial intention to perform only literary research, the limited development in the field meant that my methods needed to shift. To achieve this I naturally became more engaged with the field, not only from a curatorial perspective, but in developing it. During the period of the research I produced a series of platforms for shared knowledge construction and collaboration that dealt specifically with the role of culture, creativity and technology in Africa. I present here a short list of these developments.

All the platforms listed were important parts of a growing movement to raise awareness and instigate development and debate in the field for Africa. I have included in this list the *Post African Futures* exhibition and the Fak'ugesi Conference, both of which contribute to this thesis. These two events were essentially the last in a series of programmes developed between 2012 and 2015 (the period of the research) in a wave of development.

Free Particle Festival, September 2012

The *Free Particle Festival* was a festival organised by myself, students at Wits Digital Arts and by the French Institute in Johannesburg. A collaboration between technology and art partners in Senegal and the Le Ososphere Festival in Strasbourg, France.¹⁸ It included a collaborative artist residency that focused on skills sharing, workshops and talks by South African, Senegalese and French artists.

Digital Afrique Publication, MDC, 2013

Following my collaboration with partners in Senegal, I was invited by French based MCD (*Magazine des Cultures Digitales*) to work with special issue editor Karen Dermineur (based in Dakar at the time) to co-edit as well as write content for an issue of MCD titled *Digital Afrique: Creation Numerique et Innovation en Afrique* (T. Bristow, 2013a). I contributed to the publication with research on South Africa, Kenya, Nigeria and Egypt. The issue information and pdf and eBook versions can be found here: <http://www.digitalmcd.com/digital-afrique-creation-numerique-et-innovation-en-afrique/> (last accessed July 2017).

Digital Afrique Exhibition with MDC and Planet Emergence, Marseilles, 2013

¹⁸ At the time I was still looking at Senegal as a research location, but changed this to rather focus on the Anglophone countries, Nigeria, Kenya and South Africa.

Following the success of the publication, Dermineur was invited to present an exhibition of practice in Marseilles in the events surrounding Marseilles as Cultural Capital of Europe in 2013.

A MAZE Johannesburg Festival, Africa Focus, 2013-2016

The A MAZE Festival is an indie games and playful media festival run by German based Thorsten Weidelman. We have done so since 2012 and the festival has now become part of a larger umbrella festival developed in this time called the Fak'ugesi African Digital Innovation Festival. This was supported by the Goethe Institute between 2013 and 2015 supported delegates from Egypt, Kenya, Uganda and Nigeria.

Fak'ugesi Digital Africa Festival, 2014-2017

In support of the development of a technology research hub being built in partnership between Wits University and the Johannesburg Centre for Software Engineering (JCSE), in 2014 I partnered with this hub to develop the Fak'ugesi African Digital Innovation Festival.¹⁹ This was born out of the success and interest garnered from the Free Particle and A MAZE Johannesburg festivals.

Fak'ugesi Digital Africa Conference and Special Issue of Technoetic Arts, 2014 & 2015

In extension of the 2014 Fak'ugesi Festival and in hosting the Planetary Collegium's winter composite research session, with support from Wits University, I arranged the Fak'ugesi Digital Africa Conference in December 2014.

Post African Futures, 2015

The *Post African Futures* exhibition was a curatorial project partnered with this research and calling on responses to *Post African Futures* as a framework from practitioners. A full exploration of the exhibition, outside of its description as a method is continued in *Chapter Four* of this thesis.

In the time that I developed these, many other projects, exhibitions and discussions have arisen as a result of a growth in the field. Though I have not always been directly involved I have often been asked to comment or participate in these events as they have a direct relationship to my research and its investigations. This includes most prominently and

¹⁹ <http://fakugesi.co.za> (July 2017).

recently the Goethe Institute's *African Futures* festival, held in 2015 between Johannesburg, Nairobi and Lagos. All three cities were regional cases in my own investigations. My research is published in the proceedings of the Festival. (T. Bristow, 2016)

It is important to understand that this research is a consequence both of study and of leading development in the field. This is difficult to fully articulate only as research, as the research has both developed and followed this growth as a critical encounter. As if riding the front of an ocean wave while simultaneously describing it and trying to theorise on its trajectory. It is for this reason that the conference and the *Post African Futures* exhibition are an important part of the methods of this research.

Chapter 2

munwe muthihi a u tusi mathuthu

TshiVenda proverb. Translation: One finger cannot take corn from a pot.

Referring to notion of Ubuntu: we are because of others.

2.1 Introduction: A Guide to the Responsive Methodological Trajectory

Chapter Two focuses on introducing the methodological framework for the research, with particular focus on the reasons behind its responsive approach. The first section, *Methods and Methodological Frameworks*, explores the influence of decolonising methodologies. The two following sections describe the actual methods used for this research. These are divided into two 'actions', which I title *African Cultures of Technology* and *Post African Futures*. These divisions in the theoretical development of the thesis engage distinct methodological approaches within a responsive trajectory.

In the first action, *African Cultures of Technology*, I was particularly influenced by an article written by W.K. Omoka (mentioned briefly in the last chapter) titled *Applied Science and Technology: A Kenyan Case Consideration of their Interrelationship* (Omoka, 1991). This is a rare scholarly article from the region that asks questions about socio-cultural, political and socio-economic influences on the construction and transfer of knowledge around science and technology in Kenya. Influenced by Omoka's approach and in quoting his terminology, I began to use the phrase *cultures of technology*. *African cultures of technology* therefore holds in it an exploration and understanding of the distinct regional differences I encountered in Nairobi and Johannesburg. The section of this chapter subtitled with the same name thereby presents points of departure and methods used specifically towards the fieldwork.

In the larger thesis, *African Cultures of Technology* is a framing concept used to contain the fieldwork process (its methodological and conceptual concerns) and the fieldwork findings. This frame expands on the interrogation of knowledge and power from the last chapter, exploring it in specific digital and technology domains. In this, particular attention is given to the politics of access and the roles of communities, governments and corporate agencies.

In the section subtitled *Post African Futures*, I focus on describing two responsive methodological actions that led to titling this thesis *Post African Futures* and developing it as

a secondary contributing framework. The framework *Post African Futures*, as stated in the first chapter, reflects how the research process itself was bound up with contributions and responses from a community of practitioners. The introduction to the principles of decolonising methodologies in this chapter helps to explain the importance this community responsive approach to research. Decolonising methodologies support a critical approach and highlight the importance of the relationship between researcher, researched and audience. This ensures context sensitivity; weaving in the golden thread introduced in the first chapter.

2.2 Methods and Methodological Frameworks

In working within the scope of what was available in existing scholarship and what Nuttall and Mbembe call the difficulties of writing as an ‘act of composition’, what I describe in this section is a responsive trajectory. This was led by the principles and aims identified in decolonising methodologies, which subsequently informed a community orientated and culturally responsive approach.

Before starting the discussion on decolonising methodologies I will first present the process of the research chronologically. This will give an honest impression of how the project progressed, and also highlight the contributions of each new, responsive method.

The research began with 1) an *initial exploration of literature and scholarship in the field* (much of which was presented in the first chapter), this led to 2) *posing new questions and conducting exploratory fieldwork*. The fieldwork outcomes then went through 3) *content analysis* and led to 4) *the subsequent identification of particular themes and trends* through which 5) *the framework of African Cultures of Technology is affirmed* and 6) *the identification of actional methodologies* is made. An interrogation of these actional methodologies then leads to 7) *eliciting responses from artists and cultural practitioners* and 8) *defining Post African Futures*, which in itself is methodologically ‘actional’.²⁰

As is clear, the research was largely exploratory and entirely responsive; responsive to both the context and the content of the research as it progressed. What is most significant in this, and the definition of *Post African Futures*, is that the research was not performed in isolation. The research process involved engagement with and responses from a community of practitioners. This community engagement began in the fieldwork, which supported an understanding of the cultural and aesthetic criticisms positioned between lived experience, aesthetic engagement and existing scholarship. After reflecting on the fieldwork, practitioners were again invited to respond to the presuppositions of the developing framework.

²⁰ A term used by Walter D. Mignolo in his *Decolonial Theory*, which will be dealt with in greater depth in Chapters Three and Four of this thesis.

In the following sub-section I present the principles of decolonising methodologies and the related culturally responsive methods. These contain aims significant to my own trajectory that hold in them the importance of the golden thread of context sensitivity and specificity.

2.2.1 Decolonising Methodologies

Decolonising methodologies are a particular concern of subaltern scholarship. One prominent body of work on decolonising methodologies is found in Kuapapa Maori, also referred to as Indigenous Maori Studies. These focus on the exploration of culturally appropriate research methodologies that deal with problems in Western methodological forms, encountered by indigenous studies. The book *Decolonising Methodologies* by Linda Tuhiwai Smith (Smith, 1999) is expanded upon by a subsequent documentation of research and projects exploring culturally appropriate methods in practice in *Culturally Responsive Methodologies* (Berryman, 2013). Although I refer to Smith and Berryman et al.'s contributions in the following section, this is not intended as a focus on Kaupapa Maori, but rather an exploration of decolonising methodologies and how their principles contribute to and support of my own approaches.

Decolonising Methodologies aims to explore ways to decolonise research methods so as to reclaim indigenous ways of knowing and of being. In this Smith relies on an understanding of scholarship on Africa and the development of the power differential founded in knowledge systems. Smith's argument, however, goes on to emphasise how 'Western' research has come to be understood as something beyond the boundaries of just Western science and has come to encompass a construct known as 'the West'. In framing the construct of the West, Smith refers to Stuart Hall's *The West and the Rest: Discourse and Power* (Hall, 1992), stating:

Hall suggests that the concept of the West functions in ways which (1) allow 'us' to categorise and classify societies into categories, (2) condense a complex image of other societies through a system of representation, (3) provide a standard model of

comparison, and (4) provide criteria of evaluation against which other societies can be ranked. (Smith, 1999: 42-43)

Smith writes that these are the procedures by which indigenous societies have been coded into Western knowledge and are therefore in this sense part of the construct of The West.

Smith goes on to state that thus far interrogation of these procedures has derived from debates over knowledge within the Western cultural archive that have enabled methods of self-critique. Critical theory is a case in point, Smith states that critical theory comes from:

[...] fundamental questions about knowledge and power [...] articulated not just through academic discourse but through social movements such as the civil rights movements, the Anti-Vietnam War movement, the second wave of feminism and widespread student unrest (165).

The West, therefore, is essentially a position against which to pose questions about the relationship between knowledge and power; between lived reality and imposed ideals.

Smith states:

During this period social theory shifted, and in the global arena of scholarship, Marxist theorists challenged the liberal theories of modernisation and development which had determined how the Imperial world dealt with its former colonies. Gunder Frank and others working in the South American and African contexts re-examined ideas of development and suggested that there was a causal relationship between First World economic policies and Third World underdevelopment. (165)

Smith asserts that these methods of self-critique were valuable when used in parts of the world where societies were battling the ways in which they have been encoded into Western knowledge. What emerged led an agenda for actions and an agenda for self-determination.

Indigenous self-determination is central to Smith's principles of decolonising methodologies, which hold at their core the role of culture as a mediating force. Smith explains that social justice allowed for changes in the social sciences, which subsequently began to tap into cultural resources – not as mere artefacts or primitive expressions, but as significant sites for critical engagement. Following this line of thinking, I believe that technology in contemporary Africa is most critically and successfully interrogated through cultural resources.

In what she terms an “agenda for actions”, Smith identifies four major foci: 1) survival, 2) recovery, 3) development and 4) self-determination (116). For Smith these four are the goal of decolonising methodologies, she writes:

It is not sequential development – the survival of peoples as physical beings, of languages, of social and spiritual practices, of social relations, and of the arts are all subject to the same basic prioritising. Similarly, the recovery of territories, of indigenous rights, and histories are also subject to prioritising and to recognition that indigenous cultures have changed inexorably. (116)

The latter recovery and the “recognition that indigenous cultures have changed inexorably”, is of particular concern in my own research, where agendas for self-determination are explored alongside the development of new technologies. Within contemporary technology cultures there is a tendency to overly romanticise the contributions of traditional culture, rather than see them as an alternative knowledge repository. All four are at play in contemporary engagements with technology in Africa: the recovery of knowledge systems and repositories; the survival of cultural forms in a globalised information economy; the support and development of African perspectives and critical engagements; and the value of self-determination in all of the above.

Smith uses the following diagram (Figure 3) to identify how the goals of decolonising methodologies are different from those in Western research methodologies. She identifies new methods in the keywords: “healing, decolonisation, transformation and mobilisation” (117). Western methodological frameworks prefer the criteria identified by Hall, namely:

categorisation, representation, comparison and evaluation. These, Smith states, are understood to be non-constructive, debilitating and at times dehumanising in their approaches (108).

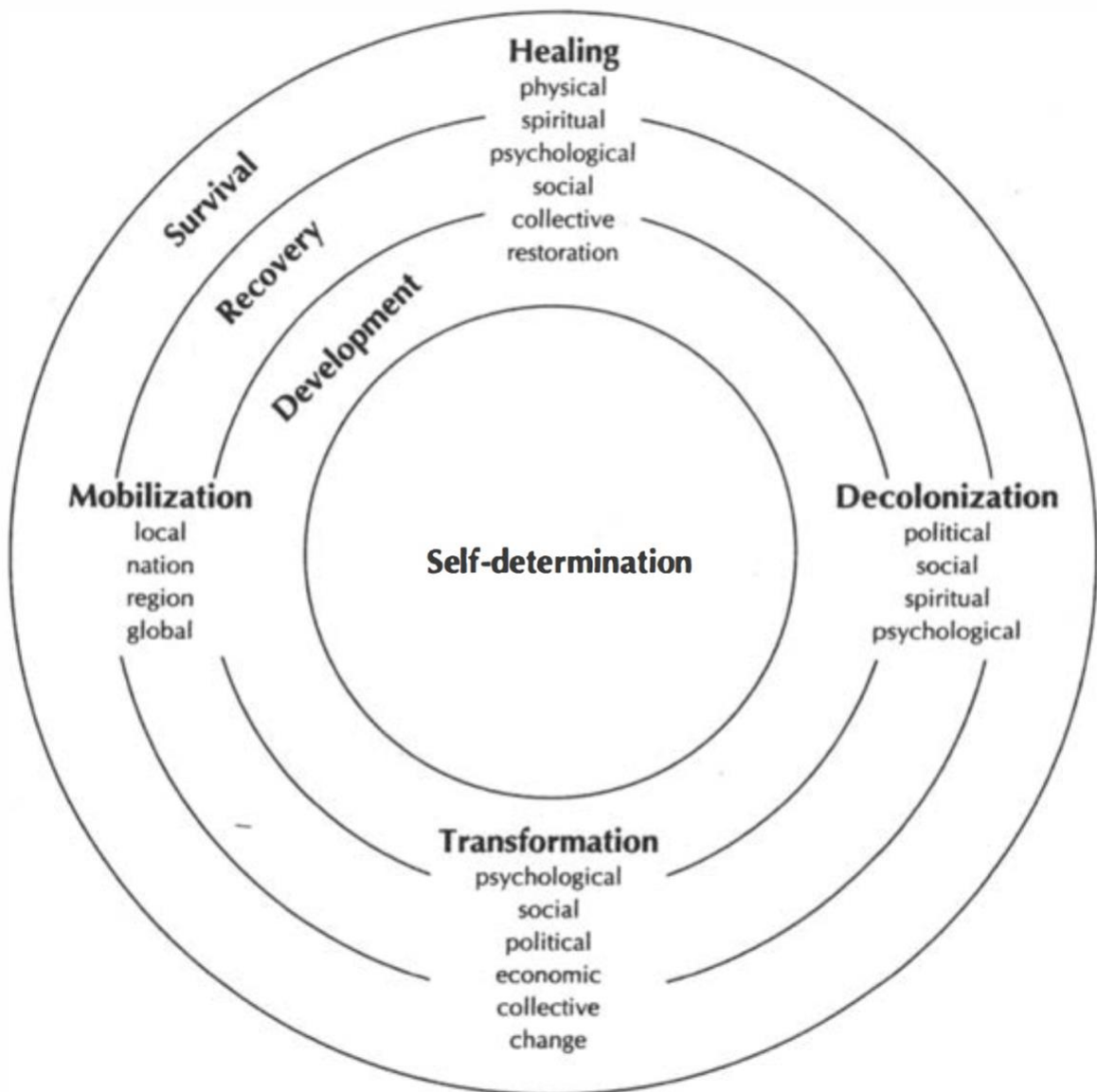


Figure 3: “The Indigenous Research Agenda”. Source: *Decolonising Methodologies* (117) (Smith 1999).

Decolonising methodologies offer a framework for thinking about the intentionality of research and thereby how this intentionality can be shifted to better server indigenous self-determination. The decolonising methodologies in this research will reveal themselves as I begin to unpack the processes and outcomes of fieldwork and the development of *Post African Futures*.

Going forward into the next sub-section, I introduce community oriented and culturally responsive methods, this is in extension of the aims of decolonising methodologies.

2.2.2 Community Orientated and Culturally Responsive Methods

There are a number of community orientated research methods within the social sciences. Within the principles of decolonising methodologies these must be conscious of the concerns of self-determination. A distinction between research being done *on* communities versus *with* or *by* communities is important. In my own research I moved between literary research, research with the community and research by the community. This combination of methods was required, first, to successfully establish the research area, then to understand the context and subsequently invite responses on a developing position.

In *Culturally Responsive Methodologies* (2013), Berryman et al. state that research participants' rights to "initiate, contribute, critique, or evaluate research" (2) have been given little regard in the past. And as I came to understand the need for transformation and mobilisation in the field, it also became increasingly clear that working with a community would be the only way to critique and instigate that transformation. What Smith refers to as healing, decolonisation and transformation through research are very closely linked to the goals of community orientated and culturally responsive methodologies.

As in my own experience, Berryman et al. state that culturally responsive methodologies evolve from and require a situated practice. Berryman et al. emphasise the importance of acknowledging how groups of people make meaning. They state:

Understanding how a particular group of people view the world is linked to how members of the group define knowledge; how they differentiate between various forms of knowledge; which forms of knowledge have more value for the community or society; [and] who benefits or are disadvantaged by different forms of knowledge (3).

While I have up to this point focused on locating this research within a history of scholarship on Africa, the role of the *African Cultures of Technology* and the explorations of the fieldwork aim to do exactly what Berryman et al. refer to: to understand how the respondents make meaning and define themselves in line with culture and technology.

Berryman et al. also ask questions about who controls this knowledge (4), indicating that a situated practice is fundamentally required to understand the politics of access. They state:

Determining the basic epistemological assumptions of knowledge production is essential in this type of research. One must consider not only the transmission of knowledge but also how knowledge is produced. Conventional methodology, both quantitative and qualitative, lack commitment to inclusiveness, cultural diversity, and epistemological pluralism and therefore research procedures do not typically focus on the diverse ways people come to know about their worlds. (5)

Communication technology is particularly influential in how knowledge about technology is shared, understood and controlled in contemporary Africa, as an extension of a globalised knowledge economy. The fieldwork acted as a way to bypass this paradigm and explore knowledge creation delinked from this medium, which holds within it intrinsically the values of a Western knowledge system. Berryman et al. refer to Biermann (Biermann, 2011) when they state: “[h]aving a different understanding of the process of knowledge generation, legitimization, and dissemination is a process of intellectual decolonization that challenges discipline boundaries, establishes epistemological traditions and normative assumptions” (393).

In a recent talk²¹ on African knowledge systems, Achille Mbembe referred to the presence of three *knowledge regimes* from which we generally draw. The first, *expert knowledge regimes*. These he referred to as the knowledge of power and exploitation, and a transnational knowledge that is not used by us (in Africa). The second is *subaltern or*

²¹ African Futures Festival, Goethe Institut, Johannesburg. 31 October 2015.

vernacular knowledge (indigenous knowledge in Smith’s term), which Mbembe stated includes social technologies and tactics of survival. The third he refers to as *insurrectionary* knowledge, which he states is found in cultural practices, in music and in art. My own research engaged all the knowledge regimes Mbembe refers too. Most important to me is the fact that it allows for an exploration the role of *subaltern or vernacular* knowledge through the fieldwork, but develops on this to explore the role of *insurrectionary* knowledge (which I refer to as actional methodologies in light of Mignolo) in the *Post African Futures* exhibition.

Berryman et al. point to a series of polarities that illuminate the dimensions of a culturally responsive methodology. These reflect an understanding not only of intentions, but also of the ethics of decolonising methodologies. These polarities are as follows:

Resists

Positivism
Essentialism and generalisations
Colonisation
Exploitative research
Covert agendas
Appropriation
Research “on” others
Superiority, self interest
Static passive forms of data collection
Fragmented, decontextualised data
Exclusive linear text representation

(23)

Promotes

Multilogicality
Holistic contextualisation
Cultural rituals of the researched
Challenges power structures
Transparency
Overt ideological frameworks
Research “with” and in service of...
Humility, humanity, empathy
Long term continuous sharing
Dynamic, organic, transformational
Artistic, aesthetic, dialogic

These polarities resonate with my own intentions in this research and many are present, not only in the methods, but in the outcomes. In particular the promotion of “holistic contextualisation”, “long term continuous sharing” and “dynamic, organic, transformational” data.

In the following two sections I delineate two methodological actions that respond to the above concerns.

2.3 African Cultures of Technology: Knowledge from the Field

Along with what was learnt in the field, the fieldwork process very importantly introduced me to an important community of practitioners. This section does deviate a little from strictly presenting methodology and method. It additionally acts to present concerns identified through literary research that had an impact on how I approached the fieldwork from a content perspective and understood the contextual concerns of the regions under investigation.

2.3.1 On Existing Positions

Up to this point I have largely addressed the historical positions of scholarship on Africa, with some attention given to technology and culture. Entering the fieldwork process required a more direct interrogation of contemporary technology practices.

This section is made up of a couple of subsections. In *2.3.1.1 ICT and Technology Futures*, I explore the political and related socio-economic concerns that surround ICT use and access in the two regions. I additionally address what is known as *Technology Futures*; in this I explore a case that shows how Africa's technology futures are speculated upon by internationalised interests rather than by the societies themselves. The following section *2.3.1.2 Questions Posed by Omoka: Developing African Cultures of Technology as a Framework* presents a discussion on Omoka's paper and how it assisted in the development of the *African Cultures of Technology* framework for the fieldwork.

2.3.1.1 ICT and Technology Futures

Mobile phone penetration as understood in the ICT (Information and Communication Technologies) sector has, on the African continent, risen exponentially in the last ten years. Between 2006 and 2015, South Africa went from almost zero to a nearly 87% increase in mobile phone subscriptions, while Kenya developed a 71% reach during the same time. Meaning that in this short period, almost every household came to own or have access to a mobile phone, making mobile phones a fully domesticated technology and the most prevalent digital communications medium in the regions of study. In a pre-mobile indicator

of the digital divide, the African continent was shown to be almost completely excluded from the information technology revolution: Castells in 2010 observed that there were more landlines in Tokyo and Manhattan than the whole of sub-Saharan Africa (Castells, 2010). These of course have rapidly become mostly (not fully) redundant through the sudden scale of digital and information inclusion through mobile networks.

The term 'digital divide' is generally used to refer to access to ICT in relation to infrastructural difference between 'developed' and 'developing' countries. The notion having grown from the heralding of the inevitability of the information economy. Selwyn in *Reconsidering Political and Popular Understandings of the Digital Divide* (Selwyn, 2004) identifies that the term 'digital divide' was first used in the mid 1990s in policy-making by leftist governments in Europe and North America. In this, emphasis was on social inequalities, and how access was differentiated by economic and social segmentation within these economies (345). Early concerns for the digital divide included cultural divisions, the place of women and these in relation to societies and literacy – in both technological and language literacy.

Today in 'developed' nations the 'digital divide' is now less orientated towards access, as it was a few decades ago, and has rather swung towards the concern for meaningful access to information. Selwyn develops on the understanding of the notion of the 'digital divide' by promoting a redefinition that underlies this, stating:

Use where the user exercises a degree of control and choice over the technology and content. Use should be considered to be useful, fruitful, significant and have relevance to the individual. (352)

In addition Selwyn highlights concerns about actionable outcomes of meaningful use (352).

Basic access is often understood to be the primary concern for the African continent, it is important therefore that this be viewed in full, a 'digital divide' should be addressed from the perspectives of both infrastructural access and meaningful use in an advanced information economy.

The greater implication with regard to growing mobile networks is that access to and the use of information technology should become increasingly intertwined with the growing importance of decolonial thinking, self-determination and the role of critical cultural practices. This intertwining can clearly not be simple, and comes with a warning not to view its development through the lens of a romanticised Africanisation of Western technologies. The growing aesthetic tension between the assertions of African ontologies and the episteme inherent in information and communication technologies is political, social and economic.

One of the primary concerns in relation to the power differential inherent in new communications technologies, is that mobile networks exist in most regions in Africa on the backs of international interests and through the actions of global corporations. The mobile networks facilitated the rapid growth of mobile communication, allowing African nations to leapfrog expensive, fixed-line Internet access that required complex infrastructures. These were infrastructures that local and regional governments had previously been unable to adequately fund or maintain due to the large space that needed to be traversed and the difficulties of the territory.

Mobile phones are cheap, modular, energy-friendly and effective tools in the hands of many. The focus on the increase in access is, however, overshadowed by the fact that these networks are (in Kenya and South Africa) independently established and maintained, and have been since their inception in the early 2000s. This then brings into focus the new question of who controls mobile network systems and the dispersion of knowledge with them.

Returning to Selwyn, he states that it is important to “distinguish between the different mediating forms of capital that underlie differential access to, and use of, ICTs in society” (2004: 352); these include economic, social and cultural capital. He points out that the most immediate form of capital with regard to an individual’s engagement in ICTs is economic; which, he goes on to state, relates not only to what the individual can access but also to their patterns of use. Selwyn follows by referring to cultural capital in extension of

Bourdieu in *Sociology in Question* (Bourdieu, 1993) who indicates “cultural capital denotes the extent to which individuals have absorbed (even unconsciously) or have been socialised into the dominant culture over time” (353). Selwyn refers to technological know-how and a socialisation into techno-culture as part of this cultural capital. From a subaltern perspective it is important to note that a socialisation into techno-culture includes a socialisation into language and dominant semiotic forms; along with the modern / contemporary narratives of the West that abound in networked media.

Selwyn goes on to state that the success of many individual’s ability to engage ICTs is reliant on an additional ‘social capital’. In light of Bourdieu, he refers to this as: “social obligations or connections between an individual and networks of other significant individuals, organisations and institutions” (354) and, as Bourdieu states:

Social capital is the aggregate of the actual or potential resources which are linked to possession of a durable network of institutionalised relationships of mutual acquaintance and recognition – or in other words to membership of a group – which provides each of its members with the backing of the collectively-owned capital. (*The Forms of Capital* (Bourdieu, 1997) (51))

For African communities to form part of a more dominant global information economy would mean engaging institutional and expert knowledge that does not reside in their country, community or culture. It further implies that the development of local and regional ‘social capital’ is paramount for societies in Africa to succeed in terms of basic access and meaningful use.

In my initial inquiry I became particularly concerned with what was being written about ICT in Africa and by whom. I found a predominance of non-academic reporting linked to capital investment on the continent in relation to new avenues of market development. Additionally, the large body of social science research in the field focused predominantly on ICTs for social and economic development.

The majority of research in the field essentially saw the increase in mobile phone penetration as a catalyst for social development. Most reporting (academic and non-academic) was, furthermore, evangelistic about this situation, promoting ICTs potential to invigorate industry, healthcare, social services and governance. Most social science or anthropological research in the field tended to focus on the social and linguistic impact of mobile phones, 'modernising' African communities through access to information and shifts in social processes. In this, as in historical research on Africa, very little was done to interrogate or question the impact from an African cultural perspective.

New Media and Society Vol. 13. No. 3 *Mobile Communication in the Global South* (2011), edited by Richard Ling and Heather Horst, presents a good overview of the types of investigations mentioned above. The papers include subjects such as texting amongst teens in Senegal (Lexander, 2011) that shows code switching between French, Wolof and regional tribal languages, asking questions about how mobile media increases literacy in indigenous and other languages. Another paper interrogates the influence of mobile phones on the sex lives of migrant working families in Mozambique (Archambault, 2011), playing off religious and cultural beliefs against Western cultural stereotypes. All the papers consist of small studies that address technology from the position of appropriated use. Few attempt to interrogate impacts in relation to globalised information economies, and none offer insight into how these intersecting cultural practices may act to be critical of a globalised information economy.

Much of what I found when addressing communications technology as media was orientated around media imperialism theory, which originated in the 1970s in the United Kingdom. Media imperialism theory maintains that indigenous communities are forced by media into assuming the practices and thinking of a dominating centre (the West). This position is however considered outdated and 'cultural development theory' in contrast to 'cultural imperialism' is promoted in its place. This shift is focused on by Ekeanyanwu in his article *Theorising Cultural Development vis-à-vis Cultural Imperialism Theory* (Ekeanyanwu, 2010) in which he states that cultural imperialism fails at the outset as it assumes that no periphery nation will produce its own media (42). Furthermore, Ekeanyanwu emphasises that cultural imperialism relies too heavily on technological determinism, in which

technology leads culture, and is therefore too definitive in its trajectory to encompass more nuanced intersections between periphery cultures (as Ekeanyanwu refers to them) and the dominant media culture.

Primarily, Ekeanyanwu draws attention to the fact that 'cultural imperialism' does not include positions on what he terms "cultural synchronisation" or "cultural juxtaposition" (43). Cultural synchronisation, he explains, considers that the imposing culture may in fact be welcomed and imitated by the receiving culture. While cultural juxtaposition implies that the receiving culture may place, alongside its own, aspects of the opposing culture, and perform them simultaneously (43). What these allow are an understanding that indigenous cultures assume different levels of engagement with media. Furthermore, as has been discussed previously, these levels are largely dependent on the reception and understanding of the technologies by the receiving culture rather than the imposing culture. Thus they foreground to some extent an important self-determination that is often excluded from the appropriating or media-imperialist positions.

In support of cultural development theory, Ekeanyanwu states, "western technologies carry western cultural values that are capable of both eroding as well as enriching local cultural values of developing nations" (46). Ekeanyanwu almost evangelistically goes on to emphasise that developing nations should maximise on the inherent enriching capabilities found in western technologies, thus developing their own cultures with technologies of the West. Ekeanyanwu uses the case of Singapore to show how maximising on the inherent capabilities of Western technologies has been successfully enacted, stating: "they chose to appreciate the issues that globalization and ICTs raise and then go deep into them and finally see the issues as challenges that can be positively exploited" (46). Ekeanyanwu follows this by stating that if African nations took the same approach they would turn around their economic problems.

While this is a positive approach, my concern is that Ekeanyanwu glosses over many issues when asserting that the cultures of developing nations will naturally assume a stronger position over imposing cultures. While this may be true of some nations, Ekeanyanwu never fully explains the extent to which this could or should occur; instead he

takes a somewhat dangerously generalised position on the subject. While I support the importance of better understanding the impact of Western technologies on African nations, a closer interrogation of how the cultures of developing nations assert themselves in light of Western technologies is also vital.

In returning to the concerns of infrastructure and meaningful use. In the last three to five years, the success of mobile penetration has assisted in general infrastructure development, for example the further development of undersea cables and fibre-optic infrastructure in both South Africa and Kenya. This has acted to raise information literacy, and with it, a greater demand for access. This, however, has had the most benefit for a growing middle class; the majority of Africans still fall well below the economic delineation required for meaningful access.

The demand for access in lower income groups has further implications, many of which emphasise older economic divides between 'developing' and 'developed' nations. As mentioned previously, ICT in Africa is contingent upon outside interest in Africa's economic development, which is largely driven by the identification of Africa as a new market. This is a major shift in focus from outside parties historically seeing Africa as a source for raw materials. This interest in Africa's economic development has further enlisted ICT as a medium for solving development issues such as governance, healthcare and education. While this suggests positivity on one hand, it is important to note that these are well known strategies for formalising relationships between big business and governments.

The primary driver promoting ICT in governance, healthcare and education in Africa is ICT4D: Information and communication technologies for development. ICT4D is very influential in how communication technologies are being developed for and implemented in the regions of Africa.

Murphy and Carmody, in *Africa's Information Revolution* (Murphy, 2015), refer to ICT4D as the making of a neoliberalised meta-discourse.²² They problematise the

²² This is the title of their first chapter, page 104.

overwhelmingly positive stance on raising productivity and facilitating accountability. Focusing on South Africa and Tanzania (Kenya's neighbour), they address the misinformation that surrounds the economic growth of these regions through ICTs, stating: "there are inherently problematic aspects to the transformations that are accompanying Africa's information revolution, and the practices associated with the diffusion of new ICTs are often embedded in, and help to reproduce, existing (often exploitative) social relations" (107). Where Emkeanyanwu's emphasis is on the importance of fully understanding and thereby using these changes to the advantage of developing nations, Murphy and Carmody present a pessimistic view of the rapid impact that global multinationals have had on developing countries in the last ten years.

Selwyn's cultural and social capital is needed to interrogate in this context. It is therefore necessary, in outlining the points of departure for framing *African Cultures of Technology* and the entry points for the fieldwork, that a good understanding of the politics of ICT4D and corporate engagement with ICTs and digital cultures in Africa be presented. The following four short sub-sections present a locating discussion that does just this: *On Limited Perspectives* unpacks the theoretical positions from which ICT4D are drawn; *On Poverty Reduction* speaks to the concerns and impacts of ICT on poverty; *Being in the World* addresses the use of local African culture to boost markets penetration; and *Envisioning Africa's Technology Futures* presents a short discussion of how Africa's technology futures are being planned for, rather than by, Africans. Each sub-section addresses issues that were influential in how I chose to approach the fieldwork and will therefore give insight into the methods and interview schedules that follow.

2.3.1.1.1 On Limited Perspectives

Sey (Sey, 2011) states that two primary theoretical approaches are applied to ICT4D. The first is a sustainable livelihoods approach and the second uses technology appropriation as a starting point. The sustainable livelihoods approach, which was developed by the Institute of Development Studies in the UK, is aimed at the goal of poverty reduction through ICTs. Sey states:

This model proposes a system of institutions, policies, and regulations that shape allocation of assets, and thereby influence people's ability to engage in activities and make choices in pursuit of livelihood goals. The ability to influence these structures is in turn determined by the types and volumes of asset endowments – the more assets people have, the more livelihood options they have. (378)

And while it may seem like it, the sustainable livelihoods approach does not engage the role of economic capital, as Selwyn does, by identifying how material capacity and available resources can either hinder or enhance use patterns.

The second approach, via technology appropriation, focuses on innovative use of mobile media. Sey states:

the term [appropriation] is used to refer to instances of unexpected uses, in recognition that users are not passive recipients of supplier offerings but play an active role in innovation, often using artefacts in ways neither anticipated nor intended by the developers, and thus transforming our understanding of the artefact, its uses and significance (378).

In this approach, technology appropriation attempts to address how users show themselves as knowledgeable and adaptive agents when using ICT.

Although technologies are generally designed with particular purposes in mind, this often does not translate exactly to how consumers will use it. This is not just about a technology failing to meet user needs; there is an essential unpredictability about human interaction with technology that makes it difficult, if not impossible, to anticipate how users will choose to behave. The appropriation of mobile telephony in African countries, and global reaction to this trend in popular and academic circles, reflects this unpredictability. While some anticipate that mobile phones will be used prominently to generate benefits in traditional development domains (income, health, politics, etc), it is important to accept that users often choose to appropriate phones in ways that do not fall into such neat categories. (379)

While it is beneficial that not only “traditional development domains” are engaged in this approach, technology use is addressed with a focus on functional and material use, and not

the potential for this ‘unpredictable’ behaviour to understanding socio-political or socio-cultural needs.

When discussing appropriation, Ron Eglash states that adopted technologies do not contain an inherent ethical advantage for the culture doing the adopting, as the technologies are not produced through the culture itself (Eglash, 2002). This implies that technology appropriation should be viewed not only as a functional innovation but also as an attempt to impose an ethical advantage through innovation. A very basic and well-known example of technology appropriation and mobile phones can be found in the practice of ‘beeping’ or ‘flashing’, which sprang up across the continent in the early adoption of mobile phones. This practice is a way of communicating using missed calls, rather than paying for actual calls or text messages. It is a cleverly coded system that allows users to communicate various messages based on system of rings and missed calls. Beeping is often referenced as a practice that shows Africa’s surprising ability to innovate. It is, however, never referred to in relation to the affordability of call rates, or what the system could offer to other means of digital communications. Instead of responding to these concerns, service providers instead implemented a “‘please call me’ service”, which allows users to send a simple “‘please call me” text message for free via ‘Unstructured Supplementary Service Data’ (USSD). The ‘please call me’ subsequently requires the receiver to call the sender and therefore spend money. While various local technology NGOs (Praekelt Foundation is an example) are now using USSD to more efficiently and with no cost communicate with mobile users on health and education issues, service providers generally do not respond to their users’ more basic needs.

In *Mobile Phones, Popular Media and Everyday African Democracy: Transmission and Transgressions* (Wasserman, 2011) Wasserman deals with how mobile technologies are implicated in moves towards democracy. Wasserman presents concerns on the ‘Northern’ perspectives that dominate the studies in the field. He states:

The view of mobiles as radically new technologies that will revolutionize African societies may also be predicated on a patronizing ideological assumption of Northern technological progress as a benevolent force for the “underdeveloped” South

(Mabweazara, 2010, pp. 13-14). Much of the debate around mobile phones in Africa, whether celebratory or dismissive, seems to be based on a model of media transmission leading to direct effects. Such technologically determinist transmission thinking bears resemblance to outdated “communication for development” approaches that tend to see technology as a modernizing force to be introduced into African settings, rather than turning the attention to the ways in which these technologies are actively contextualized and domesticated by African users (150).

Wasserman further indicates that contextualised studies are required for transforming older views on media transmission, stating:

[T]hese technologies are taken up by people in a varied, heterogenous African context that in many ways are dissimilar from contexts in the developed world. More non-reductionist analyses that steer a path between technical and social determinism are needed to provide us with a picture of mobile phones in Africa that is rich, textured, and varied (150).

This certainly supports my own focus and approach, reiterating the importance of contextualisation and new views on the philosophy of technology.

In making a distinction between transmission and traditional ethnographic models, Wasserman states that the transmission models focus on issues of distribution and access, while ethnographic models focus on patterns of use and deployment (150). In more specific terms he states:

[T]he *technology centred* model [transmission models] is concerned with what happens to people when mobile phones are used to transmit information to them; the *context-centered* model is more interested in what happens to the technology when it is appropriated and adapted by people. (150)

Wassermann’s primary interest in unpacking the difference between transmission and ethnographic models is to better show how transgression can be understood. Wasserman argues that the transgression of technology boundaries indicates a transgression of other

boundaries, such as those established by “the state, the culture, the economy, and by the technology capitalism complex itself” (150).

Wasserman proposes that through existing ethnographic work on informal communications networks, links between the popular and political can be used to understand what he calls “the practices of everyday democracy” (157) where mobile phones are “technologies transmitting democratic and civic information but also as the location where people are transgressing the hitherto fixed boundaries of what counts as political participation or civic identification” (157). My question, however, is while this assumes the transgressing of dominating governments and out-dated cultural and political practices, can this additionally include a transgression of systems that are intrinsic to technologies developed and promoted by other cultures?

It is clear that technologies hold within them the values of the cultures that produce them, not only in the content they offer but also in how this content is transferred and integrated into societies. It is for this reason that, when addressing technology use in regions of Africa, critical perspectives should be actively sought and identified.

2.3.1.1.2 On Poverty Reproduction

As mentioned previously, the main concern about ICT4D is that its primary goal is never unlinked from market development. Murphy and Carmody state that “This bifurcation of the field is worth exploring, because in a sense ICT4D may serve as a Trojan horse for certain types of e-business” (2015: 110). The low success rate of ICT4D further acts as basic evidence of how unsuccessful its approaches are. Murphy and Carmody indicate that the World Bank, while partially successful in developing policy regulatory frameworks, had a 75% failure rate in the successful implementation of ICT and ICT4D in impoverished or marginalised groups (112). They state that this failure is the result of three primary problems: 1) a failure to account for context-specific capabilities and circumstances; 2) the implementation of inappropriate forms of capacity building; 3) as the result of the prior two, poor ownership commitments to project objectives from communities and target audiences

(113). These are well known failures that are seen repeatedly on the continent, when what has come to be termed 'parachuted in' solutions are applied.

Murphy and Carmody identify in ICT and ICT4D a deepening of existing financial inequalities:

The "poverty-washing" of ICTs, where they are presented as the cure to global poverty, but in actuality are being primarily used to promote capital accumulation, may then serve to disguise deeper problems of the ideology of consumerism and over-consumption (Sklair, 2001). As Castells (2011) recently argued, interdependent and intertwined global finance and multimedia networks play a dominant role in promoting and enabling such consumerist ideologies, and they wield tremendous power and control over the world economy today. (116)

The implications for regions in Africa are multi-fold; as individuals and nations in Africa are not only treated as markets that follow behavioural trends around technology consumerism, but are further subject to definitions of 'developed' versus 'developing' in poor attempts at 'closing' the digital divide. Murphy and Carmody speak of ICTs as objects of ideology, with particular concern for the dependence that supersedes the positive and celebratory "new age of informationalised, liberalised and distributional capitalism" (127). They state:

[...] poverty reduction or reproduction results depend upon the way in which trade and the other elements of the package are structured as a result of (class and state) power relations and the path dependency of previous economic structures. Current global power relations arguably favour regressive structuralist outcomes in Africa – increasing inequality, extraversion, and the reproduction rather than reduction of poverty. (136)

Poverty reproduction is also something that is very rarely reported on. Greater access and use of mobile phones for work related communications may have helped reduce poverty in middle to low income households by offering access to more opportunities, but evidence also shows inconsistent results due to ICT affordability. As a case in point Murphy and

Carmody refer to an example of research conducted in Uganda by Diga that points to these concerns:

[...] most of the homes in her study had reduced their purchases of store-bought groceries to pay for mobile phone airtime. According to one woman, in reference to her husband, “he would rather not buy us food but he would rather put airtime on the phone because it is the phone that makes money” (quoted in Diga, 2007b: 66). Diga found that people, and often women in particular, were also willing to sacrifice consumption to invest in mobile phones for small business. (137)

The seriousness of this position is highlighted when we look at statistics for South Africa and Kenya, where despite a general increase in disposable income, over 50% of population is considered to be on or below the poverty line. Additionally, higher income groups have experienced higher levels of growth than growing middle income groups.²³ Murphy and Carmody go on to state of Diga’s case:

[s]uch trade-offs also show that mobile phone use or ICT adoption more generally, is often driven by a dialectic of “poverty push/opportunity pull”. And yet because market size is limited ICT-enabled opportunities for some may create disadvantages for others, for whom poverty will increase as a result of this competition. (138)

While this thesis does not aim to address the concerns of ICT development in great depth, this section and the one before it act as points of departure for understanding the situation on the ground, and the inconsistencies that people working with technology have needed to address.

Additionally these sections act to highlight a generally evangelistic Western approach to meeting African ‘needs’ through ICTs. When addressing creative and cultural practice that critically responds to technology use in contemporary Africa, these influences are both ethically and culturally significant.

²³ Reports on 2011 census data.

2.3.1.1.3 On Globalised Creativity

Despite the above concerns, the increase in access to information has played an important and positive role in allowing people to bypass historical limitations where governments have been responsible for censoring or limiting access to media and information. This is hinted at by Wasserman (2011) with regard to the role of transgression. Broadcast media in South Africa and Kenya for instance, is almost entirely state run. Mobile and digital media, by contrast, allow for uncontrolled and uncensored access to information. Furthermore the opportunities that have arisen from self-publishing have been significant for presenting the views of a younger generation of Africans. For perhaps the first time in the history of globalised media, Africans are able to more adequately present themselves on globalised information platforms.

Over the last five years, the growing international interest in contemporary African art, design, fashion and music has largely been due to the increase of African creatives self-publishing online²⁴ (Jepchumba, 2016a) (Nxedlana, 2016) (Jacobs, 2016). Prior to this, Euro-American broadcast media, which still dominates global perspectives, had presented Africa as the dark continent of which little was known outside of starving children and a desperate need of aid (Bond, 2006). The active growth in self publication has allowed for a contrary message on what it means to live in Africa, and from various perspectives, reflecting both popular and critical cultures.

Self-publication has additionally led to greater sharing of values between Africans who were previously isolated from each other due to Euro-American media dominance and systemic socio-political and economic issues born of colonial delineations (Bond, 2006). This active online presence and shared engagement has brought on a new wave of self-determination, in addition to a criticism of globalised neo-colonialism. This growing engagement has further been used to challenge how media economies work and in

²⁴ Practices are featured and shared in blogs like *African Digital Art* <http://africandigitalart.com>, started in 2009, South African *Bubblegum Club* <http://www.bubblegumclub.co.za/> and regional *Africa is a Country* <http://africasacountry.com/> which are all globally known sites celebrating African digital and design practices.

extension how the World Wide Web is organised. This includes a concern about where prioritised online content is generated and by whom.

In planning for the fieldwork I found that digital spaces had become important locations for publishing creative work and creating movements around how African aesthetic practices are seen and understood. These movements were innovative in how they addressed globalised media practices and had thrown open larger conversations around local practices. An example can be found in the documentary film by Lebogang Rasethaba and Spoek Mathambo titled: *Future Sound of Mzansi* (2014)²⁵ (Rasethaba, 2014a, 2014b, 2014c) (screened at the *Post African Futures* exhibition). *Future Sound* addresses contemporary dance music culture in South Africa, a vital cultural and critical pop culture form, which draws on traditional music as well as an innovative engagement with electronic forms. Prior to this documentary the subject had received almost no attention as culturally significant or as an innovative technology practice. Since *Future Sound of Mzansi*, this South African genre has gained massive regional and international interest. This musical practice is close to twenty years old, and outside of its mass participation locally, had never been formally recognised as a means of understanding South African culture.

Bubblegum Club is an example of online publishing that is important in leading these conversations. Articles like Motlatsi Khosi's "Black bloggers are the conscious curators of our local Internet consumption" (Khosi, 2016) and Bubblegum Club TV's own webisode series *Fear of The Youth* (Club, 2016) are important locations that share critical views towards self-determination in media cultures. Sites like these play an important role in leading local and regional cultural trends that are not influenced by the West and the intentions of a globalised information economy (these will be dealt with in more detail in Chapter 3 in relation to the fieldwork outcomes). These locations however currently fall outside of scholarship on the subject of Africa, and are a reminder of Mbembe's words on the act of composition: "the capacity to continually produce something new and singular, as yet unthought, which cannot always be accommodated within established conceptual systems of knowledge" (349) (Mbembe, 2004).

²⁵ Watch trailer here: <https://www.youtube.com/watch?v=2A0ZzKybU1U>

The corporatisation of access in regions of Africa is equally interesting and worthy of interrogation. Google, IBM, Microsoft and Facebook have all in the last few years undertaken their own projects to support access in Africa. Without dismissing the contributions of these organisations, as they have done both interesting and good work, I do want to point to one rather contentious example. *Free Basics*, made up of *Facebook Zero* and *Wikipedia Zero*. *Facebook Zero* is a stripped-down, text-only version of Facebook offered through fifty mobile service providers in forty-five countries, who then do not charge for data needed to access the site. Meaning that people can use the site without credit on their phones (Hersmann, 2010). The aim is to bring more users to Facebook and to solve the two main reasons why people don't use Facebook, the first being speed and the second cost. This development grew alongside an arrangement with WikiMedia called *Wikipedia Zero*. The argument for *Free Basics* is that it gives people access to data that they would not normally be able to afford. The argument against it, however, is that it provides users with a closed ecosystem. It was for this latter reason that it has been banned in India, the Indian government seeing it as a "user grab technique" (Koebler, 2016).

African service providers have kept the service and are working with local, mobile-orientated NGOs to find ways for it to become additionally valuable to business owners. There is additionally a drive to use it to develop African content for Wikipedia (Foundation, 2016). In Africa, however, there have been some entertaining 'unexpected' uses that challenge the corporate intentions of *Free Basics*. In a recent article "Angola's Wikipedia Pirates Are Exposing the Problems With Digital Colonialism" (Koebler, 2016) Jason Koebler states:

Angolans started hiding pirated movies and music in Wikipedia articles and linking to them on closed Facebook groups, creating a totally free and clandestine file sharing network in a country where mobile Internet data is extremely expensive. [...] hiding large files in Wikipedia articles on the Portuguese Wikipedia site (Angola is a former Portuguese colony) – sometimes concealing movies in JPEG or PDF files. They're then using a Facebook group to direct people to those files, creating a robust, completely free file sharing network. (web article)

This practice of course goes against what Wikipedia stands for. And while WikiMedia are looking into how local legislation and copyright law can help them, Koebler and others are seeing this as a response to forms of digital colonialism. A better solution would be to support local service providers to offer cheaper Internet. Koehler concludes stating:

Angolan's pirates are learning how to organize online, they're learning how to cover their tracks, they are learning how to direct people toward information and how to hide and share files. Many of these skills are the same ones that would come in handy for a dissident or a protestor or an activist. Considering that Angola has had an autocratic leader in power for more than 35 years, well, those are skills that might come in handy one day. (web article)

This shows the potential of what Wasserman sees as the role of transgression. The question, however, is when these types of actions will be read more helpfully as critical, by those who create and implement policy.

To conclude, I quote Murphy and Carmody, who state:

The possibility that marginalized or peripheral regions/peoples might tap into the potential benefits made possible by ICTs and the global network society, depends upon their ability to counteract or circumvent the power relations that unevenly dictate the direction, scope, and scale of the networked flows of commodities, knowledge, and finance in the world economy (Castells, 2011). As such, the immanent power of ICTs and Africa's information revolution might be realized if they help disrupt or discontinue Africa's long history of extraverted economic relations. (116)

It is important to fully understand ICT's role in shaping the landscape of the globalised information economy, within which young Africans are forging themselves.

2.3.1.1.4 On Africa's Technology Futures

In the following section I make the exploration of 'technology futures' for two reasons. First it assists in understanding how and why *futures* are being envisioned *for* rather than *by*

regions in Africa. Secondly it assists in laying the groundwork for understanding why European cultural agencies and international art and design curators are so concerned with Afro-Futurism.

The trend for Afro-Futurism in Africa is largely a response to a contemporary revisitation in Euro-America of Afro-American Afro-Futurism and a growing international awareness of African creatives online who are using and exploring digital and technological mediums. This interest in Afro-Futurism was a recurring subject, brought up unprompted in many of the fieldwork interviews. Young artists were being labelled 'Afro-Futurist' by the international contemporary arts, music and design scene, but were not entirely sure of the origins of this naming or why it was being used. This interest in Afro-Futurism, which will be discussed in more detail in the fieldwork analysis, intersects with the discussion that follows, which acts to underscore Euro-America's own 'future insecurity'.

Bland and Westlake, in the NESTA report *Don't Stop Thinking About Tomorrow: A Modest Defence of Futurology* (Bland, 2013), indicate the following in relation to the importance of Futures Thinking or Futurology:

[...] consumer electronic brands trying to compete in a new market are attempting to play a role in the future of that market. And in this case, it is not correctly predicting the market that is important, it is shaping it so that you can lead. A clear vision of a particular future goes a long way in motivating the changes that will bring that future to life. (3)

Futures of Technology in Africa (Gosskurth, 2010) makes a study of future thinking in Africa in line with ICT development. In this, Gosskurth, highlighting the reason technology futures for Sub-Saharan Africa should be addressed, states: "the combination of a highly dynamic region with excellent opportunities for development on the one hand, and a desperate need to improve the quality of life for a large part of the population on the other, makes Africa an exciting and worthwhile project target" (9). In the *Futures of Technology in Africa* report, the focus is specifically on quantitative economic, political and infrastructural data on Africa, including views from the leading media experts and ICT heads in Kenya,

Uganda, Rwanda, South Africa, Nigeria and Ghana. Though excessively positive, these viewpoints offer personalised insights and anecdotes from the industry and its development by Africans.²⁶

Beyond a discussion of trends, the most interesting contribution of *Futures of Technology in Africa* for me is the documentation of a ‘future thinking’ workshop run by Gosskurth’s workgroup in Nairobi, which:

[...] brought together ten of East Africa’s most creative thinkers. In an intensive one-day workshop, we explored futures of East Africa with a time horizon of 20 years, based on a rapid foresight method. The workshop tested many of the preliminary project results and embedded them in different plausible future cultural, political, economic and environmental contexts. (14).

I present these outcomes as a quick case study in understanding the type of thinking present in the tech sector in Nairobi.

In this workshop the aim of Gosskurth’s team was to play out three scenarios that fall between the following extremes: good versus bad governance and healthy versus deteriorating natural resource and environments (107-113).

The outcome of *Scenario 1: Dry Spell* (good governance and deteriorating environment) was generally moderate and indicated positive trends for technology development. A moderate political climate is speculated upon, and shows government

²⁶ *Mobile money* is highlighted as a massive success in Sub-Saharan Africa; particularly in East and Southern Africa where systems like M-PESA (translation: m-money) have literally transformed how people informally and formally share and transfer money. Apart from the benefits of the mobile money for an un-backed majority, it was built and prototyped out of Nairobi and is therefore held as a ‘Kenyan’ development (though rights are held with Vodaphone), essentially turning Nairobi into the first ICT capital of Africa, the ‘Silicon Savannah’. Mobile money is so successful, because prior to mobile banking the country had very little infrastructure and did not cater to the needs of low-income earners, which essentially makes up the largest part of the population. The second mega trend, *geo location*, Gosskurth states, is key to assisting asset management, rural access and location driven data collection. The report gives a thorough outline of the key focus areas, and for a change does not overly romanticise eHealth, eEducation or eGovernance.

working with technologies to promote education and healthcare. It brings to the fore the benefits of ICTs, spelling out the potentials for ICT4D in dealing more prominently with environmental issues. This scenario reflects what is already at play in East Africa.

Scenario 2: Paradise? (good governance and healthy environment) presents excellent education and welfare for all, strengthening internal financial exchanges that boost and sustain a healthy economy. More time for leisure activities and therefore the presence of more cultural practitioners and lifestyles that include a healthy and dynamic relationship between humans and nature (the latter being very important re. the importance of agriculture), this scenario reads much like the Euro-American dream for Africa. Yet what is most interesting is that the participants of the workshop were more concerned with the potential deterioration of Kenyan values in this scenario. The concern was that the excess of time and money would lead to the breakdown of social structures, because there would be less need for them. In extension, another concern was that technology would 'adapt' to this climate better than people would and people may therefore become detached and cold, thereby threatening the strong family and community bonds in Kenya (110). With this came the concern that fewer people would be active in farming as technology would streamline these processes.²⁷ Participants asked:

Will this change the communal culture that characterizes Africa today? As people become urbanized, with nuclear families and the cutting of ties between cities and village, will old traditions die out and an amorphous culture emerge? Will people be happier or will there be a rise in depression, mental illness and Western ailments of alienation? (111)

These concerns then led to further concerns that the attractiveness of the country may leads to an influx of immigrants and subsequently xenophobia, extremism and human trafficking (South Africa and Europe were quoted as examples). What this implied is that what may be considered positive by for an economic climate and what is certainly the *promise* of neoliberalism, is in fact very uncomfortable for how Kenyans understand themselves and act in the world.

²⁷ It is important to note that farming is an important cultural activity in Kenya.

Scenario 3: Mad Max (bad governance and deteriorating environment) presented a vastly different future in which the country finds itself on the brink of anarchy. Here the economy declines as production comes to a halt because of the depletion of resources. This scenario at worst results in a food crisis, which leads to civil strife and outright war. In this scenario “emigration become the ultimate ticket” (112) and the most productive in society leave as self-interest and self-preservation become guiding principle above all else (the exodus of society’s most talented and productive is interestingly a situation faced daily in many African countries). This scenario on the other hand sees people using technology to find innovative ways to run their lives with limited resources. In this scenario, technology becomes less capital intensive, and is therefore in stark contrast to technology in the *Paradise?* scenario, in which it is intensely commodified and destructive to society.

These last two scenarios are fascinating as they play out many real issues inherent in how development and technology are understood and implemented in the region. It is interesting that the greatest loss in the *Paradise Scenario* would be communality. This clearly shows that Kenyans fundamentally understand that communications technologies and their systems from the West cannot contain or support Kenyan communality. It is additionally interesting that in the *Mad Max Scenario*, true innovation is enacted only in a complete economic meltdown and outside the commodification of technology. What the *Dry Spell* misses, is interestingly highlighted in the *Mad Max Scenario* – the thing that makes Kenya and African ICT attractive to outside developers, namely the adaptive and innovative use of technology, born out of conflict and crisis.

At the 2015 Fak’ugesi African Digital Innovation Festival, in the curation of the Fak’ugesi Residency, I asked the artists to respond to the theme: ‘speculative future of Johannesburg’. In response to the question and in making work for the residency, one resident, Jepchumba (of Kenyan origin but living in South Africa at the time), began to ask local Johannesburg residents “what do you think of the future?”. The responses overwhelmingly pointed to the fact that most people did not like to think of the future. In a paper written on the residency process and its outcomes for the Goethe Institute, “African Futures” (Jepchumba, 2016b), Jepchumba states:

In these conversations about the future I recognised recurring themes. People are reluctant to think about the future, something I believe is a remnant of colonial rule and its top-down power dynamics. In many conceptions of the future, there is a desire to connect tradition and modernity, or at least a desire to reconcile the anxiety between rapid urbanisation and existing traditions and beliefs. (162)

In her explorations, Jepchumba found that many associated the idea of a future with a lost past, often talking about land and even ancestral land. On this she states, “I had dozens of responses that imagined future as closely resembling rural homelands, not ‘smart’ cities with flying cars and hi-tech interfaces” (163). Jepchumba’s primary concern is that there is a stark contrast between these visualisations of the future and the development narrative that frames governance and ICTs’ futures. She states that these “Typically numeric exercise [...] [e]lide with difficult conversations about how systems were created in the first place to debilitate Africa’s participation in the future” (164).

In *Mobile Phones: The New Talking Drums of Everyday Africa* (Bruijn, Nyamnjoh, & Brinkman), the editors state, “[t]echnologies are not seen as determining society as such [...] [o]n the contrary, society and technology are interdependent and are evolving in a dialectic process of cultural and social appropriation” (12). This reiterates a need for vigilance around speculative or future thinking for technology in Africa. We must ask who is making plans for Africa’s technology futures and with what intentions.

2.3.1.1.5 On Questions Posed by Omoka

It has been made clear that there is a paucity of research on new and communications technologies that offers a uniquely African perspective on contemporary concerns and processes. In the following section I explore the rare paper by W.K. Omoka: “Applied Science and Technology: A Kenyan Case Consideration of their Interrelationship” (Omoka, 1991). A paper that was very influential in the early stages of this research and acted as a primary point of departure for the fieldwork. Omoka’s quite radical paper (for the time and the context) helped me develop my initial thinking towards framing *African cultures of technology*.

Omoka's article primarily poses questions about how technology is viewed when it is understood as an applied science. His focus is framed by a critique of the Euro-American mechanism for rating nations dependant on their scientific research output. Omoka's line of questioning engages the terms have been taken on by what he calls the African 'intelligentsia'. Omoka defines the 'intelligentsia' not as intellectuals, but rather those in policy development and governance. Omoka's concern is with how strongly the 'intelligentsia' are influenced by Western system of rating and the terms that are outlined for how technology and science are defined within this. By way of introduction, Omoka states:

In the scenario of national development discourse and social praxis in Kenya, technology is invested with high hopes for improving of the lives of most, if not all, wananchi (citizens). [...] The writer postulates that if one were to ask the grounds for viewing technology as applied science one would most likely be given an explanation founded as either self-evident truth or analogy. Since self-evidence proves in itself nothing about its empirical validity, and analogy is not empirical demonstration of truth, it would be warrantable to regard the explanation to be either indicative of inability to conceive of technology being anything but applied science or a reflection of a set of systematised apologetics for some dogmatic belief about science. (14)

In his paper Omoka makes two major observations, which became very important to me in this research. The first is that technology as an applied science is not unique to Kenya and he therefore does not call the notion itself into question but rather suggests:

that the notion is uncritically used; that such a usage has the consequence that it leads to forcing interpretations, based upon the notion, of the interplay of science and technology in advanced industrial countries onto Kenya's technological data; and that under specifiable conditions the interpretation either significantly distorts the objective reality of technology in use or measurably overlooks certain plainly important features of the technological efforts in the nation. (15)

Omoka's critique expands on and reiterates an understanding that difference is always sought against what is thought to be a 'normative' Western experience with regard to

science and technology. And though Omoka was writing long before the use of mobile phones, his critique pre-empted issues found in ICT. Omoka goes on to indicate in his argument that relationship between the techno-scientific and socio-economic, perpetuates not only a deterministic perspective, but becomes mechanistic for those conducting research (25).

The second important observation from this paper is, as Omoka states, “[t]he notion that other countries are doing basic research [on Kenya] whose results Kenya can take and translate into practice, if seriously taken from the standpoint of science policy, would be the surest way to perpetuate the present structural technological dependence” (23). What Omoka’s statement makes clear that the issues found with ICT are much older and systemic to science and technology. Essentially these are problems inherent in how governance and policy development are perpetuated by global competition.

Though I will not address directly the broader concerns of science and technology in this thesis, Omoka’s questioning led me to apply his thinking in unpacking contemporary cultures alongside technology. What Omoka’s paper began to hint at were domains of knowledge outside of the domain of *expert* knowledge, as Mbembe calls it. Omoka states, “given the fact that in Kenya the scientific attitude is overwhelmingly alien – not because such an attitude is difficult to internalise but because of certain interiorised beliefs and modes of cognition characteristic of the African socio-cultural heritage – the notion of technology as applied science has adverse implications on the practical plane” (15). Though Omoka does not go into much detail following this statement, he opened up an interest for me in investigating the role and consequence of other knowledge regimes in the regions of investigation.²⁸

It is worthwhile explaining that Omoka’s focus is not on the politics of difference in knowledge systems between Kenya and outside parties, but the consequence of how these politics are played out internally. Omoka asks how internal politics offset the transfer of knowledge. His question is aimed at the role of the ‘*intelligencia*’, and he asks how they can

²⁸ The terms are presented in Chapter One in relation to the writing of Achille Mbembe.

better allow the socio-cultural systems to play a part in this transfer. This issue, though dealt with briefly by Omoka, remained an important question for me and became central to how I created an approach to investigating and framing *African Cultures of Technology* In the two regions of study. This is from both an ideological standpoint and the transfer of knowledge in practice.

African Cultures of Technology as a framework then holds an opportunity to understand each nation's history of technology both pre-colonial, modern and contemporary; the way its governments have chosen to implement policy around access; the unique visual, communal and aural cultures that each nation keeps in practice; and a situations in which a critical practice can emerge from all three. The subsections above have given a brief grounding on contemporary issues faced in these regions. Issue that played an important part in outlining an approach to the fieldwork.

2.3.2 In the Field: Interview as Exploration

This second section to *African Cultures of Technology: Knowledge from the Field* is used to unpack the actual methods used in the fieldwork. I explain the referral sampling method used to identify a network of respondents, and present the interview schedule itself. I unpack what was taken into account when designing the interview schedule, with particular reference to what was presented in the last section - *2.3.1 On Existing Positions*. The interview schedule was predicated on an evolution of thinking influenced by Omoka, and evolved by better understanding the concerns for ICT in contemporary Africa.

In order to identify respondents in the field, particularly in Nairobi, which was a city that I was unfamiliar with, I engaged what is referred to as snowball or chain referral sampling. Biernacki and Waldorf (Biernacki, 1981) describe its process thus: “[t]he method yields a sample of respondents made through referrals among people who share or know of others who possess some characteristics that are of research interest” (141). I used this method for two primary reasons. The first is that it helps locate respondents when respondents are hard to identify. This was valuable as there was no directory of active participants in the field in Kenya and South Africa, neither was there one particular location

from which this type of activity was taking place in the two cities. I began by interviewing a known expert in the field and on completion of the interview, ask them to identify at least two other people known to be working in the field or who would be of interest to me in relation to the topics discussed. This allowed me to access respondents that I had not previously been able to identify and furthermore helped to uncover new practices.

The second reason this method was used is that it allowed me to explore a group of people that are interlinked. The method was therefore valuable in constructing a picture of how groups of practitioners were either interlinked and/or worked together. The results of the snowball sampling soon revealed unexpected maps of how the practitioners in question organised themselves in the respective cities of Johannesburg and Nairobi, furthering the case for distinct *cultures of technology* in each region.

I conducted one-to-one interviews with each respondent; these were formal but semi-structured. A *structured interview* is a set of questions from which the interviewer does not deviate, neither in subject nor order. The *semi-structured interview* uses a set of questions only as a guide in a discussion with a respondent. The semi-structured interview is understood to allow for what Galletta explains as an “exploration of lived experience as narrated in the interview in relation to theoretical variables of interest” (9) (Galletta, 2013). In a semi-structured interview the interviewer allows topical trajectories that deviate from the guide when necessary. As the interviews were to uncover ways of thinking and doing that were not fully contained by existing research or scholarship, this formal semi-structured format allowed for exploratory conversations.

I interviewed people who were identified as experts in their fields. These I organised into three primary groupings: 1) technology developers; 2) artists and creative developers; 3) organisers, writers and educators in the field. *Technology developers* I identify as people active as developers in the ICT industry, whose work does not strongly orientate towards cultural or art practices, but may be associated with social development in the field. The second group, *artists and creative developers*, is made up of either technology developers with distinct cultural and artistic practices, or artists with practices that concern technologies and the ICT industry but who are not technology developers. The third group,

organisers, writers and educators, are instigators, networkers, organisers and educators that are concerned with culture and technology, interact directly and work with the first two groups, but are not developers or creative practitioners in their own right.

In light of the semi-structured interview the interview schedule was designed to allow for multiple streams. Galletta identifies that as a hybrid method the semi-structured interview allows for segmentation into themes or areas of inquiry (24) (Galletta, 2013). In the design of this interview schedule, the use of topical segments therefore allowed me the possibility of various open-ended discussions. This was particularly important as I was interviewing people that fell into different groupings, who might emphasise one area over another. The questions therefore become prompts towards a discussion that would fall naturally towards one segmentation or another, depending on the respondents' particular interest and focus.

The interviews in Nairobi were conducted in a short week-and-a-half investigative visit. In Johannesburg, I was able to conduct them over a longer period, as I am a resident of the city. In order to keep a consistency between the two samples I used the same method in each city, using Nairobi to define the size of the sample. A total of twenty-six interviews were conducted; thirteen in Nairobi and thirteen in Johannesburg. This sample, though small, allowed for a good understanding of practice and engagement in the respective cities and allowed for an easy comparative analysis.

In the following I list the sections headings and questions used. For each segment I explain its purpose.

1. Introductory Details:

- a. What are the primary activities of your (Institution Name/Work Activity)?
- b. What is your role in (Institution Name/Work Activity)?
- c. What is your educational/training background?
- d. How many years/ months have you been at (Institution Name/Work Activity)?
- e. What were you doing before?

The purpose of this was to document basic work and education information about the respondent. This information was valuable in documenting which group the respondent fell into. It additionally allowed an understanding of how much influence their education and work had on how they responded to later discussion.

If the respondent was an artist or creative practitioner I would swap the above questions for the following. I would, however, more often than not only refer to these questions at the end of the interview, as I found that creative practitioners would discuss their practice in relation to the topics discussed and preferred doing so. This added valuable insight into how they saw their creative practice in relation to the topics discussed. Not every question was asked; the questions, as mentioned, acted only as guide in a conversation.

1. Introductory Details & Artwork Details:

- a. What is your educational/training background?
- b. How many years/ months have you been a creative practitioner?
- c. How do you understand your practice in relation to what might be termed “digital art” or “technology art”?
- d. Describe the activities of your creative practice.
- e. What most interests/motivates you about your practice?
- f. Do you have any particular themes or critiques that occupy you? How are these related to a technology?
- g. What other types of professional activities have you been involved in?
- h. How do you understand digital or technology creative practice with regard to the difference between using it as a medium and a critical tool?

The purpose of the following was to identify to the respondent how I came to identify them and as a means of better understanding the relationship between them and the person who referred them to me.

2. Network and Snowballing Aspect (if referred):

- a. (Connecting person) recommended that I speak to you as part of this initial research enquiry. How does (connecting person) know you?
- b. Have you worked together? And on what?

c. Why do you think they suggested I speak to you?

Questions from the following section were used to start a conversation with the respondent on their understanding of the importance of technologies in light of their social and cultural influences.

3. Initial Discussion on Digital Technology Environment:

- a. Which area or aspect of digital technology development currently, do you think has the most impact on local society?
- b. Is there a particular project that excites you? and why?
- c. What do you think had the largest impact on local society before (particular) digital technology influence?
- d. Do you know of any historical tradition of science/technology in this region, either as a traditional knowledge form or academic/research form?
- e. How would you describe a “culture of technology” in (the region)? (Here I give an outline my understanding of what an “African culture of technology”).
- f. Do you think there is a historical or traditional culture of technology in the region?

This conversation would often develop into a discussion on understandings of historical technologies, and a deeper discussion around uniquely *African Cultures of Technology*. The outcomes of this were very valuable, not only in identifying unique cultures of technology for the region, but particularly in exploring the ideological implications of technology in regional cultures.

The next section drew strongly on concerns around ICT in Africa. In addition, this section sought to explore motivations related to the topic; whether the respondent thought this motivation was global or unique to the region, how they placed themselves within this context, and what their own motivations were.

4. Organisation and Motivation of Individuals and Entities in the Environment:

- a. Which organisation do you think leads the digital technology environment in the region driven? (Organisations vs Individuals).
- b. How would you describe the organisation of the digital technologies development environment in (the region)?

- c. What would you say is the strongest motivating factor amongst people in the digital technologies development environment?
- d. Do you feel that this is unique to the region?
- e. How do you feel you and your activities fit into this environment?

In addition to developing an understanding of how the respondent understood this area, this line discussion helped to identify whether there were any trends in regional organisational or leadership roles.

The following section was an interrogation of the influence of globalisation within the technology sector. I used these questions as a guide to explore how the respondent understood the balance of influence between global versus local.

5. Relationship to a Global Digital Technology Environment:

- a. How do you understand the local organisation as compared to a global or international technology environment?
- b. What do you think are the most influential global or international factors on the local environment, both good and bad?

The following topic was born directly from my concerns around knowledge and ownership in ICT, and the role of communality and access in knowledge transfer around technology.

6. Knowledge Transfer:

- a. How do you understand knowledge and skills about digital technologies are transferred in the local environment?
- b. Do you think there is a tradition of knowledge and skills transference and sharing in the region? If so, please describe it.
- c. Do you know of any particular individuals or organisations that aim to share knowledge and/or educate in this arena. How do they fit into the large scheme of knowledge and skills transfer?

This topic often naturally followed from section 3, and was used to understand how skills, knowledge and ideas are shared in relation to the social and cultural importance of

technology. Through these questions, I wanted to understand the way in which knowledge transfer happens and how individuals understand it.

The following was a direct seeking out of information about how technology is seen to contribute to culture in the region and how this is enacted through contemporary digital and communications technologies. It additionally allowed me to understand particular cases of use relevant to the respondent's understanding.

7. Intersection with a Cultural Practice and Cultural Engagement:

- a. Do you understand there to be a relationship between the development in the digital technology environment and cultural or social practices in the region? Can you describe an example of this?
- b. Do you think there are negative influences of digital technologies on cultural or social practice? If so, please describe them?
- c. Can you name a project, activity or individual that engages a cultural or social practice through digital technologies in the region?

This was interestingly a difficult conversation for most people in the technology developers' group, as many of them see a distinct separation between technology and culture, and in fact found the influence on culture to be negative. For creative practitioners and artists it was an exciting conversation, which I would often lead to from segment 1 or 3.

Finally I would end the interview, by asking for a referral.

8. Network and Snowballing Aspect (part 2):

- a. In your opinion who are the most interesting individuals in your local digital technology/creative environment?
- b. Would you recommend that I interview them? And why?
- c. How do you know these individuals?

The snowball sampling method led to introductions and access to a wider group of people who were not interviewed in the sample, but many of whom – in addition to those interviewed – became important contributors and respondents in the later part of the research.

The findings of the fieldwork are written up in Chapter Three, in which I unpack the themes and trends found through the fieldwork. These led to the development of *Post African Futures*.

2.4 Post African Futures: Critical Responses

The development of the *Post African Futures* as a notion was an evolving process. *Post African Futures* grew out of conversations from the fieldwork and the identification of themes and trends through content analysis performed on all the interviews. Most important in the latter was the identification of actional methodologies towards a decolonisation of new communications technology, in how practitioners were working creatively in the field. This sub-section acts to identify a methodological line that went from *African Cultures of Technology* towards *Post African Futures*, and present the methods used to elicit feedback and responses to what would become *Post African Futures*.

One of the principle findings of the fieldwork was that activity around culture and technology in the two cities was vastly different, thus cementing the importance and role of understanding unique cultures of technology in Africa. In extension, practices in both cities played out in actional ways. These I initially termed *aesthetic methodologies*, identifying them as aesthetic engagements and cultural actions that act to question and critique, in this case the intersection of culture with new digital communications technologies. This practice was also in alignment with what is termed *actional methodologies* (not to be confused with action research methods). As we have seen Mignolo uses the term to contain a description of the enactment of knowledge outside of traditional research and scholarship (Mignolo, 2012).

Two community orientated actions were therefore taken to elicit responses to what I had begun formulating as a position on culture and technology in the two regions. The first was as a call for papers to a panel on the subject at the Fak'ugesi Conference. The call was not an invitation to directly respond to my findings, rather acted to engage a community of regional scholars on the subject and to understand what positions and explorations were being made in the field that possibly intersected with my own. The second action was a much larger project and more significant to the contributions of this thesis; this was the *Post African Futures* exhibition.

2.4.1 An Invitation to Respond: Fak'ugesi Digital Africa Conference

The Fak'ugesi Digital African conference was held in Johannesburg, South Africa in December 2014. The conference acted to invited both the Planetary Collegium and academics from Southern Africa to explore the digital and technological in contemporary culture.

The conference was small and tasked as an intimate invitation to researchers to present papers from which we would publish selected papers in the *Technoetic Arts: Journal of Speculative Research*. Four areas of interrogation were identified for an initial call:

1. *The Post-Digital Organic*, convened by Prof. Roy Ascott
2. *Post-AfroFuture: Art, Culture and Technology in Africa*, convened by Tegan Bristow
3. *Innovate, Collaborate, Educate: Art-Technology Education*, convened by Prof. Christo Doherty
4. Technology Dreams: Reflecting on Technology Art Festivals and the Fak'ugesi Digital Africa Festival, convened by Tegan Bristow

(See Appendix A of this thesis for the full call for papers)

The fourth panel was identified as a non-academic panel to which partners of the Fak'ugesi Festival (which was presented in September 2014) could present reflections. The majority of papers submitted were, however, situated in the first three; this fourth panel I therefore subsequently excluded from the final programme.

The first and third panels, led by Prof. Ascott and Prof. Doherty, are not of concern to this thesis and I therefore focus only on the second. The call for papers to *Post-AfroFuture: Art, Culture and Technology in Africa* read:

Technology, particularly communication technology and digital art is a way to speak to and understand mechanism of engagement between Africa and the globalised West. Here the convergence of technology with culture presents an opportunity to reposition and reassess this relationship in contemporary culture.

Papers are to address socio-cultural or art practices with technology and digital media. There will be an emphasis on South African research, but research from across the continent will be welcomed.

As is clear, this call was not asking for a direct response to my research; rather it asked for papers on research within the area of inquiry. The intention of this panel was not to generate data for my research; rather it acted to understand the scope of inquiry being made by others. It also offered an opportunity for greater discussion and sharing between those who participated, including myself.

The results of this call for papers showed that there was very little direct theoretical research being conducted in the area. The majority of the twelve papers presented on the *Post-AfroFuture* panel were orientated towards explorations of arts practice rather than theory; this was done predominantly by the artists themselves. Due to this, and to make a distinction between two types of research presented, I divided the submissions into two sections: *Post African Futures: Theory in Practice* and *Post African Futures: Art and Technology*. Please see Appendix B of this thesis for the full conference schedule. More information on authors and papers can also be found on <http://conference.fakugesj.wits.ac.za> (last accessed December 2016).

The discussions that took place at the conference and a closer addressing of the papers in the editorial that I wrote for the special edition of the *Technoetic Arts: Journal of Speculative Research* contributed to constructing the framework for the *Post African Futures* exhibition. The panel was enormously beneficial for seeing the perspective and concerns of this community of scholars and artists.

2.4.2 An Invitation to Respond: Post African Futures Exhibition

From the outset of this research I had always planned that an exhibition would form part of its final outcome. The way this would evolve, however, was open for development. The processes of the research made it increasingly clear that an exhibition or showcase of creative practice that reflected actional methodologies was very necessary not only in its own right, but also as a response to my own framing of *African Cultures of Technology* and the evolving framework of *Post African Futures*.

The exhibition as a responsive engagement fell into line with the principles of decolonising methodologies, and furthermore the role of culture as an alternative location for knowledge production. The exhibition's process and outcomes held in them the glint of the golden thread of context specificity. Firstly, they located the production of knowledge with a community in a related cultural framework. Secondly, the intersections of culture and technology that had not adequately been dealt with in scholarship, found an alternative location in which to be addressed.

After the conference, I was given a well-timed invitation by the Goodman Gallery in Johannesburg to curate an exhibition on my research. The gallery was familiar with my work and were interested the research and what it offered to an understanding of contemporary African art. As a private gallery, I did have doubts about placing such a community orientated exhibition with them. My concern was not misguided, as the only criticism I received on the exhibition was that it was produced with a private institution and that it should have been housed in a public forum. The decision to work with them was a hard one to make, but I was swayed when promised free reign on how the exhibition could be designed and programmed. This allowed me to bring in alternative formats that not only explored the interaction of culture and technology (new to an arts gallery), but furthermore gave focus to the community led engagement of the research.

In planning the exhibition, I produced a call to action that was sent out to a long list of artists. I worked with the Goodman Gallery to put this list together, which was made up of

artists and creatives I had encountered through the fieldwork; artists I had encountered in the processes of the research in other part of the continent; and artists that the Goodman Gallery identified as being known to be working in the field. I sent out this call to action as an invitation to respond and show work:

We invite you to participate in an exhibition curated by Tegan Bristow (myself) in collaboration with Emma Laurence of the Goodman Gallery, Johannesburg in South Africa.

The exhibition intends to address the role of and response to technology and the digital in socio-cultural aesthetics and contemporary practices of art and performance in Africa. The exhibition will comprise of artists from and dealing with the continent, our invitations extend to South Africa, Kenya, Nigeria, Cameroon, Tunisia and Egypt; and will be a platform for performances as well as video, installation, print and sculptural work. The exhibition dates are 21st of May to the 11th of June 2015.

This letter acts as both an invitation and frame for the exhibition. We will be in communication with you more directly to address your work. Not only are we inviting you to present work, but additionally to form a definition for how this area should and can be understood. The working frame for the exhibition is Post African Futures, a conceptual title derived from various influences and put into use for the first time at the Fak'ugesi Digital Africa Conference in December 2014. The term (which I hope to briefly unpack) is not an absolute definition, but one that acts as a guide to this invitation and the start of further engagement with you.

Post African Futures looks to do a number of things, the first and most simple is to dispose of the relationship implied by a European and North American contemporary art world, that any practice originating in Africa that deals with a creative use of technology, science fiction or forms of futuristic mythologies is Afro-Futurism. This is not something that needs to be over stated, we know it's not, you know it's not, so we will simply put forward better names and definitions.

The African Futures part of the working frame is unwittingly borrowed and adapted from Pamela Phatsimo Sunstrum (thanks Pam), a South African artist who has written on the subject of differentiation from Afro-Futurism. In "Afro-mythology and

African Futurism: The Politics of Imagining and Methodologies for Contemporary Creative Research Practices”, Sunstrum uses “African Futurism” to not only leave behind the stagnant and somewhat consuming prefix “Afro”, but more importantly to title and talk to the sciences of African mythologies, socio-cultural technologies and critical engagements with now.

The resulting response led to an exhibition with work that ranged from photography, video installation, sculptural installations, mobile media interactions, films, an interview series, a collaborative music performance and a series of talks. As a method the exhibition was effective in engaging the artists and creative practitioners I had interacted with over a period of almost three years and giving them a platform to challenge the subject and present their own responsive works.

Chapter 3

amandla engwenya asemanzini

Tsonga proverb. Translation: The crocodile's strength lies in the water.

3.1 Fieldwork Introduction: A Guide to Nairobi and Johannesburg

This chapter presents the findings of the fieldwork. In this introduction, I address why Johannesburg and Nairobi were chosen as key urban locations the fieldwork. I present positions on Nairobi and Johannesburg from the perspective of technology. Additionally I address both the cities through the lens of African Urbanism, to give some insight into how African cities differ from those in the West.

Following this introduction, I unpack the fieldwork findings for Nairobi and Joburg (short for Johannesburg), each independently. Identification of the key themes was achieved through an exploration of trends in the content analysis of both the interviews and the relational maps formed in the snowball sampling. These key themes contribute to an understanding of the unique cultures of technology found respectively in Nairobi and Johannesburg. Following the separate interrogation of findings from the two cities I address shared trends and identify actional methodologies as per Mignolo.

3.1.1 Choosing Nairobi and Johannesburg

I focused on countries with known ICT development sectors. Attempting to explore the subject in the Central African Republic (CAR) for instance would not have been useful for this research. The CAR is one of the ten poorest countries in the world and has since 2004 been suffering under a succession of religiously driven bush wars. The number of practitioners in the field of ICT and technology are minimal, and the relationship between contemporary cultures and communications technology limited. I had additionally decided to exclude North Africa in this research, even though I worked with artists from Egypt and Tunisia in the exhibition process. North Africa has strong development and cultural ties with Europe and the Arab world that put it on a separate economic trajectory to that of Sub Saharan Africa.

Language was a second qualifier. In 2012 I had begun working with Karen Dermineur based in Dakar, Senegal. The technology development sector's relationship to culture in Dakar is interesting, as it is connected with art and culture concerns through projects at the

Dakar Biennial and a strong programme run by a digital arts Residency called *Ker Thoissane*. Working with Dermineur in Senegal made clear the difficulties of working between Francophone and Anglophone countries, from the perspective of both language and culture. It was for this reason that when Dermineur and I started working together to produce the continent wide directory of practice for *MDC: Digital Afrique* (T. Bristow, 2013a), I worked with artists and cases from Anglophone countries and Dermineur (who has similar problems with English) engaged the Francophone cases. Though I did not engage practitioners from Tunisia, Egypt, Senegal, Cameroon and the DRC in the initial investigations I did however receive responses to the exhibition from artists working in these countries.

Nigeria and South Africa are two of the strongest economies in Sub-Saharan Africa, and are very influential in West and Southern Africa respectively. Kenya does not fit the same the economic rating, but its ICT development is hailed as being most influential in the East Africa region. The development of M-PESA and a crowd sourced data system for crisis situations, called Ushahidi²⁹ position Kenya as significant in the ICT development sector, with Nairobi being labelled the *Silicon Savannah* (South Africa has the *Silicon Cape* and Nigeria the *Silicon Lagoon*). The Nairobi iHub, from which the top two developments came, became a model for tech hubs on the continent and has been replicated with varying degrees of success in South Africa, Rwanda, Uganda and Nigeria. Kenya, in addition to South Africa and Nigeria, was therefore an important location, and I identified the cities of Johannesburg, Lagos and Nairobi as centres that could be used to explore practice in Southern, West and East Africa respectively. The three cities furthermore represented very real cases of the diversity in the *African Cultures of Technology* model, each with its own

²⁹ Both M-PESA and Ushahidi (<https://www.usahidi.com/>) are part of what is now the well-known Nairobi iHub. Ushahidi, a crowdsourcing, mobile-orientated reporting platform, was developed in 2008 to help manage outbreaks of violence after the 2008 elections. It was developed by a group of Kenyan developers who had recently returned to Kenya from the United States. They saw an opportunity to develop a platform that would put crisis reporting in the hands of people on the ground. Ushahidi became an important development with international interests and went on to be used in major crises such as that in Haiti. The success of the platform led to the development of the iHub, a tech hub designed to support research and education to grow local ICT development. It was out of the iHub that M-PESA and a number of other local ICTs grew.

socio-economic, socio-political and cultural implications for how technology was being culturally used, appropriated, critiqued and developed.

As the fieldwork processes went forward, making an investigation in Lagos became increasingly difficult. Not only did I have problems formalising a visa as a South African citizen, but more time and money than I had for the research, was required to enter and explore Lagos. Lagos is understood to be one of the most populated cities in the world. It is large, complex and difficult to travel. With these difficulties, which only became apparent after I had done the Nairobi fieldwork and as I had begun the Johannesburg fieldwork, I realised that I would not be able to focus my attention on Lagos, as it would be too extensive. I found as I progressed that the comparison of Nairobi and Johannesburg was in fact more than sufficient and worked well to meet the needs of the initial investigation. I was however disappointed to exclude Lagos, particularly due to its culturally rich and fascinating locations. I did however keep in close contact with the cultural practitioners from Lagos, and did return to it as a location in the *Post African Futures* exhibition; artist Emeka Ogbho and the *Imaginarium Collective* participated in the exhibition.

The diversity in Nairobi and Johannesburg play an important part in how ICT, innovation and related cultural engagements are enacted in each. Their positions as 'leaders' in ICT was pivotal to being able to compare them. Furthermore each city is influential in how these practices are seen in the regions around them. As part of my visit to Nairobi I made a quick visit to Kampala, Uganda; this was to compare Nairobi to Kampala, and understand Nairobi's influence on Kampala. Comparatively, however, Kampala at the time was barely developed with regard to technology infrastructure. I found one successful group called *Hive CoLab*, which was active in exploring communications technology from a Ugandan perspective. Their role then and today is largely skills development, with a strong focus on supporting women developers. They viewed themselves then as an extension of the Nairobi scene and received support from an East African consortium of development spaces called *Pivot East* and *m:lab East*. This consortium is also active in Tanzania, Rwanda and Burundi. Despite *Hive CoLab* being an interesting project, the visit affirmed my decision to explore Nairobi only, as it identified Nairobi as both an originating and supporting location.

In South Africa, a choice needed to be made as to whether or not I would include Cape Town in the initial investigation. For the purposes of clarity however, I chose to focus on a single city in each country. Johannesburg's value over Cape Town is that it is more culturally diverse and is considered a more cosmopolitan African city than Cape Town. Johannesburg is home to a large number of foreign African nationals and is a trade hub for Southern Africa. Johannesburg is also the commerce capital of the country and is therefore home to more ICT development.

In the following section I briefly contextualise what it means to work in African cities as locations for research. I do this using the framework of African Urbanism; this is done to identify an approach to African cities that is sensitive to their 'informal' infrastructures and communality.

3.1.2 African Urbanism as lens on African Cities

African Urbanism is an offshoot of Urban Studies and is understood as falling within the frame of subaltern or Southern theory. While my research does not draw heavily on African Urbanism as a field, locating these cities within African Urbanism offers perspectives on the importance of informal networks and communality, thereby offering greater perspectives to the fieldwork, in line with decolonising methodologies.

African Urbanism, like subaltern theory, is not an attempt at creating a dichotomy between North and South, rather it is an attempt to correct and offer alternatives to African cities being viewed as failed cities in light of Northern theory (Comaroff, 2013). African Urbanism presents new frames through which the diverse conditions of African cities may be viewed. Like subaltern theory, it grew in response to the development of differing intellectual traditions that seek to not be dominated by the contract of the West, and reflects rather (like decolonising methodologies) on historical contexts, as well as situated and subjective knowledge.

Reflecting my own process in Nairobi and Joburg, I refer to “Provincializing Urban Political Ecology: Towards a Situated UPE Through African Urbanism” (Lawhon, 2013) who explain that African urbanists propose to situate research in context, stating that “it requires starting with examining everyday practices of African cities” (506). They refer to the “relative paucity of formal infrastructure in Africa” (506) and indicate that studying infrastructure in African cities provides only a partial understanding of the cities. In addition, Lawhon et al. state that “[i]n African cities we also see the limitations of [historical] colonial impulses towards control, and there are recurrent examples of the inability of state and capital to structure African residents and their cities” (506); they go on to indicate that neoliberalism therefore presents serious limitations to the descriptive discourses surrounding these cities (506). Based on early discussions it is clear that this is also common to how ICTs are ideologically implemented and infrastructures studied in Kenya and South Africa – both influenced and impeded by the histories of colonial control.

African Urbanism as a field aims to lean towards narratives of identity and discursive power, rather than studies of infrastructure. African cities, through African Urbanism, are addressed from the bottom up; building a theoretical understanding through the eyes of those that live in them and have adapted the infrastructure towards their own needs. These narratives are often addressed against the violence from which these cities have come and which can continue to plague them, specifically in light of continued neoliberal ubiquity (Nuttall, 2008). In these narratives are written the intimate and textured social constructions that evolve from difficult circumstances, which help to form new ways of engaging and navigating the African urban landscape (Bremner, 2010). This narrative emphasises exploring cities from the perspective of social geography and is now a method through which to interrogate histories and the related politics of African cities (Nuttall, 2008) (Bremner, 2010).³⁰

³⁰ I worked on a long-term public art project of this nature. The project, titled *Hotel Yeoville*, ran from 2011 to 2013 with primary collaborators Terry Kurgan and Alex Opper, a photographer and architect respectively. The project was by invitation of the Johannesburg Development Agency, who wanted to explore the suburb of Yeoville in Johannesburg towards the development of a new community centre. The suburb is close to the city centre and is home to a majority of African foreign nationals, migrants and refugees, who find themselves in the city for various reasons. It was an important project that began in the face

In the context of my research, the concerns of African Urbanism act to highlight the importance of understanding networks, systems and ‘informal’ organising structures that have evolved outside of the more ‘formal’ infrastructures of ICT in these cities. Simone, in *People as Infrastructure: Intersecting Fragments In Johannesburg* (Simone, 2004), states:

[...] the possibility that these ruins [referring to the notion that African cities are seen as ‘failed’ or ‘ruined’ in light of Northern theory], not only mask but also constitute a highly urbanized social infrastructure. This infrastructure is capable of facilitating the intersection of socialities so that expanded spaces of economic and cultural operation become available to residents of limited means. (407)

Simone’s proposal is to understand *people as infrastructure* and in so doing to recognise people as the means by which materials and ideas flow in the city; as opposed to the often misplaced technological infrastructure (Lawhon, 2013). Simone’s proposition reflects my own interest in the role of African communality, these “socialities” as Simone refers to them. In the fieldwork in Nairobi and Johannesburg I found that these are first played out in how people organise and support each other, long before these commonalities are enacted and translated into digital and communications technologies.

Simone’s paper, “People as Infrastructure”, describes some of the complex relationships that evolve in parts of the city as a mechanism to not only adapt, but create fluid and thereby rapid support structures for people living in and moving through its spaces. Simone describes such actions as a show of force in the face of bad planning and historically incompatible infrastructures.

of huge xenophobic violence enacted by groups of South Africans towards other Africans. In difficult economic situations foreign nationals are the target of frustration around low employment rates. The project worked around the network of Internet cafés in the neighbourhood, working with the community in these spaces and in the local public library, towards a long term public installation that allowed residents to document themselves and thereby help to dispel the myths around them. The project acted to identify the concerns of this sceptical and private community. A book titled *Hotel Yeoville* (Kurgan, 2013) was produced from these results.

As a valuable example, Simone describes a downtown taxi rank in Abidjan (Nigeria). By 'taxi' he means minibus taxis,³¹ also called 'Mutatu' in Nairobi. These taxis run transport routes across cities, within regions and across local borders into neighbouring countries. They are prevalent in South Africa, Kenya, Nigeria and a great many countries on the continent, as they are a system developed in response to a lack of public transport infrastructure in cities historically designed by and for white minorities. Each city displays its own unique idiosyncrasies in the cultures that surround these self-styled public transport systems. Large taxi ranks acting as depots for interconnecting routes are therefore often difficult, confusing and potentially dangerous spaces, as they are run by different independent and mostly unlicensed organisations, which are often criminalised. Simone describes the scene:

[...] full of hundreds of young men who function as steerers, baggage loaders, ticket salespersons, hawkers, drivers, petrol pumpers, and mechanics. There are constantly shifting connections among them. Each boy who steers passengers to a particular company makes a rapid assessment of their wealth, personal characteristics, and the reason for their journey. This reading determines where the steerer will guide prospective passengers, who will sell their tickets, who will load their baggage, who will seat them, and so forth. It is as if this collaboration were assembled to maximize the efficiency of each passage, even though there are no explicit rules or formal means of payment to the steerers. Although each boy gives up control of the passenger to the next player down the line, their collaboration is based not on the boys adhering to specific rules but on their capacity to improvise. (410)

Through this microcosm, Simone presents a good example of the cultures of improvisation and support that define African cities. Understanding this helps to underscore the notion presented in Chapter One in relation to Mbembe, that African societies are an *act of composition*. I refer to this notion in the first chapter to explain a failure in traditional scholarship to fully contain and accommodate this capacity.

³¹ Essentially a small van that can fit between fourteen and twenty-one passengers at a time.

In these cities, the intersection of culture and technology incorporate multiple modalities. These are led by the particular kind of sensitive responsiveness that comes from the “socialities” Simone refers to. In both Joburg and Nairobi these “socialites” are made up of cultural and economic networks that intersect at interesting angles and begin to form interconnecting networks. Though situated in different countries, as urban centres Nairobi and Joburg have a fair amount in common. Both are extremely cosmopolitan, bringing together not only diverse local cultural groups from outlying rural areas, but also many regional migrants and immigrants. In Nairobi, the latter are largely from Somalia, Ethiopia and South Sudan. In Joburg they are predominantly from Zimbabwe, Mozambique, Nigeria, DRC, Cameroon and Côte d’Ivoire. Both cities are commerce driven and act as the economic capitals of their respective countries, thereby supporting both national and international commerce for the country. These cities are therefore also key sourcing and exchange points for ‘informal’ cross-border trade, supporting the movements of goods throughout Southern and East Africa.

The influence of foreign African communities in each city is particularly important to the communications technology culture of both Joburg and Nairobi. For example, in the early 2000s, until the growth of mobile Internet, the influx of foreign Africans from West Africa into Joburg led to the development of a network of Internet cafés and Internet social clubs. These influenced how the Internet was adopted and used by those in the inner city and its periphery. At the time there was very little infrastructural or educational support around fixed line Internet use for low to middle income earners; these cafés therefore acted as education and access points (T. H. Bristow, Jason, 2017). For both Nairobi and Joburg, migrants, immigrants and refugees interact with these cities as part of a network that has spread both physically and virtually across the continent and beyond. As Simone states of Johannesburg’s inner city:

This is an inner city whose density and highly circumscribed spatial parameters compel uncertain interactions and cooperation among both long-term Johannesburg residents and new arrivals, South Africans and Africans from elsewhere. There are interactions among various national and ethnic groups, between aspiring professionals and seasoned criminals, and between AIDS orphans living on the

streets and wealthy Senegalese merchants living in luxurious penthouses. At the same time, life in the inner city fosters intense cooperation among fellow nationals and ethnics. (415)

Both sites are population dense, with approximately four million residents in Nairobi and four-and-a-half in Johannesburg. Both have sprawling middle class suburbs as well as what are known in Johannesburg as *townships* and in Nairobi as *slums*. Between the suburbs and the slums are distinct divides between the very rich and the very poor. Despite the differences in wealth, links to traditional culture amongst black South Africans and Kenyans run through all levels of society and therefore help to bond people across these divides. The importance of traditional culture has been retained through periods of colonialism and Apartheid and also supports a dependence between people in the cities and rural regions.

Distinct splits in poverty levels found between urban and rural areas occur in greater complexity and diversity for African cities. Murphy and Carmody state: “[c]onsidered at the urban–regional scale, uneven ICT access and use further reflects the “splintering” of African cities into spaces where there is high-quality access to infrastructure and social services, and spaces of disconnection, deprivation, and marginalisation that are largely ignored or poorly serviced by municipal governments” (140). In both Nairobi and Johannesburg these “spaces of marginalisation” are worthy of analysis in that they are bolstered by a unique multiculturalism that only evolves from the magnetic force of large urban areas. This is an important dynamism found in African cities and means that these urban spaces evolve their own cultures, distinct from those of a more traditional tribal life found in the rural areas.

It is unsurprising, therefore, that in both Johannesburg and Nairobi it is in the townships, slums and the inner-city periphery that the most interesting cultural innovations occur. This is primarily due to the fact that surviving on limited means leads to innovating ways to access services and materials. Additionally, the diverse ethnic and language groups living closely together³² (in comparison to rural areas that are dominated by particular

³² Soweto township is home to people from across the country: Venda, Sotho, Zulu, Shangaan, etc. With the poorest of the poor, in Kliptown for instance, not able to choose their neighbour or neighbourhood.

ethnic groups) offer opportunities for critique and cultural innovation that explore the complex intersections of existing networks and cultures. As Simone affirms:

These conjunctions become an infrastructure – a platform providing for and reproducing life in the city. Indeed, as I illustrate through a range of ethnographic materials on inner-city Johannesburg, an experience of regularity capable of anchoring the livelihoods of residents and their transactions with one another is consolidated precisely because the outcomes of residents' reciprocal efforts are radically open, flexible, and provisional. In other words, a specific economy of perception and collaborative practice is constituted through the capacity of individual actors to circulate across and become familiar with a broad range of spatial, residential, economic, and transactional positions. Even when actors do different things with one another in different places, each carries traces of past collaboration and an implicit willingness to interact with one another in ways that draw on multiple social positions. (408)

This view of Nairobi and Johannesburg in the context of African Urbanism is an important position from which to better understanding the cities and how they operate in relation to unpacking the fieldwork.

The fieldwork and snowball sampling method were used to engage the fluidity of these cities and inform thereby a non-structural understanding of how those involved in technology and culture, organise themselves. Thus allowing, along with the interviews, a different view of the respective cities and how the respondents are positioned within a socio-cultural, rather than formal structural landscape of culture and technology.

3.2 Fieldwork Findings: Themes, Trends and Relational Maps

The fieldwork, as indicated in Chapter Two, acted as an initiating exploratory exercise. This included gaining an understanding of how practitioners in the field organise themselves and how various aesthetic mechanisms are used to engage the subject of culture and technology in the respective cities. Furthermore they became a mechanism through which I formed relationships with the communities I would then further engage.

I started the interviews in Nairobi, interviewing thirteen respondents and mapping thirty referrals in the snowball sampling. As my time in Nairobi was limited, and for the purpose of comparative integrity, I chose to interview the same number of respondents in Johannesburg. In Joburg I interviewed thirteen respondents and mapped twenty-three referrals.

After the interview process I was able to step back and perform content analysis on each city's set of interviews. And it is from this position that I write the following two sections. I used these findings to cement an understanding of unique *African cultures of technology*. In comparison, the regional trends allowed for an understanding of actional methodologies that existed in both, all of which point clearly towards actions that are an ideological decolonising of the digital, and which appear from a firm critique of the globalised information economy.

An important note is that through the interviews a modification began to occur, by the respondents, of the language that I used. This is a consequence of the discussion orientated method of the interviews. Specifically the terms *artist* and *art* came into question in Nairobi. I found that the construct *artist* is not common in African culture outside of South Africa. The notion of 'high art' has essentially been spread by Western knowledge; many post-independent nations have not accepted the form and therefore do not necessarily refer to cultural practitioners in this way. Mignolo (Gaztambide-Fernández, 2014) in an interview with Gaztambide-Fernandez in 2014 on decolonial theory, makes a distinction between popular culture / popular arts and the interventions of Western contemporary art. He states

that one must work by what he terms an analectic negation; working with concepts given by a Euro-America epistemic form, but looking past them and behind them. He states:

The analectic negation comes from memories, sensibilities, skills, knowledge, that were “there” before the imperial contact with European education. Once European education intervened, whatever creation and conceptualization of creativity there was became trapped in the category of, for example, art and folklore. The analectic negation tells you first that art and folklore are two Western concepts, not two differentiated ontologies. (202)

The modification and adjustment of my language by the respondents in the interviews was an analytic negation and therefore allowed for the exploration of other forms.

The issues around the definition of ‘artist’ were particular to Nairobi, and less pertinent in Joburg, which has a stronger commercial Euro-American orientated contemporary art scene. In Johannesburg, however, and at the technological encounter, creative practice was understood as a socio-cultural contribution and therefore not strictly art. In extension, all practice in both Nairobi and Joburg had a social focus, which looked towards fixing and healing. In this practice people were devising mechanisms to subversively challenge the position of technology in culture from a socio-cultural perspective.

The epistemological concerns outlined above pivot towards particular trends in practice and are additionally inter-woven into an unpacking of the unique *African cultures of technology*. The following sub-sections describe each city’s unique culture of technology. This is done both through the relational maps I constructed from referrals in the snowball sampling method, and the interviews themselves.

Some of what is written below has been published in an article in *Critical Interventions: Journal of African Art*, titled *Culture of Technology: Digital Technology and New Aesthetics in African Digital Art* (T. Bristow, 2014) and presented at the *African Art Histories Conference* in New York, USA, and an earlier version in *Half Tiger: A comparative interrogation of digital & mobile cultural practices in Johannesburg and Nairobi*, presented at the Di-Egy Conference in Cairo, Egypt in 2013.

3.2.1 Nairobi

The Nairobi relational map (Figure 4) shows the snowball sampling method as a process of referrals that started with Jepchumba. Jepchumba is Kenyan and editor of the very influential African Digital Art³³ blog. Jepchumba, who was living in South Africa at the time of the interview, is well known and well connected to a network of professionals concerned with culture and technology in Nairobi. In the relational map, you will see that Jepchumba's name is positioned to left as the first respondent. The people she referred to me sit at a second level to the right of her name. The map then continues, showing the referrals they made to the right of them, and so on. The diagram is additionally organised into three vertical strata, these represent the different professional groups: tech developers at the top; respondents who identify as organisers, writers and educators in the middle; and respondents who identify as creative practitioners and artists at the bottom. These strata are not hierarchical in anyway, and assist in showing the number of people interviewed across these divisions and how they are interlinked and associated.

The relational maps as a reflective method were helpful in giving a bird's eye view of how practitioners were organised and interacted. This became particularly significant when comparing Nairobi and Johannesburg. In this, even with the small sample, the maps offer a picture of the economic and political situations of each city, while the interviews offer a more nuanced understanding of the interactions of these individuals. Together, the interviews and map offer, in light of Simone and African Urbanism, a view of the informal patterns of influence that exists in these cities.

What is significant about the Nairobi map is that it shows a fluid engagement and awareness between practitioners in different industry sectors. Additionally, it shows a strong network of individuals who quickly begin to refer to each other. The snowball then begins to roll back and forth rather than sequentially down the line, which is the case for Joburg.

³³ www.africandigitalart.com (last accessed 15 October 2016).

With the Nairobi relational map (as a point of reference for the reader) the following three sections explore the key themes and trends that emerged from the analysis of the Nairobi interviews.

Please note that all respondents gave permission to publish their names as part of this research.

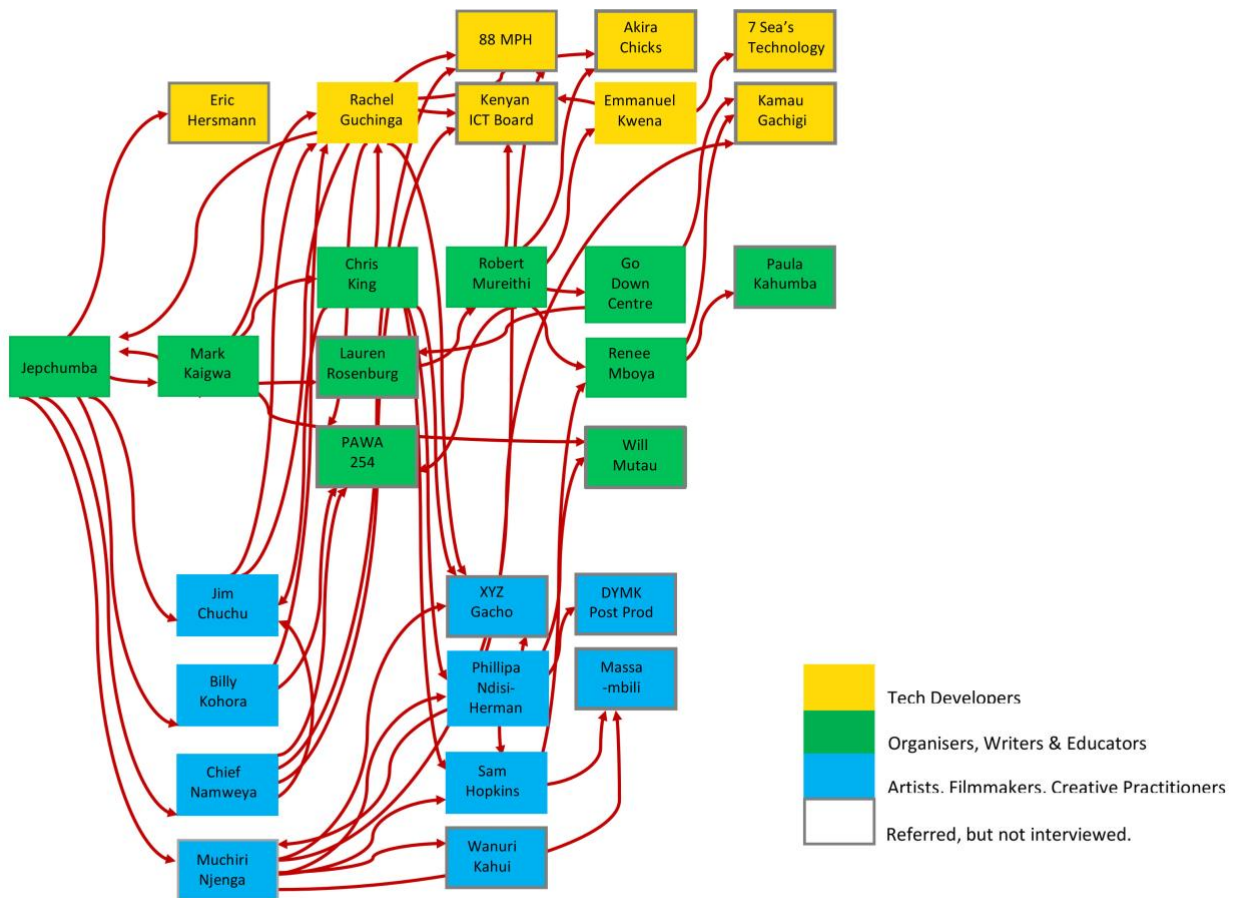


Figure 4: Nairobi Fieldwork Snowballing Diagram

3.2.1.1 Community and New Communications Technology

The prevailing position from Nairobi was the importance of community within its culture of technology.

I start with statements by Chris King, an Australian national, filmmaker and web developer who had been living in Nairobi for fifteen years. King was referred by Sam Hopkins – an artist and Nairobi local. King explains his understanding of innovation around mobile media in Nairobi as follows:

You don't have landlines here or any analogue history and a kind of predetermined role for certain technologies. So I think an inventiveness comes from these things being incredibly new and just skipping a lot of technologies and starting with the mobile phones is a way that has influenced this development. (King interview: 13)

King goes on to speak to the importance of community within Nairobi society:

[It is a] social system of collective support [that comes with] living in a state where there's no state support. On top of the whole techno fetishism around gadgets and maybe the status that can be associated with a thing like a mobile phone in areas where people don't have a lot of material possessions. It feels like a lot of those elements have meant that as soon as those kinds of technologies landed and the platforms became available and attainable, that there was already this whole social structure around information spreading incredibly fast (King interview: 12-13)

King's conversation begins to show that apart from its newness, mobile media has had an interesting impact that expands on how Kenyan society already interacts.

Robert Mureithi is a web developer, trainer and journalist writing at the cross-over of art and technology and was referred by Stellenbosch (South Africa) based researcher Lauren Rosenberg (not interviewed) as Mureithi had been valuable to Rosenberg in connecting her to various people in Nairobi. Mureithi, the youngest of the respondents, expands on King's impressions and brought my attention to the culture of Harambee, a common format for community interaction in Kenya:

In our culture [...] if somebody has a problem and then you have the means of trying to assist them, then by all means you do it. You have the Harambee spirit more or less [...] at the iHub] they also tend to think of helping in terms of skill sets too. (Mureithi interview: 19).

Mureithi's mention of Harambee in the interview was in describing how the Nairobi iHub, apart from being a development hub and incubator, additionally acted as a forum and location at which people could share knowledge and receive help. Mureithi's understanding is that this is an extension of Harambee as a traditional Kenyan practice.

Harambee is a Swahili term that literally means 'working together' or 'joining forces' and is used to describe a community forum at which issues are voiced and problems solved, as a community. Generally Harambee are public forums and are events that can last a few hours when organised by word of mouth, particularly after urgent issues have arisen in a community. They are also, however, often very formal events and can last a few days. In these cases the event is advertised by newspaper, as an open public forum. To expand on an understanding of Harambee and its importance, I refer to Checkoway in *Core Concepts for Community Change* (Checkoway, 1997), who describes Harambee as a community forum in which "[j]oining together helps people realise that their individual problems have social causes and collective solutions" (15). This is a strong philosophical position that exists in common culture in Nairobi. But what Checkoway describes is in fact a common understanding of community, relevant in many African societies; similar notions and ways of engaging are found across the continent in different formats.

As a practice, Harambee predates colonial rule and its strength has allowed it to continue through colonialism into contemporary Kenya. It is driven primarily by the impetus of self-organised communities; as King stated, there is a general mistrust of government's ability to adequately to address community concerns; nevertheless, Harambee are often performed in consultation with government officials. When asked about the validity of Harambee in decision making, Mureithi made a point of indicating that legislation has recently been put in place to ensure that the personal agendas of government officials did not take precedence at these forums. Harambee is therefore understood as a strongly autonomous, influential and well supported, community led public forum that is also reflected in how Kenyans see the role of technology.

Artist Sam Hopkins (who participated in the *Post African Futures Exhibition*) was referred by filmmaker Muchiri Njenga. In a discussion with Hopkins around the culture of technology in Kenya and the augmentation of traditional communications with technology, he refers to a type of community forum called Masikani:

Digital culture varies in different countries; the cultures vary because they fit into a different kind of map. On the Kenyan coast [for instance] there is thing called Masikani, it's basically like a public space where you meet and its base isn't necessarily the closest one nearest to you, it's the one you are affiliated to by interest. These are public spaces where people meet to talk and experience this form of conversation, but they also become somehow [an] impact on how these digital networks are connected. The digital end is invisible; I suppose these networks are the physical [version]. (Hopkins interview: 22-23)

Hopkins is familiar with Masikani as he was at the time working on a mobile phone story-telling project on the Kenyan coast. So while it is not a distinctly Nairobi practice it is significant towards understanding the importance of these types of forums in Kenya. Masikani translates directly as 'street corner' and are most popular on the East coast and also in Dar es Salaam in Tanzania (due to their location, they may have older Islamic roots). These events are essentially groups of young people meeting in the street to discuss different issues and to join around different cultural interests (Moyer, 2005), and Masikani play an important part in the region's socio-cultural engagements.

What is clear from the inclusion of both Harambee and Masikani by respondents is that community is central to socio-cultural engagement in Kenya. And that it has long-held structures that support it as a common and usable format. The underlying emphasis on community plays an important role in problem solving, idea sharing and overall cultural communication. This emphasis is additionally understood to be augmented by technology and is it therefore fundamental to understanding the culture of technology in Nairobi.

In the interviews I asked which technologies prior to mobile might have had a similar impact. Answers sat broadly in the following categories: 70% radio, 20% the railroad and 10% technologies of agriculture. Agriculture is very important to Kenyans, whose traditional

culture is strongly linked to pastoral lifestyles. The mention of technologies of agriculture by two respondents was explained as being due to the shift in this lifestyle, and the fact that colonial divisions of land had had a deep impact on Kenyan society. References to the railroad derive from similar positions. The colonial railroad was built from Mombasa to reach Lake Victoria (in Uganda); Nairobi lies at its centre. This railroad acted to simultaneously colonise and modernise Kenya and was therefore understood as being particularly impactful. Radio was referred to by most respondents, bringing into focus the medium's impact on Kenyans, a technology with similarly colonial roots.

The emphasis on radio in relation to Harambee and Masikani is, however, additionally significant. Renee Mboya of the Kuano Art Centre, referred to me by Mark Kaigwa, stated the following of her experience of radio:

There's a radio programme that runs every morning from about 6am to 10am and I can guarantee you 50%, 60% of Nairobi is plugged in. [...] I used to actually get up and listen to it and as I'm walking I'm hearing it out of shops, so I can keep up with the programme. And this is maybe two kilometres apart, like I can keep up with the programme because it is in every shop; they're just blaring it. (Mboya interview: 21)

Sam Hopkins makes a similar statement about radio as a historically influential technology:

Radio is pretty huge in terms of disseminating information over a large distance, in terms of also connecting individuals to a big imagined identity as a nation as well. (Hopkins interview, 22)

Jim Chuchu (who at the time was a musician with *Just A Band*) film maker (with *Nest Collective*), who was referred to me by Jepchumba, made a similar comment about radio, emphasising it as an important influence on Kenyan society. He stated, however, that he found it odd that radio was still proven to be the most accessed media in Kenya, despite the growing popularity of digital and Internet media (Chuchu interview, 26). Chuchu's band *Just A Band* (who he has since left, but who participated in the *Post African Futures* exhibition) became famous through the Internet and are therefore hailed as a digital culture band.

Chuchu's dismay is based on his own experience, and while radio is understood as having a significant historical influence, it is still important in contemporary Nairobi.

The history of radio in Kenya is important and helps make sense of Nairobi's culture of technology. This history is fundamentally connected to Kenya's independence. Pre-independence, the early introduction of radio in Kenya in the 1920s was by and for British colonists and excluded larger indigenous populations. With the beginning of colonial reform in the mid 1950s and the slow move towards winning independence, two indigenous language radio stations were allowed. Both were controlled and limited in their content, however. It is understood that there were developed to act as channels for propaganda to ease this transition. These regional language broadcasts were specifically segmented and were broadcast at particular times of the day to guarantee focused attention.

The trend towards developing indigenous press and media continued to grow in this time of reform. To the point at which regional radio broadcast stations were also built in Mombasa, Nyeri and Kisumu (Ogola, 2011). With the eventual independence of Kenya in 1963 and with Jomo Kenyatta as president, the use of radio grew further, but was still largely restricted and controlled by the then independent government. It was used by this government primarily as a mechanism towards community development.

Following the Kenyatta government, however, restrictions on press and media increased dramatically under the Moi government (1978-2000). During what is now known as the Moi Regime, Kenya experienced a clampdown on both regional and international content, and developed laws that restricted press freedom. In the late 1990s, a period identified as a time when Moi started losing his powerful grip, there seems to have been a loosening of the restrictions on local broadcasters. This, however, brought something of a boom for independent radio.

Seen as a third wave in the liberalisation of media in Kenya, the focus of this boom was radio for indigenous language groups. This was a dynamic shift, particularly for education, as many of these groups had previously been excluded from education, which was led predominantly in English and Kiswahili (Ogola, 2011). It is speculated that this

opening up of the media at the end of Moi Regime and the boom in the media industry in the early 1990s contributed to Moi's toppling. This boom continued with much fervour into the 2000s, and it was at this time of media intensive engagement that mobile use was introduced into Kenyan society. It was a combination of radio and mobile media that led to the massive post-election violence after Mwai Kibaki's win in 2007. This moment is also understood as the moment in which mobile media come to the forefront as a means to help contain and resolve issues like the post-election violence.

Ushahidi was a guiding light as it was developed in repose to the post-election violence and showed the potential of mobile media. Led by Ushahidi, the Nairobi iHub, and M-PESA (which followed soon after), the Kenyan government saw the potential and value in giving as many people as possible access to mobile media. The Kenyan ICT Board (independent of government) was thereby developed to assist in this task. Its first mandate was that Kenya should have full 3G coverage cross the entire country and that data rates should be kept low in order to offer all Kenyans access. In many of the interviews conducted in Nairobi, both creative practitioners and technology developers referred to the head of the Kenyan ICT Board as a person of interest; its impact is therefore felt. The influence and impact of the Kenyan ICT Board also stands out on the continent as an initiative that was able to maintain a positive influence, as it stands between government and industry and is therefore not liable to the pressures of either.

There is a clear trajectory from the role of radio to the potential of what mobile media can offer Kenyan society. Radio is an important part of Kenya's culture of technology³⁴ and despite Chuchu's dismay about radio's popularity, it is embedded in a history of contemporary culture. Its strength lies in its ability to support many indigenous language groups as well as being a communal voice accessible by many. The Internet on the other hand does not as yet offer the same support, nor the potential of augmenting a strong culture of local and regional community orientated communication. The informational

³⁴ Interestingly and not directly linked to this discussion is the fact that the expat community that was involved in broadcasting remained quite heavily involved in television broadcasting and advertising in Kenya. Chuchu explains that advertising, unlike in South Africa, is a very difficult location for black creatives to find work and make money in and therefore does not feature any aesthetic challenges, as it does in South Africa.

power dynamic of the Internet today is still largely dominated by commerce and content from Euro-America. Kenya's focus on community is important in their culture of technology. Therefore, when communication technologies are addressed and critiqued in Nairobi, this perspective is at the forefront.

Interestingly Chuchu followed his statement of dismay by stating that he does not think that Kenyans use digital technologies properly (Chuchu interview: 26). Billy Kiwanga, who runs Kwani, a literary publishing house in Nairobi, inadvertently shares a view that sheds light on Chuchu's statement:

If you're in the West and you are using a Mac or like a Samsung thing, your day-to-day life and your rituals are connected in all devices and they're connected because it's just simple to connect in all sorts of ways [...]. If you're here I go to the supermarket or if I walk down the street and go to the kiosk, if it's buying clothes, all these things like in the west if I'm trying to access are just daily rituals. Now there's no connection between what I would consider real economies or the rituals or my daily life in the online space. So actually to function practically here you have to do away with all these things, how you use your devices are mostly things like email, Google searches, because [our] systems are not systemised within technology and digital spaces... it's just easier for me to use other networks. (Kiwanga interview: 15-16)

In stating this, Kiwanga shows that the current structure of digital technologies – the Internet and its implied systemic ubiquitousness – is not aligned to a Kenyan way of being. Nor does it, for that matter, effectively serve Kenya as a new market. The question is not one of a lack of infrastructural development, but rather a deferring of development until the right type of system can be put in place. Much like the histories of radio in Kenya, the current situation of digital communication technologies is too heavily weighted towards Euro-American knowledge and systems and is therefore potentially exploitative and dangerous to Kenyan culture.

In the second chapter I refer to *Futures of Technology for Africa* by Gosskurth (Gosskurth, 2010). In this we saw concerns that reflected this hesitation to overtly develop

infrastructures and systems of digital communication technologies as they stand today. In particular, the “Paradise Scenario” saw the focus group respond with fear towards a fully developed technology reliant society, and in particular the potential for the emergence of an amorphous “western” culture that might come with it, and the subsequent deterioration of community values and Kenyan culture. These responses clearly show an anxiety about a neo-colonialism – via digital communications technology – that would lead to the breaking of inherent and important systems and structures.

In the interviews, respondents began to show that they felt technology to be both useful in the sense that it augmented community structures, but also dangerous in its potential to break down particular ways of life if not implemented with care. If not integrated effectively, the potential to exploit and damage rather than serve looms large.

3.2.1.2 Youth, Middle Class and the Diaspora

Chief Nyamweya (who was invited to participate in Fak’ugesi), is an ex lawyer and now a designer and political comic book writer, referred by Mark Kaigwa. In extension of the discussions above, Nyamweya reflects on some of the disjuncture felt by young people engaging technology as part of their work and daily rituals:

[...] technology has helped to restore something of our culture, as since we have started living in silos, we have started becoming a bit more individualistic, we have started basically going the way of New York. You can be living in the same city with your relatives and see them once in a year, that’s where we are going and Nairobi is actually bad at that. Nairobi is a different country from the rest of the country, it has a way of really breaking us down. [In this situation] technology has started to restore Ubuntu; these days people are concerned about working together, every morning you are on Twitter and saying hello to the community, it’s like opening your window and yelling out onto the sea “we are fine”, whatnot. It makes it very easy when you need to protest the MP when he’s doing something silly. But I don’t want to be too optimistic, I mean it won’t completely restore what has been lost in that sense of community and the whole African concern. It excludes certain segments like the older people and the poor, those are sometimes the most vulnerable, the ones that

need the most care. So I mean in getting us together to that degree it could do more.
(Nyamweya interview: 36-37)

It is clear that Nyamweya battles to articulate fully the disjuncture between technology and community that is being played out in Nairobi society. Nyamweya, however, by indicating that older people and the poor are excluded, draws our attention to the fact that in Nairobi, communication technology and its development is in the hands of a new generation of young, digitally literate users and developers. The very newness of mobile and digital technology as a mechanism and the manner in which its structures are aimed at young people, means that its effective development is entirely in their hands. This is certainly a different encounter for Kenyans, whose traditional culture strongly orientates towards communal knowledge and integrative relationships between young and old.

Film maker Muchiri Njenga (who participated in the *Post African Futures* exhibition), referred to by Jephumba, speaks about a poverty in Kenyan culture because of a break between young and old. It is in fact a subject that consumes Njenga's work as he continues to highlight the importance of indigenous knowledge in a technological age. Njenga stated in his interview that through colonialism the use of radio had replaced the tradition of elders in the community in which information about the world, both spiritual and practical, was conveyed through community structures. In this Njenga speaks of a lost generation and with them the loss of information. He gives an example: "[t]hey were involved in the community as people who taught... like look at that tree (pointing at a tree close to the window) and what you get from there, is it food, medicine, shelter and all that... right now, they are just using it for décor" (Njenga interview: 8). Njenga's position reflects a deep desire among many within the technology and culture field in Africa to reinvigorate traditional knowledge systems within the technological. The form, however, not only concerns facts and content, but systems and their structures.

In the first chapter I refer to Collier and what she states as a trend towards "the continuous re-inscription of protocols of access to ghosts" (Collier, online). She refers here to the revisiting of indigenous practices and knowledge structures in contemporary media as an attempt to heal a wound in how African cultures and African knowledges have been

inscribed (the clear lack and subversion thereof) into Western media practices, in what she describes in her expanded discussion as a “scientific colonialism”. It is clear that Nairobi is poised at a moment where the focus on technology should be to develop and innovate in response to these concerns. Njenga, Nyamweya and many more are attempting to make this central to their positions and practice, building these ideas into a rhetoric around technology and culture.

The question, however, is whether or not the ICT industry, as it stands in Nairobi, can allow for this. Rachel Guchinga, who at the time was working at the Nairobi iHub as a community organiser and researcher, was referred to by both Jepchumba and Mureithi. Guchinga speaks about how the ICT scene is largely led by virtual communities in Nairobi. Like Nyamweya, Guchinga pointed to a vibrant Twitter community, which has led a growing and fluid interaction online with individuals both foreign and local. Guchinga stated: “the culture of technology is primarily about an online and virtual interaction more than, say for example, an actual start-up scene or building of products, that’s secondary” (Guchinga interview: 2). Guchinga indicated that this is spawned by a strong culture of conversation in Kenya, stating: “Kenyans have always been opinionated and have always wanted to gather in spaces to talk politics and things like that. [...] So the fact that they had this culture allowed them just to move those conversations elsewhere” (Guchinga interview, 3). This virtuality is, moreover, not strictly regional or local and is strongly linked to the Kenyan diaspora. As stated previously the Kenyan ICT tech development scene was put in place by a diasporic community. On this Guchinga states:

The diaspora played a big role. So you had these people who were out and they’d come back and say, “this is what I’ve seen and this is what I’ve learned” and it became easier for people to access that information. Through the Diaspora Kenyans could see what people were doing in the rest of the world and I think that has been important. (Guchinga interview, 3)

This is reiterated by Jepchumba, who stated, “There is a strong relationship in the tech dev industry to the diaspora. And being known in that space is linked to being known online and having presented at TED-X and thereby supported by people in the Diaspora” (Jepchumba

interview: 4). Both Jepchumba and Guchinga highlight the intertwining of an international influence with development in Nairobi.

The link to the diaspora and the growth in numbers of Nairobians online is discussed in some of what was presented in the second chapter, in which I explore the role of digital technologies in making young Africans and African culture visible to an international community. This is largely through a growing trend in self documentation and an interest in African fashion and design. This relationship with international media fame is, however, precarious. ICT development in Nairobi is therefore not only driven by a younger generation, but a generation that is taking its cue from the West.

As digital and communications technologies do not originate in the region and learning new skills and structures of use requires international interaction, the focus outward is certainly par for the course. The situation is a push and pull between Kenya and the West, with the pull of the West being stronger. Without a clear understanding of the consequences it is likely that little reform to the ICT industry will be made, particularly when we consider Murphy and Carmody's view on ICT, which sees insensitively applied ICT4D as a central catalyst for market development that leads to poverty reproduction, which is insensitive to cultural concerns.

The strong virtuality that Guchinga refers to is further reserved for a segment of young people who have a certain level of education and access. Guchinga adds that the trend is strongly led by the middle class. She states:

And I feel like that's one way in which the culture has shifted, definitely. It's a lot more outward looking culture, it's "how can I present myself as no different from anybody else?" There's a recent piece in *Africa is a Country* and even on *African Digital Art*,³⁵ it was talking about how in the past [in the image of Africa] all the Africans were starving with flies on their faces, and now everyone is middle class and wants to show you their mobile phone. You do it and you get more prominence, and

³⁵ <http://africasacountry.com/> (last accessed December 2016) and <http://africandigitalart.com/> (last accessed December 2016).

then people [from outside] come and they're asking questions and it shifts and everyone is trying to present themselves as this new generation, and that has impacted on how Kenyans present themselves. (Guchinga interview: 8-9)

Based on Guchinga's and Jepchumba's interviews and my own observations, a cultural digitisation within networked and social media in Nairobi is essentially being led by this group. While self-publication is fundamentally changing how Africa is viewed from the outside, there is a blind spot about regarding the systematic neo-colonisation in ICT development.

In a group interview with a number of women who lead and run the *Go Down Arts Centre* in downtown Nairobi, referred to by Muriethi, one woman gave the following analogy:

Yes, it is a bit like Kentucky Fried. Yes you know the company coming in [from outside] and we are all queuing up for our chicken... and we are like hang on, what are we doing here. That is exactly it, you are eating and enjoying it, not thinking too much. [...] the whole global-ness of it hasn't really begun to filter through. (Go Down interview: 10)

One of the other women followed this by stating:

But there still is that at a very fundamental level, that kind of contact and that removal from that personal space with technology. And it is a very class thing as well, because I mean how many people can access Kentucky Fried Chicken, it is expensive. And so it is a certain class of people that will access Facebook and Kentucky and that kind of lifestyle. And even though you think you might not be talking too much about it, we are nurtured by the time we get to the computer, it has got routes somewhere in your development. And it does come from somewhere. It is not just parachuted down and you know it is grown over a certain generation. But at the same time we are still very close to that culture where the computer is not accepted at all and we co-exist. (Go Down interview, 10-11)

It is clear therefore that it is understood as a neo-colonialism which additionally segments the world by levels of access.

Actions and projects do, however, exist in Nairobi to promote the communal engagement valued in Kenyan culture. These are predominantly driven by a need to tend to regional and local concerns. The most prominent and well known is Ushahidi and the development of the iHub, but more have grown from this. Guchinga states:

[...] some other people came and viewed the iHub in itself as the drive of innovation, whereas it was really more the people who then found a physical space [from which to engage]. So there's been lots of replication in different spheres. Some of it is doing really well, some of it is not, so like for example PAWA254 which is a creative hub is great, because you put together all the activists and the creatives and that has enabled us to thrive. (Guchinga interview, 5)³⁶

PAWA254 is an organisation that started addressing how journalists and social activists could work together to effect change in Kenya. The organisation acts to engage social justice in response to and with the support of growing digital and social networks (interview with PAWA254 member). Guchinga spoke of a specific photographic project on at the time of the interview, which was led by a journalist photographer at the head of PAWA254 named Picha Mtaani. The project was called *Kenya Burning* and featured photographic images from the 2007 election violence and subsequent political events that threatened human rights.

Guchinga states:

Kenya Burning featured other artists but it was Picha Mtaani's work, taking that around the country, putting up these metal grills and mounting photos on them, and having people come there and begin a discussion about what they'd seen and what they'd heard when it happened. And again you have all these people who will come out of the woodwork and say, "hey I'm a photographer, I'm a videographer. I want to use my work for social good. I want to have a community of people who are also helping," because you don't want to be the one who's risking your health and livelihood by yourself. And so they came together and PAWA was opened about a year ago. (Guchinga interview, 6)

³⁶ Guchinga at the time, though working at the iHub, was working very closely with the social activists at PAWA254.

Guchinga is very aware and concerned that projects like PAWA254 are at odds with the individually orientated promotion and social media culture growing around the middle-class youth in Nairobi.

It is clear from the discussions that the intersection of culture and technology grows from an understanding of communal culture in Nairobi, and is additionally strongly orientated to a middle-class youth, who are at an important juncture in how technology will be culturally and socially integrated into a future culture of technology in Kenya.

3.2.1.3 Development Binaries, Culture and Actional Methodologies

Guchinga's view on the value of the intersection of culture and technology is, however, not shared by everyone in the technology development sector. The majority of the iHub developers and developers in ICT in Nairobi see a distinct split between the arts and technology. This is largely due to the assumption that cultural intervention and business don't mix. Moving out of these neat divisions of business vs culture is furthermore a difficult thing to do in an ICT structure that already strongly contains these binaries.

iLab Africa³⁷ technology director Emmanuel Kwenya, referred to by Mark Kaigwa, was one of the people interviewed who sat very firmly within ICT development. When asked how he understood the intersection of culture and technology, he answered:

I mourn the death of music, of musicians in Kenya in terms of music creativity, you know going to the studio and operate the equipment and mixing, you know the old mix of the audio play. What is happening in Kenya, someone gets a digital mixer, opens a bedroom recording studio, plays a few sounds, records and produces a track and then it hits two days later. The music industry in Kenya has really been affected by these shortcuts of creativity. (Kwenya interview: 36)

It is clear that Kwenya identifies culture as distinctly just arts, he goes on to state:

³⁷ A mobile technology development lab associated with Strathmore University, a private University in Nairobi.

Franco Molombo who died in 1989 was a producer of Kumba music [from the Congo], if you look at the translation of the music that he does, he was speaking about life, for example one of the big problems that was happening in the Congo and Sudan is polygamy, and he sung why do people do this. I mean these are songs have an everlasting message because that problem will always be there, or has been there. The arrangement of this took months, so that's why people that were born after he died still believe in his music, but technology in this respect is killing that aspect and I've really been disappointed. (Kwenya interview: 33)

For Kwenya there is a clear threat to music that is largely not about the technology itself, but how it used and approached. It was interesting to me that in his interview Kwenya put emphasis on the work that he was doing to assist the development of farming and helping with concerns for environmental issues with technology innovation. Kwenya's focus was particularly orientated towards dealing with how colonialism acted through farming to displace people and to centralise food production. (Kwenya interview, 24) Kwenya put additional importance on technology as playing a role in challenging government, stating: "in fact they've really been pushing on operational efficiency and procurement in the public sector because this is the biggest, inefficient, most corrupt section and they have been really pushing it" (Kwenya interview, 26).

While Kwenya, like many of those interviewed, maintains a strong sense of social responsibility in his work, he falls into the rhetoric that splits culture and development. A split in intentionality that is promoted, sometimes unintentionally, by ICT4D in its endeavour to focus on 'sustainable' livelihoods. A disjuncture that has a major impact on how cultures are addressed in innovation practices. And often to the detriment of the cultural actions that assist in maintaining the sustainability of those communities at risk.

The rift between creative practitioners and developers is further widened by binary views. It seems that despite the importance of the iHub in assisting in an understanding of the role of community in the cultures of technology within Kenyan society, artists and cultural practitioners that I interviewed: Sam Hopkins, Muchiri Njenga and Chief Nyamweya all spoke about the difficulty in connecting with developers at the iHub. They all spoke of situations in which they were invited to participate in meetings or workshops, but found

that developers were mostly looking for visual designers for their digital applications and not to address the challenges of technology and culture. Developers were largely deaf to concerns of culture outside of competitive commercial consumptive concerns. And while I don't wish to dismiss practices that aim to support music or new food culture, as many of them are valuable in understanding how culture can be consumed, it is problematic if larger cultural concerns are not dealt with in a more integrated manner.

Before continuing this line of argument and going further into exploring the roles of artists, I do want to briefly present an example from the interview with Chief Nyamweya, of an innovation that sensitively addressed music consumption in Kenya. The example additionally segues into a larger discussion about the location of artists and cultural practitioners within ICT in Nairobi. This is a music buying system called *Mdundo*, which translates to 'drum beat', and was developed through a technology start-up incubator called 88 MPH (based both in Cape Town and Nairobi). At the time, *Mdundo* was a unique music-buying mechanism, whereby people bought airtime or data through a scratch card and a code as a means of accessing music. On buying a *Mdundo* scratch card, a user could download four or five tracks by a particular artist directly to their phone. It borrows from the airtime-buying model by focusing on quick access, directly to the phone, which is the most common media device in Kenya. It is also important to note that international music buying mechanisms such as iTunes were not available to the African market for quite a long time. Even since they have become available they have been mostly unaffordable, with copyright limits on what they can offer, and a lack of locally-known featured artists.

Mdundo was successful because it responded to a low-income bracket, firstly by directly targeting the only media device most listeners can afford and secondly in that it is a small amount of money for a single purchase that is supported by a free download. The habit of buying only what you need in small packages, is a common practice particularly in this income bracket. This is seen in the pay-as-you-go model for mobile phone use, in which most low-income earners only top up their airtime or data for what they will be using short term, i.e. to make a call or send a message. *Mdundo* replicates the same buying and access pattern, and is therefore particularly responsive, and supports innovation.

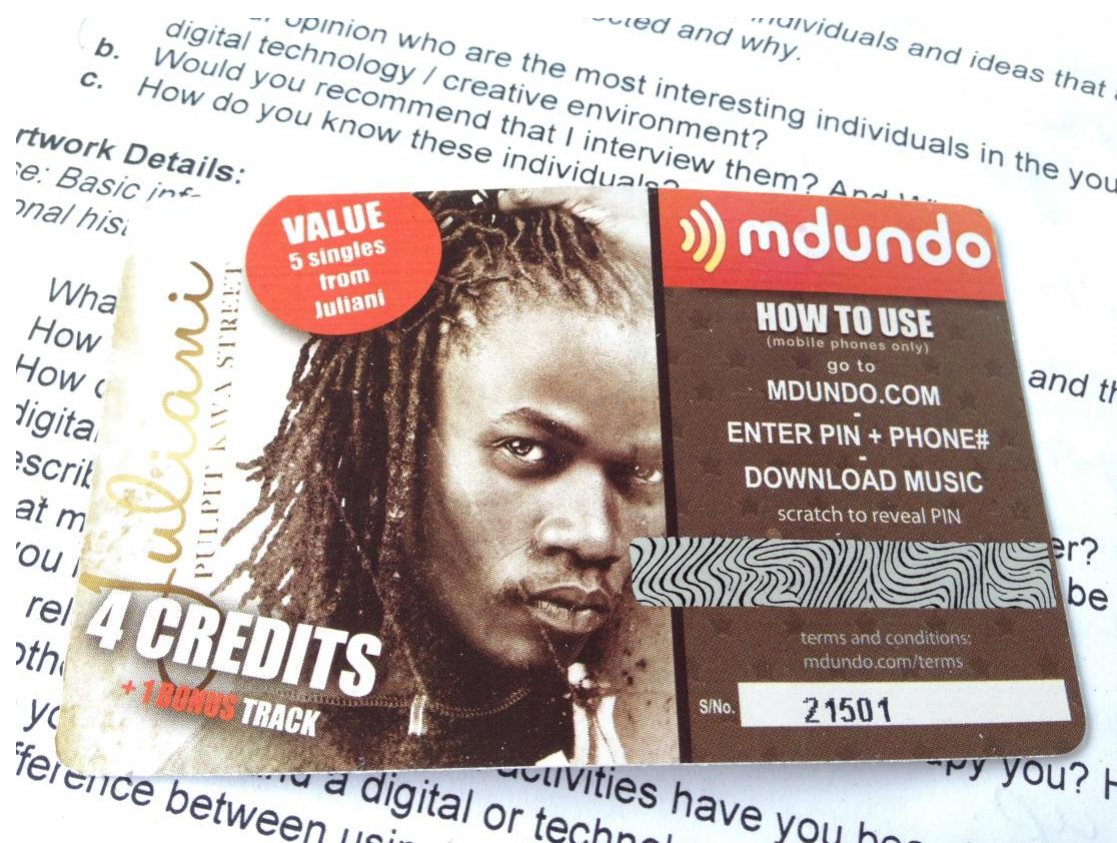


Figure 5: Mdundo Card, photo by author (2012).

The artist on this particular *Mdundo* (Figure 5) is Juliani, a popular hip hop artist who is known to have grown up in the slums. His relationship with Kibera slum in Nairobi is deeply ingrained in his practices. It is his use of innovative practices that links him most directly to this audience. In addition to helping pilot the *Mdundo* project, Juliani is known for using social media to organise his fans to help him on various social development projects.³⁸ So while *Mdundo* is a clever innovation that locks into the buying habits of a particular community, it is also important that it responds to a larger form of community action and is therefore valuable.

A significant finding of the fieldwork and another key difference between Nairobi and Johannesburg, is that Nairobi does not have what could be called a contemporary art scene. This is particularly significant as we engage further the role of arts and cultural practice with technology. In Nairobi, commercial art galleries were initially only founded to meet the interests of tourists and British expatriates who collected objects from local cultural groups.

³⁸ See the Road to Coast project on <https://vimeo.com/45076303> (last accessed July 2017).

These galleries, however, were not used to serve local or regional community. The galleries I saw when in Nairobi sold mostly painterly representations of landscapes, wildlife or 'indigenised' patterns and compositions. Very little of the visual art in these galleries could be defined as making a critical contribution. This surprised me, only because contemporary art of this ilk is well established in South Africa. This does not, however, mean that Nairobi does not have a culture of contemporary criticism through the arts; only that it resides elsewhere and in forms more aligned to community practice.

During the Moi Regime, art education was virtually non-existent in schools, and universities emphasised the sciences, law and business rather than the arts. This was compounded by embedding of Euro-American style 'humanities' in colonial education systems. Indigenous cultural practice was left out of formal education, and therefore not developed. Art centres have since been established in Nairobi to make up for this shortfall (interviews: Go Down Art Centre, Kuano Art Trust, Chuchu). Many of these art centres, while supporting a few artist studios, focused predominantly on the fields of performance, dance, music and narrative-driven media such as animation and film (Go Down interview). It is for these reasons that Nairobi, in comparison to Johannesburg, has a stronger association with traditional African culture in its contemporary cultural forms. Contemporary cultural criticism in Nairobi has therefore been dominated by literature and other narrative forms. Rachael Guchinga in her interview intimated that literature was an important aspect of Kenya's contemporary history. She stated, "I mean Kenya was fairly outspoken at the time, through Kenyatta and through the Mau Mau. You had a generation coming out at that time who had a very strong literary culture in the 1970s. It dipped a bit when Moi came in and was a bit more repressive" (Guchinga interview, 4).

Kenya is known to have produced some of the best fiction writers in Africa in the last century. These include Grace Ogot, Meja Mwangi, Ngugi wa Thiong'o and more recently Binyavanga Wainaina who went on to help found Kwani (run by Billy Kiwanga at the time of the interviews). Kwani is seen as an important contemporary cultural location in Nairobi, because of this literary culture. Nairobi has subsequently spawned a number of important films. In fact all the visual artists I interviewed in Nairobi: Muchiri Njenga, Sam Hopkins, Phillipa Nidisi Herman, Jim Chuchu and Chief Nyamweya all situate their practice, if not fully

then in part, in film and narrative forms such as animation. I was hard pressed to find visual artists who were not of this ilk. The histories of static visual arts in Nairobi are strongly tied to the histories of colonialism. And as will be seen when I look closer at Joburg, even its strong visual art scene was not evolved in extension of African cultural practices, but rather through colonial practices. Therefore outside of narrative forms and in them the prevailing importance of communally led cultural endeavours, rarely do artists in Nairobi work in isolation. This is a methodology inherited from traditional cultural practices, through which contemporary cultural practitioners understand that culture and community are intertwined. Particularly when the outcomes need to be influential and effective.

It is for this reason that many of the cases discussed with creative practitioners in the interviews engage an actional community form. *SlumTV*, a project instigated by Sam Hopkins, is an example of exactly this type of engagement. *SlumTV* was inspired by what he calls “video groups” or “pirate cinema networks” (Hopkins interview: 4-5) found in Kibera and Muthare slums in Nairobi. Hopkins states: “someone has a little house [and] fifty to 200 [people will gather] and they watch football or Hollywood or Bollywood or Nollywood”³⁹ (5). It is within this existing informal cinema structure that Hopkins started a TV production group called *SlumTV*, which is made up of young men and women living in these slums. Hopkins states:

[...] it’s just a small group of twenty at any one time, young men and women who make small features about local issues and the typical form is a news reel and a newsreel is made up of like maybe five or six small docs which are maybe four or five minutes long about certain things happening and a drama. So like a fictionalised version of something, which is actually I think proving to be more interesting than a documentary anyway. I mean that’s the way the project has taken, I think that’s because raw fiction lets you talk about stuff in a more personal way, so paradoxically in a documentary. (Hopkins interview: 5)

³⁹ See *SlumTV* video <http://www.youtube.com/watch?v=bruvlhvQBvg&list=PL4C2517871817C3B6> (last accessed December 2016).

SlumTV, beyond extending an existing social cultural form, also assisted in developing new content, and it is this shift in content that is significant to Hopkins.

Hopkins states that these communities have predominantly been consuming media from the rest of the world. Additionally he indicates that there is an NGO rhetoric which has started to influence how people in these areas are choosing to tell stories about their environments. Hopkins felt this was detrimental to other forms of storytelling inherent in the very multicultural communities in the slums, which are more often than not made up of migrants and immigrants into the city. Hopkins states:

[...] initially I saw my role there as a facilitator, not like I was very conscious of not shaping the aesthetic qualities or the narrative qualities of what was produced, but more and more I took it as a provocation to teach a position, because there was a certain kind of NGO setup that was being reproduced again and again. Films being made about HIV/AIDS, water and sanitation [made in a very type of voice and structure ...] because the NGO sector is a cultural dominant in Kenya... so it's a kind of rhetoric which has been absorbed.

An earlier work that Hopkins also spoke about was a visual artwork that he had made in response to this influx of NGOs in Nairobi, in which he reproduces the logos of hundreds of NGOs. In relation to *SlumTV*, Hopkins indicated that people in the area had stopped telling stories from their own vantage points and that *SlumTV* therefore attempted to shift this by encouraging stories more unique to the situations and cultures of those making them. Meaning that through *SlumTV* communities were given the opportunity to shift the rhetoric that surrounds communities at risk.⁴⁰

⁴⁰ *SlumTV* productions, outside of being screened in video groups, are available online and Hopkins has put together a collection for the Iwalewahaus in Bayreuth, Germany.



Figure 6: Slum TV, photo from Africalia Project website (<http://africalia.be/slum-tv/>).

Chief Nyamweya, moreover, used digital narrative to transform particular histories that have not been adequately written about in the past. Nyamweya, as previously mentioned an ex lawyer turned animator and comic book writer, produced an online comic book titled *Emergency*, which explores the narrative of Kenya's independence. Of this, Nyamweya states:

Emergency, was basically the returning of the establishment history, it was a bit revisionist [...]. [At school] you open our books and it is a ridiculous narrative of our history, really ridiculous. I mean everybody sees through it, but we still teach it because we haven't really interrogated our past and found a way to tell it. And you can't even blame the government because there's no consensus, how do you confront some pretty uncomfortable things about how we [as an independent nation] were born. I mean most nations are born in an untidy fashion, that's not a big deal; the big deal is when you are dishonest about it. [...] So in our case the fact is when the British left the institutions which were colonialist institutions, they were preserved and it's only very recently that they are dismantling those institutions. Everything was kept in place, the only thing that changed were the faces which were running those institutions. [...] So you still have a tiny majority controlling everything and [...] actually in some ways they were worse you know, but because the

inheritance of the State were the primary beneficiaries of independence the story could never be told. So what we get told is this really rosy picture about how evil the British were and how wonderful everything has become, it's a load of nonsense. And it's only now that we are starting to address those things, it always flares up in little ways like the election violence we had in 2007. (Nyamweya interview: 7)

Nyamweya decided to produce this story as a digital comic book, because it would allow a larger public audience access to the story. He states:

I'm dealing in numbers, I'm trying to reach the most number of people. You can write these high-minded essays, I mean there are so many books out there, there are so many public intellectuals who have done a fantastic job of explaining our condition, but how many people have read it? I mean they only reach the people who are curious or educated enough to read that. (Nyamweya interview: 8)

Even though Nyamweya produced the work independently, he was very focused on shifting public narratives about a community, and the digital therefore became a tool through which this could be done. What we see with Nyamweya is an attempt to engage the community in a manner which points to what Muchiri Njenga spoke of, when he spoke about a missing link in how stories are told in contemporary Kenya.

Njenga was of interest because of a very specific short experimental film he made titled *Kichwateli*.⁴¹ *Kichwateli* translates directly into English as 'television head'. Njenga states the following on the film:

I was feeling that our parents' generation lived at a point in a society (Moi Regime) where [they we]ren't allowed to criticise or analyse or come up with things and say why? And us, we are living in a technology [time] where we are coming out and coming in [...], you are allowed to interact more. And so, there is this curiosity of wanting to know where [we] have come from and where [we] are heading. (Njenga interview, 6)

⁴¹ See film online at <http://studioang.tv/work/kichwateli/> (last accessed December 2016).

Kichwateli is a narrative about a boy who comes into the city from the country, he falls asleep in the slums and wakes with a television as a head. We then watch him move around the city and see how people respond to him. *Kichwateli* is a strong symbolic critique of a media-driven society. Njenga states: “I was trying to come up with a character that [we would] project and see 100 years from now, where [we] want to see ourselves in Africa and what kind of content people would be putting out there” (Njenga interview: 6). Njenga’s link to the traditional is further implied when he speaks of a traditional spirit in African mythologies that represents taking from the past into the present as a way to understand what will happen in the future. This is a common format in African cultures for addressing the future. The future is never directly addressed the way it is in Euro-American culture; rather, lessons and stories from the past are used to speculate on futures. We see in Njenga’s, Nyamweya’s and Hopkins’ work a strong link to the actions of traditional culture and their knowledge forms. These themes re-appear again and again as this generation of Kenyans begins to grapple with the role of information technology in their socio-cultural forms. Along these lines, Njenga states of the *Kichwateli* character: “We will end up on the same road, so I was feeling this character was just representing the generation that is going to show people where we are heading” (Njenga interview: 6).

What was significant about *Kichwateli* outside of its narrative (which will address in more detail in line with the discussion on the *Post African Futures* exhibition in Chapter Four) is how it was made. In planning its production Njenga made a point of working with local makers rather than an experienced film production crew. He worked with makers in the Jau Kali sector where local craftsmen make and sell metalwork and furniture and other functional objects. Njenga believes strongly in including in his productions the skills that exist outside of commercialised film production. Additionally this method has allowed the short video to be owned by the community and people he worked with; who would otherwise not have the opportunity to engage in this form of creation and storytelling. He states:

I felt performance and installations and also mobile technology were: how can they create stories that people can contribute to? Whereby you feel like you either have that sense of ownership to a story or you can interact in the story when you are

outputting the story and you can come in and be part of it. So these are the experimental elements that would be just connecting. (Njenga interview: 19)

Njenga worked with this community to produce the props, in addition to shooting the different scenes in public spaces. Aspects of the development of the sequel to *Kichwateli* were presented alongside *Kichwateli* at the *Post African Futures* exhibition, including sculptural props that Njenga had begun constructing with the community, focusing the audience on their collaborative sculptural qualities, rather than the narrative of the film itself.

The discussions presented in this sub-section and the sub-sections before it, explore how contemporary critical cultural practice in Nairobi is very strongly tied not only to narrative forms, but also to practices that include community structure. The latter is particularly significant in Nairobi, particularly where these practices are augmented by digital, innovative and communications technologies and are therefore able to adequately address cultural concerns.

It is also clear from these discussions that much of this practice contains in it a level of critique about the role and impact of new technologies in Kenyan society. This criticality, when linked to the deep-rooted method of working with community structures, is the enactment of an actional methodology. It is clear that this actional methodology does not reference Western institutional knowledge, but is rather subaltern and insurrectionary. It is additionally an act towards decoloniality, in response to the strong neo-colonial leanings of the globalised information economy.

As stated in the introduction to this section on the fieldwork, the understanding and framing of actional methodologies in cultural practices is in this thesis what *Post African Futures* takes forward from *African Cultures of Technology* as a representation of what was gained in the fieldwork. In the *Post African Futures* exhibition, all the works explored further aesthetic methodologies that were actional in this manner. They are identified as methodologies not only due to their derivation, but further in how they aim to affect.

3.2.2 Johannesburg

The Johannesburg relational map (Figure 7) is different to that of Nairobi. One of the main differences is that there is more than one instigator in the snowball sampling. In the Johannesburg interview process I quickly came to see that the professional networks were less integrated and more segmented into industry silos than in Nairobi. In Nairobi it did not take long for respondents to start referring back to each other, showing an integrated network of respondents. Additionally, Nairobi's mesh of interlinking referrals became dense as it looped back and forth between different individuals across industry strata. In Johannesburg, referrals would rarely link back or move between industry strata. This began to show that the culture of technology in Johannesburg was vastly different to that of Nairobi.

Comparatively, the Johannesburg relational map pointed to the fact that Johannesburg was more developed from an industry perspective, as there were more respondents in each network, but this meant less interaction between sectors.

I started the snowball sampling process in Johannesburg with Professor Christo Doherty, who at the time was head of the University of the Witwatersrand (Wits) Digital Arts Division and was known to be connected to an array of creative practitioners, as well as having developed his career through broadcast media. Doherty's referrals were predominantly made up of respondents in broadcast media, as well as two people in the ICT sector and an artist. The second level of referrals in broadcast media continued down a trajectory of people in that industry, as did those in ICT, and did not look back at any point (only artist Marcus Neustetter referred back to people in broadcast media and ICT). Additionally, the network of referrals that started with Doherty featured only well-established white professionals. Despite the strong trajectory of referrals into particular industries, I was most concerned that in this snowball I was missing groups of young black creative professionals who were known to be working in this space. The pattern of the Johannesburg map quickly showed the inherent structure of the South African industry that reflected an Apartheid past.

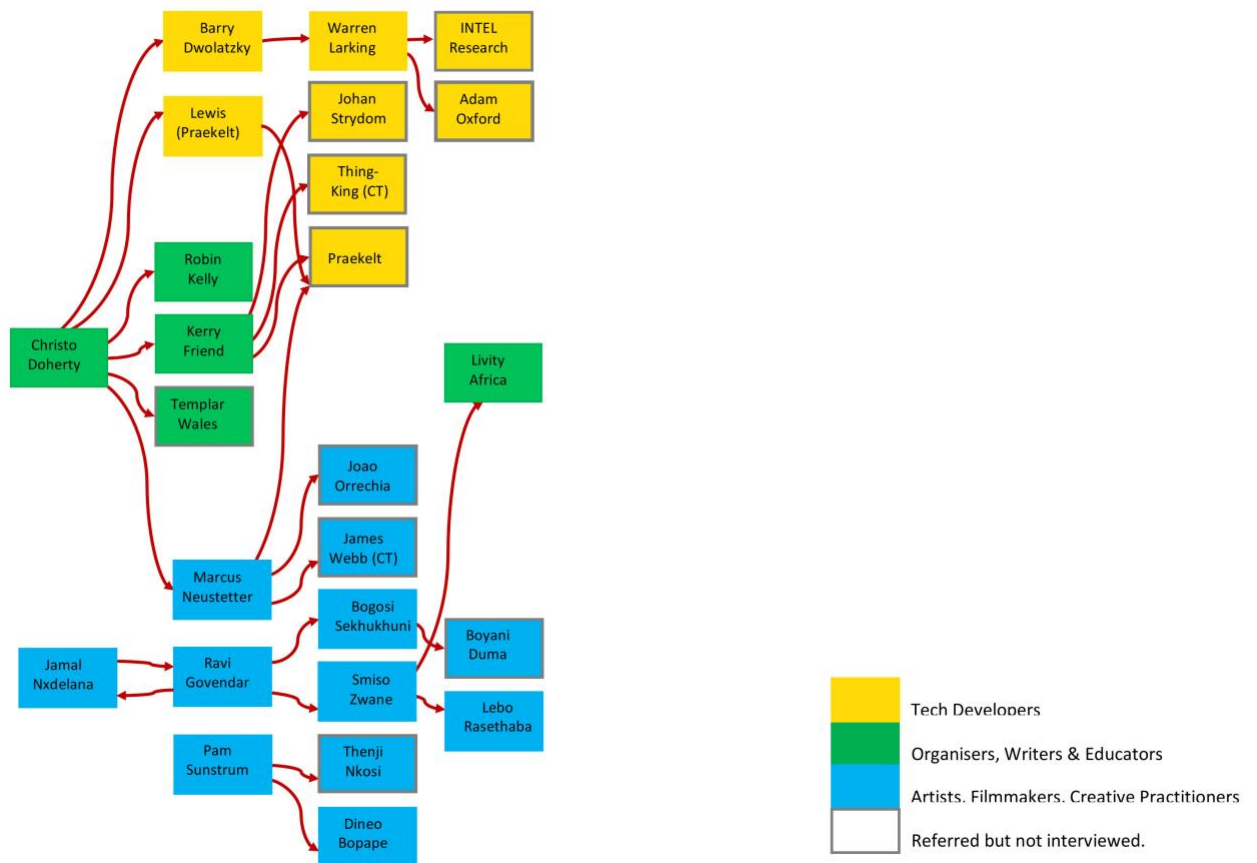


Figure 7: Johannesburg Fieldwork Snowballing Diagram

As I had chosen to interview only thirteen practitioners (based on the Nairobi sample) and because Johannesburg networks were so much narrower, I made a choice to add two new instigators to the snowball sampling for Johannesburg that would help diversify the sample. The first was artist and fashion designer Jamal Nxedelana, whose work I was familiar with. The second was artist Pamela Phatsimo Sunstrum, whose paper on African Futures had become important in how I started addressing Afro-Futurism as a theme in my investigations. Interestingly both these new instigators had similar horizontal referral patterns, but within new groups. This was less the case with Nxedelana, who works in a community-orientated way similar to that found in Nairobi; nonetheless even this simple mapping of referrals made it clear that Johannesburg’s structural differences would be significant to its culture of technology.

Adding two new instigators did not affect the outcomes, since the fieldwork was an exploratory exercise to establish an impression of each city's culture of technology, and was not required to represent a complete view of the networks of each city. The interviews in each case succeeded in helping to identify trends that were unique to each.

3.2.2.1 Apartheid Computing and Television

The prevailing position from Johannesburg was that the area of culture and technology was situated within and dominated by the language of the commercial culture of broadcast media. Additionally I found that artists and cultural practitioners in Johannesburg were more often than not working in response to this dominance, its influence therefore entering critical cultural practices.

Of those interviewed, 80% stated that the most impactful technology prior to mobile in South African society had been television, many stating that its influence continued to have an inherent impact on contemporary culture. Mobile, while indicated as being significant in Johannesburg as currently the most influential technology, did not however have the same socio-cultural influence that it did in Nairobi. This was largely associated with, as will be shown, ideologies surrounding technology that are interwoven differently into Johannesburg's socio-cultural forms.

It is useful to start by looking at how mobile media is received and positioned. The primary reason mobile did not have the same impact in Johannesburg is that it was introduced much earlier in South Africa's history. This may seem like a contraction, as longer use would imply more integration, but mobile's early introduction meant that the scope of invention around what it could be used for was limited. At the time of its introduction in 1994 (also the end of Apartheid) it did not offer much transformational functionality. In addition, the three large mobile media companies in South Africa, namely: Vodacom, MTN and later CellC quickly cornered the market (as licensing is issued by a government body and is limited) and locked pricing with high call rates. These companies have subsequently done little to transform their consumer model, thereby leaving most South Africans at a disadvantage and making mobile a difficult and somewhat expensive area for development.

In fact the mobile industry, like many other industries in South Africa, was built on systems and financial structures that evolved during Apartheid and therefore the industry and users suffer from this legacy.

Professor Barry Dwolatzky heads up the Johannesburg Centre for Software Engineering (JCSE) and since 2012 has been working with Wits University, the City of Johannesburg and various local and international institutions to develop what is now known as the Tshimologong Precinct. Prof. Dwolatzky was referred to by Prof. Doherty. The Tshimologong Precinct aims to be one of Johannesburg's first IT Hubs and is broadly modelled on the Nairobi iHub. Prof. Dwolatzky has a particularly interesting and somewhat uncommon history with computing in South Africa, this being during Apartheid, which is significant for helping understand some of this history of not only computing, but also broadcast media and mobile in Johannesburg.

When asked what he thought the most influential technology was on South African society prior to mobile, he (unlike the majority who referred to television) stated:

[...] computers and what computational devices [...] And it was abused by the previous regime, so it was what made Apartheid work in many ways, having computers... because there's the population register, ways of dealing with the bureaucratic registration of names. The State under Apartheid was horrendously bureaucratic and although they were not of today's terms, it's interesting that in the '50s when computers first appeared, this country led the world. It was the second country in the world to have a computer society. (Dwolatzky interview: 4)

Prof. Dwolatzky goes on to state:

So through the '50s, into the '60s, into the '70s, this country took to computers almost like no other in the world and I've often wondered about why that was and I think the kind of top down repressive nature of Apartheid South Africa was like a cosy bedfellow with the kind of organisation of information that computers provided; this country took to it like a duck to water. So I think if you look at the pass laws, the Group Areas Act, etc. I would even go so far as to say that censorship laws

were kind of supported by a technological infrastructure with help to classify, control lists in doing things that computers do well, store information, retrieve information. (Dwolatzky interview: 4-5)

Prof. Dwolatzky's recollections are part of a fascinating and largely undocumented South African history. Prof. Dwolatzky goes on to indicate that sanctions in the late '70s and early '80s acted to aid development rather than deter it. He states:

On the positive side, when sanctions happened and we became cut off from the world, in terms of corporate relationships, that gave the locals of the industry carte blanche to ignore patents, ignore copyrights, reinvent the wheel. [Due to this] a lot of very innovative stuff happened in computing and IT in this country as a way of breaking sanctions and breaking dependency. The military, which grew humungously big in the '70s and '80s really poured billions of Rand into computing and IT. A lot of cutting edge stuff was done at that time and communications, inscription and image processing were quite advanced. (Dwolatzky interview: 5)

Prof. Dwolatzky was not actively part of this development and was in exile and studying these developments from abroad. He states:

I went into exile in the late '70s, I studied and finished my PhD in '79 and then I left South Africa. I lived in Britain for ten years and I worked there for the anti-Apartheid movement. The ANC were looking at technology projects in support of the boycotts and the movement. So I did research and engage in what was going on here, but I was not experiencing it first-hand. (Dwolatzky interview: 6)

It is as equally little known that the ANC and the anti-Apartheid movement were working to understand and destabilised the Apartheid government through computing. Some of this history is documented in the government gazettes of the time, but apart from those who experienced it first-hand there is little documentation of its use or the rationale behind it. It is certainly a history that requires further exploration, but does not unfortunately fit fully into the scope of this research.⁴²

⁴² I am very interested in exploring and documenting these histories more clearly as a post-doctoral study. The scope of this research however focuses on creative and cultural practice

South Africa is now just over twenty years post-Apartheid and its histories are therefore entwined in contemporary industries. Prof. Dwolatzky indicated that at the end of Apartheid many of the great minds working in computing in government either left the country or moved into the banking sector. Banks in South Africa in the 1980s were some of the most digitally advanced in the world. And as independent entities they could continue development with computing after the Apartheid government was dismantled. In addition to the banking sector, the South African Broadcasting Corporation (SABC) also held in its technologies, both physical and ideological, remnants of the Apartheid regime. And it is for this reason that the histories of broadcast in South Africa are particularly relevant to respondents in Johannesburg that see television as an important influence on the culture of technology in Johannesburg.

Another respondent referred to mining, which is the foundation of Johannesburg's existence and the very reason why British colonialists settled on the Witwatersrand. Two others referred to pre-colonial histories of traditional healing 'technologies', both medicinal and spiritual, of the Sangoma (witch doctor) which are still very important in Johannesburg's traditional culture and will be discussed further in line with the artworks on the exhibition.

In order to address the contexts of television in Johannesburg, the following breaks from the format of addressing the content of the interviews by taking a small detour into history of broadcast television in South Africa. Like the history of radio in Nairobi, this acts as an important frame to understand why respondents put so much emphasis on television.

The history of television in South Africa begins with the outright banning of the medium when it was first popularised in Euro-America in the 1940s. Its first introduction into South Africa in 1976 came after long years of nationalist propaganda and ideological protectionism by the Apartheid state. Rob Nixon, in *The Devil in Black Box: Ethnic-Nationalism, Cultural Imperialism, and the Outlawing of TV Under Apartheid* (Nixon, 1993), states:

in a more contemporary culture and therefore does not warrant a full exploration at this point.

The South African ban on TV ranks as the most drastic act of cultural protectionism in the history of the medium. It stands, moreover, as the most extensive act of pre-emptive censorship by a regime notorious for curbing free speech. The ban went well beyond the familiar measures of removing from circulation. For in the process of barring television from South Africa the ruling National Party anathematized an entire technology. (1993: 120)

Nixon goes on to present the history of this ban as a “focus to their intellectual and administrative efforts to reorganize relations between ethnicity, race, cultural identity, national and international community” (121). The ban was understood as a fundamental precaution against the potential for the television to enact cultural imperialism.

A primary focus was the language of imperialism propagated by the medium; which was understood to be capitalist, leftist and included the support of civil rights movements (American and British) that threatened the foundations of Afrikaner nationalism. Nixon states:

In combination, these tendencies were used to vindicate Nationalist claims that the very nature of the technology promoted an American ideology of melting-pot assimilation and would erode political programmes that sought to differentiate between groups, whether along Afrikaans-English lines, black-white divides or along a variety of state-promoted, ethnic, nationalist fractures. In short, the National Party portrayed television as an agent of cultural fusion subversive of state efforts to promote cultural fission. (123)

The particular association with imperialism, however, Nixon believes should be understood as an extension of longer inter-colonial rivalry for the control of black territory, labour and resources – particularly the gold mines (123). The ban on television was highlighted as a method aimed to protect Afrikaner Nationalism from both internal and external white forces that threatened the formation of Afrikanerdom and Apartheid control. Additionally, TV was seen as a source of liberalised depravity that threatened racial segregation, religion and notions of womanhood. Essentially the Nationalist government used principles being explored in communications theory around media imperialism to support the banning of

television. This hostility was directed at international monopoly capitalism and not strictly capitalism itself, as the Apartheid government was clearly enabled by nationalist ethnic capitalism. (Nixon, 1994: 60)

In 1953, a strong pro-TV lobby emerged in relation to the promotion of South Africa as a civilised nation, which was largely a mechanism to ensure that the country could participate in globalised scientific modernity (Nixon, 1993: 129). The pro-TV lobby was supported by the growing wealthy Afrikaner middle class, who saw access to international markets as an attractive means to develop this wealth. This group was not as concerned with the threat of internationalisation to the ideology of the Afrikaner *volk*, but neither did it aim to exclude racial domination (ibid: 130). South African society was at the time crippled by uneven access to basic modernisations like electricity (a legacy that continues well after the end of Apartheid), in which fewer than 10% of black homes were electrified (ibid: 129). The lobby for television was promoted as an expansion on computing, that had already been introduced by the Apartheid government as a tool through which to more adequately engage the data to implement its racial organisation and segregation.

The pro TV lobbying however coincided with newer threats to the Afrikaner through the rise of independent states in Africa between and 1958 and 1971. Nixon states, “[t]he Nationalists were alarmed that African decolonization might allow Radio Moscow and Radio Peking increased penetration of South African airwaves and that countries like Ghana, Zaire, Nigeria, and Zambia might beam in anti-Apartheid propaganda” (1993: 129). If we align the histories of South African and Kenya, it was at this time, in the late 1950s, that Kenya was just gaining its independence from Britain and Jomo Kenyatta was becoming president. It would be at least another forty years before black South Africans saw their independence.

By 1969, however, the pressure to introduce TV to South Africa was expedited by what Nixon calls “two extra-terrestrial happenings” (131), namely the Apollo 11 Mission and the development of satellite broadcast technology. Nixon states:

Armstrong’s words – “One small step for man, one giant leap for mankind” – combined two very powerful appeals: to the ideology of the family of “man”, and to

the ideology of the march of progress. Both applied salt to white wounds, quickening the pain of spacial ostracism from the “family” of nations and of temporal abandonment – of being “behind the times”. (Nixon, 1993: 131)

This instigated feeling amongst white South Africans that they were being excluded from a scientific rite of passage that threatened their racial superiority.

Boosted by the confidence of their technological progress in computing, the National Party gradually introduced TV from 1976, implementing it carefully alongside the Bantustan scheme, which acted to organise black people into distinct tribal groupings. The idea of tribal purity was an important part of Afrikaner Nationalism, and the Bantustan scheme was justified as a gesture towards the inclusion of black people into this ideology. In this scheme, Zulus, Sothos, Xhosas and seven other tribal groupings were physically separated into their own (Apartheid-controlled) regions. Bantustans, later Homelands, were implemented in the rural areas. In peri-urban townships, black people were also separated into tribal areas within what are known as ‘townships’.

Along with the Bantustan scheme, Bantu Radio was also developed. Bantu Radio was specifically designed as means to counteract the potential reception of radio from elsewhere and is quoted as making black South Africans “immune to the poison of overseas influence [...] and inculcating more localised ethnic nationalist identities” (Nixon, 1993: 65). Televisions unbanning was therefore done with extreme caution and only locally made content was available.

Artist and respondent Dineo Sheshe Bopape, referred by Pamela Phatsimo Sunstrum, interestingly states the following when asked what was the most influential technology before mobile:

The camera and the gun. [...] The camera, because it shows you an elsewhere, but then also mirrors something – it was also in like Apartheid, a witness to lighten the atrocities and stuff. But also the camera with the pass books and the way people were documented. The gun technology – by colonialism; that it’s used as a tool to enforce. (Bopape interview: 19)

Bopape comment's show that the impact of television and politics is fundamental to her memory of the form.

My personal memory of broadcast television starts in the early 1980s and I remember it being venomously led by Apartheid propaganda. It was dominated by an overtly Christian message of a chosen people that had the right to separate and subjugate black people. News broadcasts and information were strictly controlled and aimed at supporting the message of Afrikaner nationalism. There was little foreign content and that which was there was well chosen and extremely censored. We grew up with Afrikaaner children's programmes, Afrikaner talk shows and even black dramas like the gory *Shaka Zulu* series developed late 1980s. *Shaka Zulu*,⁴³ which was initially produced with funding from the USA, fascinated and consumed the nation, both black and white. Its premise, however, was distinctly tribalistic, with an underlying negative depiction of black South Africans as violent and gory (Rosenberg, 1986).

In the late 1980s and the early 1990s, as Apartheid was increasingly eroded due to its own bankruptcy and the need to become part of a larger internationalised capitalist society, TV came to play an increasing role. There was also leakage into the country of other forms of television. I clearly remember the thrill of being able to access BOP TV, a television broadcast from the then independent neighbour Botswana and Bophuthostwana (a Bantustan that which became an independent Homeland in 1977); this broadcast African American music and North American television.

With this 'leakage', TV become important in how black South African would begin to form ideas of their identity outside of Apartheid. Nixon states:

[F]or many urban Black South Africans, [TV was] a leading source of cosmopolitan values, reaffirming their attachments to an internationalized urban culture at the very time when the regime sought to disqualify them from city residence and thrust

⁴³ See a series segment: <https://www.youtube.com/watch?v=pcDLHQIkvQ8> (last accessed December 2016).

upon them essentialist ethnic identities. The TV variant of this cosmopolitanism was, from the Nationalists Party perspective, associated with nation busting ideology of consumerist individualism. (Nixon, 1993: 132)

Television's historical influence on a contemporary culture of technology in South Africa is important.

At the end of Apartheid in 1994, the opening up of television was momentous. Not only was it a window through which a new nation saw the inauguration of Nelson Mandela as president, but it became a medium through which political transformation was enacted. This was done not only through local talk shows, soap operas, news shows and dramas but was also the first access that most black South Africans had had to the outside world and the breadth of North America's global influence through film and television. In addition, the rapid growth of television advertising aimed at black people was almost a cultural revolution in itself. To groups of people who had been severely excluded from participating both socially or commercially, advertising was a form of recognition.

3.2.2.2 Television as Community Culture

Interestingly, many of the Johannesburg interview respondents were young enough not to fully understand the reason for television's impact on post-Apartheid society or unaware the history of televisions banning.

Kerry Friend, a creative director of a digital marketing team, is very influential in the tech and creativity scene as she has pioneered the use of hack-a-thons as a mechanism to bring social development into marketing. Friend was referred by Prof. Doherty. When asked what, prior to mobile, had been the most influential technology, she answered:

I mean obviously for me TV has had a huge impact especially on the psyche of the emerging classes and where they want to go with the country. So you can't discount the emotional impact of TV. Also when I was a kid you would hang around watching *Generations* with your helper in the house and everything is ceded in through soaps

and dramas from political opinions to football to fashion to music. (Friend interview: 6)

Here Friend speaks about the locally made soap opera *Generations*, which was the first contemporary black soap opera to air on SABC.

Marcus Neustetter, referred to by Prof. Doherty, is a media artist living in Johannesburg who works with digital media. Neustetter quotes television as being impactful, but particularly educational TV that targeted a black population that was still trying to establish economic freedom after Apartheid:

Television, the late arrival of the television obviously had a big impact [...]. Even the house maid, sitting with her child ironing the madam's jersey or whatever it is, while the child is listening to Takalani Sesame. There was this whole campaign around that, Takalani Sesame and Sesame Street made for local content, but it was specifically played back at certain times of the day when the house help or whatever would be watching while doing certain chores. You know this whole idea that the children have got access to it with the parent's present. It was really bizarre the way that technology infiltrated communities that weren't supposed to be the way they were, but they are, that was an interesting moment. (Neustetter interview: 12)

Neustetter is referring to a South African version of Sesame Street, called Takalani Sesame, its aim was to offer literacy and basic learning in a number of local languages and it would code switch between English, Afrikaans, Zulu, Xhosa, Sotho and even Venda. It is hailed as offering different types of literacy learning to a wide range of people, from illiterate mothers who would have been denied a formal education in the previous regime, to black children and white children, not only in educating them in African language literacies, but in racial integration in a State that was still clearly dominated by racial prejudice. The programme is additionally heralded for its inclusion in 2002 of Kami,⁴⁴ a character who was HIV positive (having been infected through birth). The focus for this was to educate around

⁴⁴ See more on Kami: <http://www.takalanisesame.co.za/muppets/kami/> (last accessed December 2016).

prevention and care of HIV in the HIV pandemic of the late 1990s and early 2000s (Segal, 2002).

Television was also understood as a particular kind of luxury. Belinda Lewis, referred to by Doherty, a strategist at Praekelt Consulting a company that focuses on mobile media development, stated the following when asked what she thought was most influential before mobile:

I do remember when we first got independent television services, television broadcasters and what a big deal that was. (Lewis interview, 7)

Lewis is speaking about the first non-governmental satellite TV service, that was expensive and therefore only a few had access to it.

Bogosi Sekhukhuni, referred to by Ravi Govender, is a young artist that went on to participate in the *Post African Futures* exhibition with *Ntu*. Sekhukhuni stated:

I remember when satellite television was like the Internet before the Internet, especially because it was also attached to class; if you had a dish, you had actually made it. There was a lot of status attached to it, but you were also as a kid who afforded the opportunity to see a whole lot of other things that we can't gather on the four channels, so I mean that was a big deal. (Sekhukhuni interview: 11)

All in all, television had a major cultural impact on South African society. Not only did it become a site through which a generation of post-Apartheid black South Africans were able to explore an identity, but as more local content was being produced by black South Africans, it also became a rich cultural site.

Another outspoken respondent on the role of television was Robin Kelly. Kelly, referred to by Prof. Doherty, is the co-founder of *Don't Look Down*, an agency that runs the interactive aspects of DSTV (Digital Satellite Television, a South Africa and Africa only subscription television broadcaster). *Don't Look Down* manages the live social media interactions for large-scale popular shows like South African *Idols* and *Big Brother Africa*.

Kelly was one of the few who did not indicate television as being an important prior to mobile phones; rather he takes a shorter-term view and addresses the Internet itself:

The Internet, in relation to how it changed public perceptions and TV watching. Through online portals people then drilled down [back towards television shows] and what really stuck out for us was [...] what we found was that people were now asking questions through online forms and wanting to know more about a character who [...] had developed a massive audience on the forums. (Kelly interview: 10)

Kelly goes on to identify how, with the introduction of mobile phones, the Internet then allowed for a more diverse audience to access and enter these discussions. As is clear from Sekhukhuni's statement, access to Satellite television was largely about affordability and therefore class based. Kelly states that through the linking of what he refers to as the second screen – mobile phones brought a significant change in how a new audience began to have an influence. Kelly indicates how political engagements were a central talking point, he states:

So [initially] the audience that was voting was primarily privileged and in this country that means primarily white. The buffer they have is the judges, who we gave certain powers to save certain people if they're voted off, but the general trend from Idols was one of elitist, racist voting. You would have your top ten invariably being white kids.

But as we started opening up these forums and diversifying you would see different discussions happening on these forums and where you started to see a lot of negative things come through about the brand, about the show and about the contestants. But in [turning it around] we've achieved the ultimate thing, we got the audience chatting to the audience and they're making the content now. People aren't coming there because they want to read the article. They're coming there to see what somebody said about what they said. (Kelly interview: 26-27)

Kelly goes on to state how a pan African form of the same type of political engagement was played out in *Big Brother Africa*, which is a pan-African version of the European *Big Brother*:

[The forums] encourage debate and they stir debate and that is why Big Brother [Africa] is so successful. Whether it be the fact that a man slapped a woman or whether it's the fact that cultural practices are different somewhere else and someone won't actually break the chicken's neck in the house and eat it, all the way to political statements. Big Brother runs for three months and during that time a lot of things happen in various parts of the continent. So what you find is that cross-cultural or across country debate – a lot of xenophobia, primarily the audiences are from South Africa and Nigeria. [...] It will turn out into a full out war within an hour, over the merits of Nigeria's economy versus South Africa, or who's more xenophobic. (Kelly interview: 29)

Kelly is explicit that in these new forms, content creation resides with the audience:

One that's engaging, not always necessarily like-minded people, but a community of people interested in the same thing and debating and making the experience a lot richer, [this] is more important for us and has been fascinating for us to see [over the last 10 years]. [...] The audience is determining what they want on the show and how this show is important. It's not just another singer being sent to stardom. Kya [for instance] the winner last year represents all the best singers that this country has to offer. Young, black, intelligent, charismatic, can sing, religious, massive following and exemplary. (Kelly interview: 30)

Television, even in its early forms such as BOP TV in the 1980s, was a cultural event for many black South Africans. It brought people together towards a level of cultural growth.

Ravi Govender is an artist and member of CUSS Group, and was referred by Jamal Nxedlana. CUSS Group participated in the *Post African Futures* exhibition and is, I believe, one of the most interesting and cutting edge artist groups to be working in and around digital media in Johannesburg. Govender spoke about how CUSS heavily references television culture in their art practice as a mechanism to engage the visual language of popular culture. He states:

[...] we try to create work that is highly referential and also that audiences are enriched by. So it is not complicated or it is on levels that are quite simple. We want to reach people and enrich them... culturally I feel like there is a lot we have to offer

[as South Africans] and that kind of [culture] exists on these platforms that are mass consumed, like your SABC TV and Radio. (Govender interview: 2-3)

Here Govender is speaking about the video and visual work produced by CUSS Group that references the visual and colloquial languages of South African television. Though the group identify as an artist collective, their work constantly interweaves the mechanisms of popular culture.

Through television, shared music genre has had the same cultural effect, forcibly since the late 1980s, when South Africans started to invent new music genres that would engage all black cultural groupings. Smiso Zwane, a musician who performed in the *Post African Futures* exhibition under the name OkMalumeKoolKat (direct translation: Ok Uncle Cool Cat), referred to by Ravi Govender, spoke about a television programme called Ezidumo as being highly influential in how he developed his particular genre of dance music. He states:

Ezidumo wasn't a Jam Alley [Jam Alley was a live competitive dance show] or a magazine show, it was a live music show that just focused on traditional music. So like you will get like cats from deep Lesotho, cats from Polokwane, cats from Durban, it's the only show where they could perform, there was nothing else for them you know. [...] we were looking at that and just like it's quite cool because at that time we were going through the whole thing where we just wanted to reference what we grew up listening to. (Zwane interview: 4)

The regions that Zwane refers to range from the North to the South of the country and represent many different cultural groupings, from VhaVenda through to IsiZulu. Zwane is particularly active in producing a type of dance music known as Qgom in response to this.⁴⁵ South Africa's culture of technology is strongly linked to television and its role in developing a unified understanding of contemporary South African culture. A role that seems to

⁴⁵ Qgom as a genre of music that was developed in backyard studios in the townships and was explored further in the *Post African Futures* exhibition through the documentary film *Future Sound of Mzansi* (Rasethaba, 2014a) (Rasethaba, 2014b). *Future Sound of Mzansi* was included in the show as an example of innovative use of technology by people in very poor communities.

augment what would have been a strong community focus, like that found in Nairobi, had it not been eroded by Apartheid.

For artists like artist Ravi Govender, Bogosi Sekhukhuni, Simiso Zwane and Dineo Sheshe Bopape (to be discussed further, who participate in *Post African Futures*), television is fundamental to forms of communication that play out in their artistic practice. Govender states:

[There is] a strong not even verbal but maybe just a communicative culture because there are various ways of people expressing themselves, I think of dance as being a huge way of communication. I mean it is interesting, popular culture in South Africa is very different and it is uniquely different.

I feel these mediums for expression within these cultures have existed there for a long time, it is just with time things change and technology is obviously a big factor in that. (Govender: 16-17)

In all of their work, a similar role of communication in community is interrogated.

In the following section I look at its impact on cultural forms, but also follow a trail through how artists that were interviewed interrogate their work in relation to Johannesburg's position in a globalised information economy.

3.2.2.3 Digital, Commercial Culture, Poverty and New Aesthetics

Before continuing with the aesthetic responses discussed with respondents in the interviews, it is important for comparative purposes that I explain how different the Johannesburg art scene is to that of Nairobi. Unlike Nairobi, Johannesburg has a thriving contemporary art scene, with numerous private galleries, two art museums and two annual art fairs. This infrastructure is the consequence of a long tradition of Western art forms practiced under both colonial and Apartheid rule.

The Johannesburg Art Gallery, still active today, was built in 1915 under British rule. Furthermore as universities were established in this period, these included British styled art schools and academies for painting, sculpture and printmaking. At the time of British rule these serviced upper to middle class white South Africans. Black South Africans could legally access these institutions, but conditions favoured segregation and few black artists participated. Of those who persevered, like Ernest Mancoba and Gerard Sekoto, they were trained in the styles of European Modernism under the tutelage and mentorship of British artists and teachers. But while the styles of these artists were distinctly those of European Modernism, they did grapple with content that addressed white representations of black people and the concerns of black lives in South Africa at the time. Circumstances, however, were not ideal and most black artists developing their careers at this time left to pursue study and careers in Europe, and would remain there during the Apartheid regime (Rankin, 2011b).

With Afrikaner Nationalism grew a specific genre of art making that was representative of its ideologies. Community art workshops and print studios, mostly led by English white South Africans, were the only locations at which black artists with an inclination towards the arts could work. In the late '50s and '60s, many white South African artists, responding to a trend in primitivism and formalism, started to reference traditional African arts, but black South African artists were not encouraged to develop their cultural roots. Rather, African traditional culture for black South Africans was forced to remain the domain of women running homesteads, and within cultural groupings (Rankin, 2011a). This meant that the methodologies of African traditional cultural practice were not explored in art making at all. Art making was symbolic and representative in the fashion of European Modernism, rather than social, as it is in African traditional practices.

The strongly supported visual and contemporary art scene in Johannesburg, derives from a particular international and commercially driven Modern art tradition. It is only now that a younger generation of black artists and creative practitioners have begun to challenge the dominant role of the Westernised art forms in the City. This is the location at which we find groups like CUSS and artists like Bopape and Sekhukhuni, who though working through the gallery system, are exploring African culture in both its traditional and contemporary

forms. This is an attempt to construct a less elitist dialogue, and one that exists as a rich and more diverse cultural experience.

Their explorations of media in this, tends to go beyond TV towards the Internet, but played out in extremely different circumstances and different histories. On this Govender states:

[...] culturally it is a really strong aesthetic. I mean I have felt like there are number of situations where we are quite far ahead of the world, I mean there are very few cities or countries that have the kind of cultural diversity and integration issues that we have had. I think there is innovation based on necessity and there is a lot of necessity, especially on the levels that we reach or reference and I think that is essentially where a large amount of creativity comes from, it's from street level. (Govender interview: 10)

As mentioned previously, unlike Nairobi, the mobile and new communication technology sector in South Africa was predominantly oriented towards commerce and not social development. This is strongly reiterated by the respondents, all of whom took the view that mobile media companies were motivated by profit. Sekhukhuni says the following of his understanding:

I mean it's just like that relationship between the producer and consumer, is becoming more and more intertwined. (Sekhukhuni interview: 31)

Friend speaks about this from an industry perspective:

[...] mobile is obviously where it's going specifically for Africa [...] well it is a current land grab between the telecoms, so they are trying to think of ways to put people onto data and mobile especially with the aspirers. (Friend interview: 5)

[...] if you are talking in a communication space it's how can we get people addicted to mobile and data and data on mobile. (Friend interview: 7)

Friend uses the term 'aspirers', which is a term in the advertising industry used to refer to people that are low to middle income who aspire towards being technologically connected.

Lewis, who is lead strategist at Praekelt consulting, speaks comparatively about the Kenyan and South African mobile media scenes:

I mean that the obvious thing that comes to mind in is the digital divide in South Africa, which is obviously very pronounced. You know we still have a reasonable amount of people now have got broadband Internet and have a very, almost western culture experience, of accessing information and how easy that is. And we have all the way down to people who still have very basic mobile functions if they have phones, these can only access certain services by voice and text. So I guess that leaves the culture a little bit discordant. (Lewis interview: 7-8)

Lewis goes on to speak about South Africans' mobile habits:

So people do have this habit where they check their money before they phone, and check their money after they phone. I think that kind of thing, is a way that people sort of value stuff in society and how much they are willing to spend on different things, this consciousness of telecommunications is really important, but still something that lots of people still can't afford, easily at least. (Lewis interview: 15)

Neustetter states the following of the common 'please call me service' available through most service providers in South Africa:

[...] but the majority of these organisation are not philanthropic or for the better of the community approaches at the end of the day. Even MTN or Vodacom or whoever launches a campaign or whatever at the end of the day it's to get more users. So it's very difficult to separate it out, the 'please call me' service was always so fascinating for me because they launched 'please call me' because they knew the largest part of the population can't afford to actually call, but if they were given a free SMS they knew somebody else was going to make the call. So it's like this you know you are making a good gesture to tell them you've got free communication and you can send a free message, but essentially you know you're going to make

your money back. Number one, the advertising that you do through that message⁴⁶ and number two, through the call that's going to be made back [...] (Neustetter interview: 18)

This culture of commercialism is common in Johannesburg, which is the economic powerhouse of the country and the region. This is emphasised by the fact that respondents in the marketing and broadcast sector were mostly oblivious to or simply unaware of the artists engaging in critical creative practice around new communications. In the technology development sector the rhetorical split between culture and innovation came across particularly strongly. Interviews also showed that people in the tech development sector were even confused by the possibility of supporting either social justice or culture through the medium.

The economic focus in Johannesburg impacts its culture of technology, which in turn affects how people work together (as seen in the relational map) and furthermore allows large multinationals to dominate technological innovation.

While the *Post African Futures* exhibition focused on the critical creative practice of artists in Johannesburg, the impact of a commercial culture on young creatives (graphic designers, film makers, musicians, innovators, etc.) is all-encompassing. A recent online documentary titled *Reconnecting Pangeae: Culture* (Tlale, 2016) begins to show some of this impact. This is the first part of a documentary series published on *Bubblegum Club* (an online publishing site directed by Jamal Nxedlana and Lex Trickett who also from part of CUSS Group).⁴⁷ In the documentary, *Black Nation's* Andrew Simelane (Simelane, 2016) speaks about the role of new online publication as an important informal constructor of histories (timecode: 02:59). Simphiwe Mpye, former editor of black youth magazine: *YMag* now *YFM* (Pillay, 2016) and current editor of *Noted Man* (Mpye, 2016), expands on this by stating that the next frontier is in the realm of ownership and the question of who profits from that content, in both the short and the long term (timecode: 06:55).

⁴⁶ 'Please call me' messages are always followed by texts with marketing campaigns aimed at lower income users.

⁴⁷ See: <http://www.bubblegumclub.co.za/> (last accessed December 2016).

The documentary addresses how young creatives in Johannesburg, who are understood as cultural ‘influencers’, are being packaged for the benefit of big brands who are taking ownership of their cultural innovation. The worry, as stated by Mpye, is that the power dynamics in those relationships are overwhelming skewed towards the brands (timecode: 09:35). Mpye states that this then “makes the brand the tastemakers and validators of local culture” (timecode: 10:11), thereby not only taking ownership but diminishing its contribution to culture.

Reconnecting Pangeae, however, point at new collectives that are forming in the urban centre of Johannesburg. These aim to counteract the takeover of cultural innovation by brands and marketing campaigns. These collectives act to support each other by collectively offering corporate entities the visibility they require while at the same time offering support to the development of new projects disconnected from these brands – the latter falling into the categories of critical cultural production and maintaining the importance of black South African culture and creative practice. In South Africa these include: *Bubblegum Club*, *J&B Hive*, *Feminist Stokvel* and *Creative Nestlings*. All are loosely organised collectives of artists, film makers, designers, writers, etc., all working together to claim cultural production outside of commercialisation.

The commercialisation of culture has a larger impact on people in low income brackets. As mentioned by Friend, and Murphy and Carmody (2015), this group are seen as a new market with technological aspirations. CUSS Group and especially the artist Jamal Nxedlana are particularly sensitive to these concerns, and much of Nxedlana’s work explores and documents the street level cultures of townships. Govender refers to a practice called *Izikothane*, which Nxedlana has worked to engage and document⁴⁸ (Degree, 2012).

They are just trying to adapt and survive you know and I feel overly obsessed with image and glam. Like *Izikothane*, which are still rooted in a market that doesn’t really

⁴⁸ See Third Degree’s Part Two Report on *Izikothane*:
<https://www.youtube.com/watch?v=JbsnhbRM7P4> (last accessed December 2016).

have money. So it is a form of cultural expression and its performance. It is a highly-evolved state of performance, in cultural experience and aesthetic expression.

(Govender interview, 11)

Izikothane is a posturing performance made in public, on the street or at parties, that is synonymous with the street culture of townships. Izikothane are essentially competitive groups who will dress and perform in expensive branded clothing, the most popular being knock offs of flamboyant Italian designs that were popular in South Africa in 1990s. This performance, however, includes destroying these clothes, along with burning money and pouring Ultra Mel custard and expensive liquors on the floor. It is an excessive, challenging, almost criminal performance of implied wealth meant to evoke both envy and horror in the onlookers. Izikothane was spawned by the extreme divides particular to these urban areas. The performances are an exhilarating performative subversion of aspirational thinking that affects low income groups. Govender states:

It is a strong visual language and I feel like this is why these things interest us because the visual language is strong always and I feel like it is not as strong in the actual art scene. (Govender interview, 11-12)

Govender celebrates Izikothane and other forms of popular culture prevalent in Johannesburg, identifying them as richer and more interesting than 'bought' cultures.

Govender goes on to show how this type of popular street culture begins to intersect with communication technology. As these cultures are documented and shared between individuals:

[E]xactly the pastor Chris kind of situation and it is a very viral kind of form of communication as well on the street level. The way that they have accessed technology and have gotten their voices out is interesting because it is largely due to video. (Govender interview: 20)

The quality of this video is generally low, mostly due to the fact that there is little access to fast Internet and data is expensive. As a mechanism to engage with and reference this form

of cultural production, CUSS Group intentionally use a low-fi aesthetic in their work.

Govender states:

So I mean low-fi technology and recreation of technology and malfunctioning of technology was always something that we fooled around with in terms of the actual cameras we used to shoot. Sometimes this would be one mega pixel kind of thing. Like the deconstruction of the images actually [was really important]. Also with regard to some of our works, like Jamal did on Isikothane for the Joburg webisode and I did some work for the first Durban webisode. Those cultures communicate mainly via cell phone and that is a very important thing about South African culture that we access. You know they do not have access to their own PC's or laptops so it is cell phone, dot mobi sites and Bluetooth as a form of exchanging and file sharing. (Govender interview: 4)

Govender goes on to state how these references are a truer reflection of the socio-political situation of South Africa, stating: "it has reference to real life and I think that is important when it comes to [engaging] these mass aesthetics" (Govender interview: 4). The work of CUSS Group is reflective of the media environment in Johannesburg. Not only in referencing street level cultures, but also in giving a more accurate view of contexts.

Bogosi Sekhukhuni's work also acts to reference Johannesburg's urban culture. Though Sekhukhuni works very differently to CUSS there is a similarity in the direction of focus. Sekhukhuni states however that he is interested in popular culture as a shifting mechanism and how his own work can reflect how culture in Johannesburg is enacted. He states the following when speaking about work in development:

[...] the mode of like expression is taken from this idea of catering events, really elaborate catering events and because it's, I guess the whole conversation is just this idea of evidence of aspirational thinking that you see in a consumer culture, that are quite likely linked to when black South Africa like post 1994 communities and catering events. I actually see them as quite a big symbol of aspirational living, if you look at how a lot of catering companies how they present, the different kinds of themed events, like Mediterranean themes, you get Medieval themes, you have all these like genuine, elaborate or decadent type of, nostalgic, historical like things, but

I think that says a lot about, you know, what people are aspiring to as well, and you know for a family to go all out for a child's twenty-first or a wedding, it's, that is part of that conversation. That is what we communicated to the community, the whole obsession with like royalty and things like that, so that is like the basic premise. (Sekhukhuni interview: 3-4)

In the work Sekhukhuni produced an excessive and ornate environment in which to present various video and digital works that also reflect this type of culture. Sekhukhuni goes on to state:

[...] the early years of democracy, I was really interested in the attitudes popularly expressed at the time, and also just like having always heard conversations and heard stories with my mother about like those few years, and although it was an interesting contrast with where we are now, this kind of really ultra, optimistic, almost like devotional optimism that existed, and what we have now, I guess. You know in reflection to this idea of the rainbow nation and what that means. So it became as that kind of conversation, then I started drawing links with what I started thinking about with the Internet, the nature of the Internet and also this idea of national consciousness, and the cultural expressions of national consciousness and it was a way for me to sort of structure these differences. (Sekhukhuni interview: 5-6)

As may be clear Sekhukhuni is perhaps the youngest respondent I interviewed in Johannesburg. And much of his work is an attempt to unravel the present as a mechanism to understand the past.

Sekhukhuni spoke of two more works in the interview, titled *DNA Copy* and *Cyborg Father*. Both are digital video works that heavily reference Internet culture against his experience of being South African. *Cyborg Father* is a complex and very personal work in which Sekhukhuni explores a fictional cyborgian relationship with his father. Sekhukhuni's father was not present when he was growing up and made contact with him briefly and strangely through Facebook when he was older. Sekhukhuni takes this experience and explores it in the realm of artificial intelligence. He states:

The one narrative is based on my father, the other one based on Bogosi Bot... it's a father chat box to talk to or whatever, but yes, so it's just that whole conversation about guessing you know, I am those possibilities? (Sekhukhuni interview: 39-40)

The work begins to address questions of origins and the influence on science and technology. Sekhukhuni's interrogations are largely about identity for young black South Africans and how they identify in a globalised information society.

Not all the artists interviewed were working within this frame between popular culture and identification. Dineo Sheshe Bopape works with digital video as a medium of transcendence. Her work is usually made up of installation and digital video, not unlike Sekhukhuni, but her work explores the tension between screen and the body. In this the surface of the screen becomes a membrane between a symbolic transcendent spiritual space just on the other side of screen versus the real world on this side of the screen. It is a membrane to the spiritual through which Bopape unpacks a deep-seated exploration of spirituality within a contemporary world. Her work "is I am sky" is explored further in the next chapter on the *Post African Futures* exhibition.

Johannesburg's culture of technology is clearly strongly associated with the histories of media and television in Johannesburg. The link to mobile and Internet use, while not distinctly innovative in the ICT4D sense, is an extension of this difficult and commercially orientated history. Artists and cultural practitioners interviewed were all critically aware of its effect on society. Each in their own way, are formed in their approaches by this culture. All are attempting to link back to a larger cultural engagement that this culture of technology has the potential to overwrite. In this there is a level of healing in the attempt to mend a broken past, to give agency to communities that don't have it and to offer a critical approach to the potential of globalised information economies to maintain the concerns of the past.

3.3 Shared Trends, Actional Methodologies and Misplaced Afro-Futurism

The content analysis of the fieldwork outcomes allows for a comparison to be made between Nairobi's and Johannesburg's cultures of technology. Based on what has just been presented, the two cities are clearly different and their differences are clearly founded on their respective socio-economic and political pasts. These histories, as I have shown, have placed each city on a particular trajectory that is unique to its culture of technology. The value in this comparison is that it identifies each as distinct and contextual, with its own very particular contemporary concerns. Additionally this distinctiveness allows some insight into what I have been calling *African Cultures of Technology*. *African Cultures of Technology* is thereby a framework that implies that each region of Africa will have its own culture of technology, but as a grouping on the continent (and as I have shown through the fieldwork) these are all bound by a history of colonialism and thereby subject to a coloniality of power. In the following I unpack and compare the key themes of Nairobi's and Johannesburg's cultures of technology and address how particular mechanisms are engaged to interrogate and engage with this coloniality of power.

As is clear, key themes exist that are distinct to each city. These themes I have identified are trend based, as I have focused on themes that proliferated with the sample. In Nairobi, what stood out was the role and importance of community communications structures. This theme in Nairobi not only reflected how the role of new and communications technologies were understood, but furthermore in how they *could be* developed to support Kenyan culture against a backdrop of internationalising ICT and ICT4D initiatives. In extension, what was present in Nairobi was a trend for the return to pre-colonial mythologies and knowledges. This return emphasised community orientated and culturally responsive mechanisms that aligned to African ontologies. With this came an interrogation of what Euro-American systems were not able to do, particularly in meeting the needs of marginal groups and a communal orientation in culture.

In Nairobi the position of a middle-class youth and their role in shifting the culture of technology came into view as a consequence. This group was identified as a group of

individuals who stand at the border between a globalised information economy and traditional and communal cultures. The immense responsibility they hold to both contain and potentially transform their culture of technology was made very clear, and that this would require sensitive cultural innovation. The mechanism of which would be paramount to how successfully the ideals of Kenyan culture could be maintained against and within a globalised information economy and society.

In Johannesburg the prominent focus on television was an important trend that developed an understanding of Johannesburg's history of media coloniality and thereby its culture of technology. This trend revealed a theme of cultural commercialisation; a commercialisation against which its rich urban cultures battle as if wrestling with an enormous and strange python. The culture of technology in Johannesburg is one that is in the hands of neither cultural practitioners nor a middle-class youth. Johannesburg's culture of technology is in the hands of industries that own and maintain communications. Its forms of innovation are therefore formally linked to globalised capitalism. Yet its culture of technology raises a new theme for Johannesburg, and that is of cultural disobedience, in the form of evolving of groups and collectives of artists and cultural practitioners designed to weigh against cultural commercialisation and the ownership of technology innovation within multinationals. These groups have needed to act as conglomerates in their own right, to shift ideologies of roles within Johannesburg.

In both cities, particular mechanisms are performed in response to unique cultures of technology. In Johannesburg this is fundamentally more critical, acting to challenge and disobey in sophisticated ways. In Nairobi, the mechanisms are extensions of existing community forms; making community engagement more prevalent through its culture of technology. It is clear that both employ these mechanisms in an attempt to shift the impact of a globalised information economy.

The principle findings of the fieldwork that go on to inform *Post African Futures* are these mechanisms and their contextual histories. These contextual histories reiterate the importance of the golden thread of context specificity. These mechanisms highlight the presence and importance of critical engagements played out in actional ways. In

Johannesburg I saw them enacted at the precarious meeting point of art and popular cultural practices, interrogating technology and communications. Johannesburg's mechanisms drew heavily on both a culture of intellectualisation and the rich visual and musical cultures of urban Johannesburg. The latter allowing these performed critiques in support of community development, as the positions on the periphery of communities were identified as more challenging, interesting and fertile.

In Nairobi the mechanisms used focused on engaging communities in inclusionary and participatory actions. These mechanisms, performed by different cultural practitioners, generally acted to support and encourage participation towards transformation or mobilisation. In this manner, community development was central to both the actions and their outcomes.

Post African Futures going forward therefore attempts to identify these mechanisms as a decoloniality directed at neoliberalism being advanced by the conduit of technology, much like Collier's (2011) identification of a 'scientific colonialism' around the Chokwe in the first chapter (pages 27 to 29).

Before continuing it is important that I full address Afro-Futurism, as its critique in an African context forms part of what *Post African Futures* is. At the start of the fieldwork process, there was an assumption from many that I engaged that because I was addressing African cultures and technology I was investigating Afro-Futurism. This was intriguing to me and I spent a little time uncovering why this association was being made. What became clear was that Afro-Futurism, as an African America and British African / Caribbean movement, was being used as a convenient label by the Euro-American contemporary art and music scene for any creative work from Africa that engaged the technological. I saw that this 'tagging' came from Euro-American curators' attempts at finding simpler ways of framing cultural practice from Africa that dealt with technology. The consequence was that the works (and artists) labelled Afro-Futurist became reduced and unlinked from the real criticism and concerns of the context in which they were made.

I found there to be a fair amount of frustration by regional artists and cultural practitioners that this label was being imposed on them. This label furthermore meant that the different mechanisms engaged by these artists were framed as only Afro-Futurist and therefore became disconnected from the mechanisms of regional cultures. In response I began to actively comment on this misplaced use of Afro-Futurism. I was subsequently invited to write a number of papers on what Afro-Futurism is and is not for Africa. Most of this thinking is most succinctly produced in an essay for book produced alongside an exhibition *The Shadows Took Shape* (T. Bristow, 2013b) at the Harlem Studio Museum (in the USA), which dealt with Afro-Futurism and its contemporary influences. In this I wrote:

[Afro-Futurism is] an escape from the externally imposed definition of what it means to be black (or exotically African) in Western culture, and a cultural rebellion drawing on technoculture, turntables and remixes as technological and instrumental forms. By placing the black man in space, out of the reach of racist stereotypes, Afro-Futurism allows for a critique of both the history of the West and its technoculture. (81)

Afro-Futurism engages what it means to be black in *Western culture* and not what it means to be black in African culture; this was the primary concern of artists and cultural practitioners in the regions I was exploring. They all felt that Afro-Futurism, while interesting as a form that responds to a white hegemony, could not contain the contextual concerns of working in Africa. Additionally Afro-Futurism did not contain an actual critique of the technology engaged, rather technology was used as a mechanistic conduit to speculative alternatives.

A 2012 exhibition at the Arnolfini Gallery in Bristol in the UK titled: *SuperPower: Africa in Science Fiction*, acted to bring attention to the fact that the Euro-American obsession with African science fiction and labelling creative and cultural work that engaged technology as Afro-Futurist was driven largely by a fear of its own decline. The exhibition catalogue states:

Superpower: Africa in Science Fiction surveys the recent tendency for artists and filmmakers to apply the forms and concerns of science fiction to narratives situated in the African continent. [...]

Africa has had a rare yet distinct place in popular science-fiction, from the opening scenes of Stanley Kubrick's iconic *2001: A Space Odyssey*, depicting the mysterious appearance of a black monolith in the cradle of civilization, to the recent success of Neill Blomkamp's debut movie *District 9*, a multi-layered allegory on South Africa's recent internal and external tensions. Imagining a new space-time to the typical "third worldist" representations of the African continent, caught in a perpetual state of crisis, the works in *Superpower* project an alternative landscape of possibilities. (Gallery, 2012, n.p.)

The exhibition explored the fragility that exists around the failure of the Western world's technological utopia and attempted to understand the consequence of a European decline by looking at Africa. *Superpower*, while one of the more honest framings of a Euro-American position on Africa, does show the unfortunate consequences of looking at the world through one's own navel.

In extension of the frustration of artists and practitioners from regions in Africa being labelled Afro-Futurist, I began to see that the mechanism and actions I had encountered with artists and cultural practitioners in the fieldwork could not be compared to how technology was being addressed as a mechanistic conduit to speculative alternatives in Afro-Futurism. It was through this that I began to make a distinction between aesthetic mechanisms and actional methodologies. Afro-Futurism's engagement with technology, for me, fell into an aesthetic mechanism: in using technology as a speculative conduit. And while there were certainly aesthetic mechanisms in some of the practice from the fieldwork, seen in crossovers such as the use of music and popular culture, what was identified in the fieldwork was not the same. The mechanism and actions identified in the fieldwork engaged an epistemic difference, and acted to counter it in actional ways.

In my research I found only a few instances of African artists referencing Afro-Futurism and engaging Afro-Futurist mechanisms. One of these was musician Spoek Mathambo, on whom I wrote in the article for the *Shadows Took Shape*:

South African DJ and music producer Spoek (pronounced “spook”) Mathambo has declared, “South Africa is such a complex cultural space, and I’m not really sure ever where I fit into it”. Mathambo’s performance persona is based on a character from a 1980s South African television horror series. He states that this imagined form represents an attempt to identify a unified hybridity of self. He grew up surrounded by various styles and genres of music, a global mash-up of forms. Using the semi-science fiction horror narrative or “horror tactics”, as he puts it, Mathambo is able to break away from a stereotypical understanding of what it means to be a black South African. He creates carefully, and with a good balance of irony and seriousness, the possibility of a cultural engagement that looks past the Apartheid struggle and the political traditionalism to which many South Africans are culturally tied. However, his engagement is not a dismissal of African cultural forms, but a contemporary reimagining of the culture as it stands. (86-87)

Mathambo’s is an attempt to claim an identity outside of stereotypical norms of what it may mean, from a global perspective, to be a black South African. Mathambo thereby employs Afro-Futurist aesthetics in his characterisation and performances, in which he builds a hybridity of African and horror fantasy forms to shift stereotypical frameworks.

There was a point in the research at which I attempted to define the practice I was identifying in fieldwork as an African alternative of Afro-Futurism. I borrowed the term ‘African Futures’ which was defined by Pamela Phatsimo Sunstrum in her paper “Afro-mythology and African Futurism: The Politics of Imagining and Methodologies for Contemporary Creative Research Practices” (Phatsimo Sunstrum). Phatsimo Sunstrum’s ‘African Futures’ was, however, an exploration of Afro-Futurist methodologies with a focus on African mythologies and in contemporary African ways of being. Of which I wrote, in extension of Mthambo’s practice:

These artists engaging in African Futurism present it not only as a way to move past Western notions of a dystopian Africa, but as a critical take on the traditions and politics of a continent with a desperate need to encounter its contemporary self. In the words of Phatsimo Sunstrum, “It means neither staying in the box, nor thinking outside of the box, nor yelling at the box, but transcending the box entirely”. (87)

So while Phatsimo Sunstrum's African Futures did begin offering an alternative to the popular and misplaced use of Afro-Futurism, it did not reflect the direct critiques and contextualisation I was finding in the fieldwork.

Returning to the outcomes of the fieldwork, the mechanisms and actions that were being played out can be understood, from Mbembe's and Mudimbe's perspectives, as insurrectionary knowledge. In them exists a disobedience of sorts (more pronounced in some areas), which actively engages disenfranchised histories and peoples in an attempt to shift the future of new technologies and its systems. These are actional methodologies that not only serve decoloniality, but also perform African forms. Actional methodologies and their roles became more pronounced as I went forward with *Post African Futures* and sought responses: intellectual, creative and cultural responses that went beyond the findings encountered in both Johannesburg's and Nairobi's cultures of technology.

Chapter 4

indlela ibuzwa kwabaphambili

Zulu proverb. Translation: A way forward is asked from those who have travelled down the road.

4.1 Introduction: A Guide to Actional Methodologies in Post African Futures

Apart from acting as a position on knowledge, decolonial theory plays a number of important roles in framing history. As mentioned in the introduction to the thesis, decoloniality is referred to by Nelson Maldonado-Torres (2011) as the “decolonial turn”, he states:

Different from these other turns, however, the decolonial turn has long existed in different ways, opposing what could be called the colonizing turn in Western thought, by what I mean the paradigm of discovery and newness that also included the gradual propagation of capitalism, racism, the modern/gender system, and the naturalization of the death ethics of war. [... the] premise or fundamental hypothesis is that the decolonial turn is anchored in specific forms of scepticism and epistemic attitudes out of which certain critical questions and the search for answers are generated. [...] Arguably, because of its emancipatory goals and its suspension of method, the decolonial turn cannot be fully contained in single units of study, or captured within the standard division of labour between disciplines or areas in the traditional arts and sciences. What is at stake is the larger task of the very decolonization of knowledge, power, and being... (1)

Maldonado-Torres goes on to state:

Anti-colonial and decolonial political, intellectual, and artistic expressions existed before, but not necessarily in the same amount, or with the same degree of self-awareness and regional and global exchanges as in the twentieth-century, when one can refer to an increasingly self-conscious and coalitional effort to understanding decolonization, and not simply modernity, as an unfinished project. (2)

In this manner, I engage decoloniality to support an understanding of what was found through the fieldwork and how practices in the field could be explored further as actional methodologies.

Linda Tuhiwai Smith outlines agendas for decoloniality. These, I remind you, are: healing, transformation and mobilisation. We additionally see from Tuhiwai Smith that decolonising methodologies are actional; they engage actions towards self-determination. From the fieldwork it is clear that similar actions are engaged by cultural practitioners in their creative and community engagements. The artists and cultural practitioners from the fieldwork and those engaged in the *Post African Futures* exhibition engage, culturally, actional decolonising methodologies. The following locates my use of *actional methodology* in extension of Walter Mignolo's *border thinking, disobedience and imagining* (Mignolo, 2012) as means to support its understanding.

4.1.1 Mignolo on Border Thinking, Disobedience and Imagining

Semiotician Walter Mignolo in *Local Histories/Global Designs: Coloniality, Subaltern Knowledges* (Mignolo, 2012), in presenting histories leading to decolonial theory, proposes what he calls *border thinking*. This he describes as an epistemological boundary that can be used to engage decolonial thinking and doing. Mignolo's border thinking and how it acts decolonially, is an important influence in how I have come to understand and explain the role of actional methodologies. Actional methodologies like border thinking, are used to both interrogate what is at the border and apply an epistemological shift.

As we have seen, decoloniality has less to do with coloniality and post-colonialism than it does with the liberation of knowledge. Mignolo (2012), when establishing a place for alternate forms of knowledge, uses the Greek term *gnosis* rather than *knowledge*. Mignolo indicates that *gnosis* allows for a distinction from epistemology and hermeneutics that have come to play their own role in the split between the foundations of science and the humanities (9). Mignolo addresses the point at which epistemology took over from *gnoseology*, the point at which knowledge, rigid epistemic borders and territorial frontiers, had as yet not been established in building the modern world. He states "this is not a new form of syncretism to hybridity, but an intense battlefield in the long history of colonial subalternization of knowledge and legitimation of the colonial difference" (12). Colonial difference describes not an implied dependency on Western knowledge, but a separation in knowledge. In Mignolo's structural history he importantly puts modernity together with

coloniality, referring to the period as *coloniality/modernity*, a single term. Through this he highlights the fact that modernity viewed from the perspective of the colonised is really only seen as colonialism. The entire period of modernity, the intellectual development that took place in Europe and its extension in North America, did not have an equivalent in Africa (or South America), and it was in this that the colonial difference was established.

The use of *gnosis* as a separation and reframing of knowledge was also previously employed by Valentin Y. Mudimbe, in his book *The Invention of Africa: Gnosis, Philosophy and the Order of Knowledge* (Mudimbe, 1988) and it is from here that Mignolo garners its use. *The Invention of Africa* is an important book, developed as a commission to write a history of philosophy for Africa, a text that is foundational to decoloniality and is the first to identify the validity of insurrectionary knowledge. Of it, Mignolo writes:

Mudimbe states the discomfort he found himself in when he had to survey the history of philosophy as a disciplined kind of practice imposed by colonialism and, at the time, to deal with the undisciplined forms of knowledge that were reduced to subaltern knowledge by colonial disciplined knowing practices called philosophy and related to epistemology. The “African traditional system of thought” was opposed to “philosophy” as the traditional was opposed to the modern: philosophy become, in other words, a tool for subalternizing forms of knowledge beyond its disciplined boundaries. Mudimbe introduces the word *gnosis* to capture a wide range of forms of knowledge that “philosophy” and “epistemology” contribute to cast away. To seize the complexity of knowledge about Africa, by those who lived there for centuries and by those who went to Westernise it, [...] underlying at the same time the crucial relevance of “African traditional systems of thought” needed to conceptualise knowledge production between two cultures. (2012: 10)

Mudimbe celebrates different forms of knowledge and attempts to identify forms unique to the continent, both as a mechanism to restructure knowledge outside of the colonial difference and as a mechanism to recover from it. In Mudimbe’s identification of an “African traditional system of thought” and the emphasis on the use of ‘traditional system’, points to the fact that African knowledge during *coloniality/modernity*, could only be held within the

cultural and traditional. These forms became the only conduit for African knowledge and are therefore, as has been shown via decolonising methodologies, significant sites.

When we understand knowledge from this position, from the subaltern view, Eurocentrism and Western knowledge is understood as a global design. Mignolo differentiates from pluralistic hermeneutics, in stating that colonial semiosis identifies moments of tension between either two local histories and knowledges, or those local histories that are “forced to accommodate themselves in the new realities” (2012: 17). And in negotiating these tensions he states that pluralistic hermeneutics cannot resolve these conflicts of description for either one side of the epistemological divide. And it is here where Mignolo evolves this thinking to include ‘border thinking’, thereby addressing the consequence of a pluralistic engagement in a) looking at the spaces in between and b) in producing knowledge from these spaces.

For border thinking, Mignolo borrows and develops on Gloria Anzaldúa’s *Borderlands/La Frontera: The New Mestiza* (Anzaldúa, 2007), which explores institutional spaces that engage non Western audiences, languages and experiences, and therefore inhabit in-between spaces. The notion of border thinking is thereby consistent with understanding African traditional systems present in new technologies, as they stand today. In *Geopolitics of Sensing and Knowing On Decoloniality, Border Thinking and Epistemic Disobedience* (Mignolo, 2011), Mignolo writes:

Because decoloniality’s point of origination was the Third World, in its diversity of local histories and different times and Western imperial countries that first interfered with those local histories – be it in Tawantinsuyu in the sixteenth century, China in the nineteenth century or Iraq from the beginning of the twentieth (France and England) to the beginning of the twenty-first century (the US) – border thinking is the epistemic singularity of any decolonial project. Why? Because border epistemology is the epistemology of the *anthropoi*, who do not want to submit to *humanitas*, but at the same time cannot avoid it. Decoloniality and border thinking/sensing/doing are then strictly interconnected since decoloniality couldn’t be Cartesian or Marxian. (2011: Online)

In *Local Histories/Global Designs* (Mignolo, 2012), Mignolo explains that the engagement is not one of conflict or of fixing an imagined fissure and neither is it one of territorial epistemologies. Mignolo writes:

The goal is to erase the distinction between the knower and the known, between a “hybrid” object (the known) and a “pure” disciplinary or interdisciplinary subject (the knower), uncontaminated by the border matters he or she describes. To change the terms of the conversation it is necessary to overcome the distinction between subject and object, on the one hand, and between epistemology and hermeneutics on the other. Border thinking should be the space in which this new logic could be thought out. (2012: 18)

I therefore explore through actional methodologies, an understanding of technology from the perspective of border thinking and subaltern logic. When viewed from the perspective of border thinking and African traditional systems, technology does not act to represent Western culture (however much this is desired for continued dependency), but rather is a system acting as a structural conduit for Western culture.

In the actions of the cultural practitioners in the fieldwork I saw attempts at negotiating technology from this perspective. Engaging technology as a structural conduit and not as content. This has resonance with how Mignolo describes the origins of border thinking:

The bodies that thought independent thoughts and independence from economic dependency, were bodies who wrote in modern/colonial languages. For that reason, they needed to create categories of thought that were not derived from European political theory and economy. They needed to delink and to think within the borders they were inhabiting – not borders of nation-states, but borders of the modern/colonial world, epistemic and ontological borders [...]. We, the *anthropoi*, who dwell and think in the borders with decolonial awareness, are already on the way to delinking, and in order to delink, you need to be epistemically disobedient. (Mignolo, 2011)

The different engagements with technology by the respondents in their different cultures of technology are in effect similar to what Mignolo describes. Here, however, there is a delinking from technology as a Western system. The actional methodologies furthermore engage a form of disobedience towards these systems, particularly when addresses in their design as a conduit for neoliberal capitalism in a globalised information economy.

This disobedience includes a disobedience of innovation. Innovation in Africa, as seen previously, has become a contested space. Innovation as it is enacted in these regions, in its purest form, is in fact a border thinking and a disobedience. Innovation towards survival, of both peoples and cultures, changes the status quo and makes technologies more contextual. Corporations with an interest in developing Africa as a technology market have begun however to see innovation as a promising commodity and therefore find ways not only to own it, but also to drive innovation for market development. This drive subsequently destroys the initial role of innovation as a form of border thinking. A direct example is given by Kenyan writers and influencers Mutua,⁴⁹ who take a critical view of *vulture economies* (as they are called in Nairobi) developed by multinational corporations (from the US, China and Europe) in their need to claim innovation in Africa. Mutua and Mbwana's call against vulture economies is an attempt to protect African developers and start-up's. It is for this reason that cultural innovation (dare I call it that) around technology is potentially the last outpost of effective disobedience and thereby a location for the mechanisms of border thinking.

On colonial difference, Mignolo goes on to refer to it as the "classification of the planet in the modern/colonial imaginary" (13) (Mignolo 2011). In this he refers to the "imaginary of the Atlantic commercial circuit", which he states "is romanticised in the discourse of neoliberalism as a new civilising project driven by the market and the transnational corporations" (24). He thus identifies globalisation as part of this 'imaginary'. Mignolo's notion of an imagined world state consequently gives a good deal of agency to new forms, particularly the challenges to the structural aspects of technology. Technology is after all an imagined state and calls for manifestations of the imagination.

⁴⁹ Mutua and Alliy Mbwana in *Innovative Africa: The New Face of Africa* (Mutua & Alliy, 2014).

The shifting of an imagined state of technology is not, however, a task that can be performed without a radical repositioning of the imagined state of the world. So while the precept of decoloniality is that globalisation as an imagined and economic project is an extension of the coloniality of power, for Mignolo this has allowed the “emergence of forms of knowledge that have been subalternized for the past five hundred years under global designs” (Mignolo, 2012) (22). And yet decoloniality still lacks a clear interrogation of Mudimbe’s “African traditional systems of thought” from the perspective of colonial subjects.

It is certainly, as seen in *African cultures of technology*, the meeting of the imagined state of technology and “African traditional systems of thought” that the respondents are predominantly concerned with. Representation has long proven to be difficult and subjective, particularly for Africa, and the shift towards a systemic view allows representation (in part) to be bypassed. It is at the border territory of systems and conduits, that actional methodologies are successful in shifting and re-imagining.

Mignolo writes:

Although border thinking requires dwelling at the border, dwelling in the border is a necessary but not a sufficient condition to engage in border thinking. To engage border thinking requires engaging in conscientious epistemic, ethical, and aesthetical political projects. (2011: xvi-xvii)

He states that this first requires delinking hegemonic epistemology and second, engaging in relational ontologies when it comes to defining world truths. He goes on to say:

The main thrust of border thinking is not aimed at “improving” the disciplines but towards “using” the disciplines beyond the disciplines themselves, aiming and building a world without modernity / coloniality. Border thinking is actional. What types of knowledge do decolonial thinkers want? We want knowledge that contributes to eliminating coloniality and improves living conditions on the planet. (xvii)

It is clear that border thinking within decoloniality is not an attempted return to a previous world state (as may be implied by delinking), and neither is it an attempt at a modernisation; it is an epistemic awakening to what is already taking place and continues to develop the world.

This epistemic awakening in regions studied and within culture and technology; interrogates the geopolitics of knowledge and an understanding of what is 'beneficial' development. An 'epistemic' awaking at this location is therefore conducted at the coal face of these concerns and within a situation that is unbalanced in resources and under threat of ownership. Actional methodologies engage new and communications technologies to transform the imagined state of technology and the imagined state of the world. In this, new imaginings are constructed where Western imaginings are challenged.

4.2 Post African Futures

In the following I present the development of *Post African Futures* both as a position and a framework. *Post African Futures* holds in it not only the histories and contextualisation of culture and technology in the regions studied, but also the responses from a community of practitioners. From the perspective of border thinking, the focus is the border between culture and technology, which is expanded through *African Cultures of Technology* to the border between the African Knowledge and Westernised technologies. By exploring actional methodologies with a community of practitioners I move the engagement of this thesis from what Mbembe calls *subaltern* or *vernacular* knowledge towards *insurrectionary* knowledge.

This section is divided into two parts. The first explores the outcomes of the panel on *Post African Futures* at the Fak'ugesi Digital Africa Conference held in late 2014. The second section is a close look at the *Post African Futures* exhibition. *Post African Futures*, through the actions of the exhibition, is in itself actional.

4.2.1 Post African Futures at the Fak'ugesi Conference

As presented in the second chapter, which outlines the methods of this research, the Fak'ugesi conference was organised by me and hosted both the Planetary Collegium and academics from Southern Africa to explore the digital and technological in contemporary culture.

In the resulting editorial of the special issue of the *Technoetic Arts: Journal of Speculative Research* (T. Bristow, 2015). In the following I will refer to the editorial text as a guide to highlighting the contributions of the papers. These were important in helping affirm a focus on actional methodologies. The *Post African Futures* panel consisted of twelve papers; these were presented predominately by South African researchers and artists. In the following, I explore nine of these, highlighting their contributions.

Zoe Whitley's article, "Today and Yesterday, forever: Negotiating time and space in the art of Mame-Diarra and Dineo Seshe Bopape" (175) is on the work of South African artist Dineo Seshee Bopape and Senegalese artist Mame-Diarra Niang. The article is written from

the perspective of a contemporary art curator and invites us to look at the role of performance and installation beyond what is understood in Euro-America to be contemporary African and new media art practice. Whitley identifies a number of instances but particularly what she calls “time outside of time”, addressing time as simultaneously past, present and future in African new media work. She frames this idea using Derrida’s ‘hauntology’, but makes a case for specifically ‘black hauntology’ that is associated to geography and ritual place.

Whitley’s first case is Mame-Diarra Niang’s *Éthéré*, performed at Dak’Art⁵⁰ in 2014, which Whitley describes as:

[...] a funeral without a corpse, an elegy to a young Muslim man suspected of being queer whose body was hatefully disinterred. As the artist explained: “They dug up his body from the cemetery, dragged it to his parents’ house and left his corpse on their door step. The parents had to bury him in their own backyard. Even in death we are not seen as human beings” (Whitley, 2015: 176).

Niang’s performance was a recreation of this backyard burial that uses the demarcation of a grave as a demarcation of space and time.

The second case is by Dineo Sheshe Bopape (Bopape was a respondent in my fieldwork and participated in the *Post African Futures* exhibition). The work *but that is not the important part of the story* (2013-2014), draws on references including slave rebellion and Shembe religious rites (Whitley, 2015: 179). Whitley states of Bopape:

Her artwork frequently incorporates technological elements such as mobile phones, projectors, television sets and flat screens. The artist conceives of time and space through acts of simultaneity and synchronicity, collapsing the past and future into the present.

[...] Bopape negotiates, ruptures and creates spaces beyond the visual through her explorations of realms aural, digital, political, social, imagined and remembered.
(181)

⁵⁰ Dakar Biennial

Whitley goes on to quote Bopape from Bopape's website:

I wish I could take it outside... and leave it there, to be torn by the wind, and the rain and some sun... but it would not easily disintegrate none of the parts except for the wood is bio degradable... oh I doubt the wood is bio-d... it is painted white... and I have the perfect place/setting for it... the rural landscape of gamatlala in polokwane, south Africa / I keep thinking alot [sic] about the shembe people's aesthetics... the white painted rocks used in both urban and rural areas... but most especially in the urban areas, to temporarily demarcate a space that would function as a spiritual zone... a temporary church... an ephemeral space, bubble... arena – within which that spiritual event/activity is to take place... (Whitley, 2015: 181)

Through these works Whitley begins to discuss this idea of demarcating a space, as Bopape states, an “arena – within which that spiritual even/activity can take place” (Whitley, 2015: 181). Whitley uses this to address the negotiated digital space; found directly in Bopape's work and indirectly as geo-specific metaphor in Naing's, as a spatial dimensions of an uninhabited space that allows for a performative engagement of what it means to be in some spaces as black or homosexual. Of being out of time and out of place, as per Derrida's hauntology. Whitley's paper highlights how technology is used as a metaphor to step out of an epistemic form.

As Whitley's curatorial background is founded within Afro-Futurism, I see an iteration of Afro-Futurist aesthetic methodologies at play within her discussion. It is important to note that actional methodologies within decoloniality are not metaphorical or speculative in the same way as Afro-Futurist methodologies. There is a split in intentionality between the two; actional methodologies act to transform and mobilise.

In the editorial I follow Whitley's paper by pointing to two papers on Johannesburg based Internet Art practice. Tabita Rezaire is a Danish-Guyanese artist-filmmaker and video curator now based in Johannesburg. In Rezaire's words, the article “Afro Cyber Resistance: South African Internet Art” addresses “Internet art practices in South Africa as a manifestation of cultural dissent towards western hegemony online” (Rezaire: 185).

Rezaire, who went on to participate in the *Post African Futures* exhibition, presented her paper as a video artwork that can be viewed under the title *Afro Cyber Resistance* (<http://tabitarezaire.com/rza.html>, last accessed December 2016). Rezaire's video work of the paper is an Internet artwork in its own right. A work that begins to challenge preconceived notions of the Internet in Africa by addressing how fellow artists engage the online space.

In the paper Rezaire explores the Internet and online spaces as colonised spaces, led by what she describes as a “tangible occidental hegemony” (188). She presents the Internet as space dominated by Euro-American content, where African concerns are considered secondary. She points (one of many cases) to Wiki Africa,⁵¹ which was produced as an alternative to Wikipedia, as Wikipedia was not supporting African content due to their citation policy and much of the content being produced from Africa was not cited in more than three locations.

Rezaire goes on to address the work of Bogosi Sekhukhuni and CUSS Group. For Sekhukhuni, Rezaire explores a new work (at the time) titled *Virus SS 16* (2014) which was produced on NewHive.⁵² *Virus SS 16* is an exploration of the media portrayal of the Ebola outbreak in West Africa in 2014. Of this, Rezaire states:

As ebola.com just got sold for \$200,000 to the Russian company Weed Growth Fund, 4,941 deaths have been reported so far and the virus continues to spread, with no real measure in place to prevent this plague. Meanwhile, the world fears the black body more so than it previously did, and racist statements, articles and propaganda are spawning and openly disseminated to and from all possible medias, from social networks, newspapers, TV or viral memes. Everyday my Facebook feed is filled with bad (racist and derogatory) jokes about Ebola, from a Coca-Cola-like ad, 'Enjoy Ebola' to 'Sexy Ebola nurse outfit for sale' or articles coming up with the most absurd comments about the outbreak. Sometimes censorship should be allowed. The

⁵¹ <http://www.wikiafrica.net/> (last accessed December 2016).

⁵² <https://newhive.com/b/>, a UI online content creation space that allows user to construct visual and video collages by dropping and dragging content (last accessed December 2016).

Western paranoia concerning Ebola is as frightening as it is ridiculous. The writer Maryn McKenna coined the term 'Ebolanoia' and collects incidents of Ebola-paranoia on her Tumblr *The Further Adventures of Germ Girl* (McKenna 2014). (Rezaire, 2015: 189 - 190)

Rezaire goes on to state the following on Sekhukhuni's work:

Bogosi Sekhukhuni's *Virus SS 16* could be seen as a curated virtual exhibition about Ebola. His choices of artworks are subtle, satirical yet incisive and gives a personal critical picture of the frenzy online environment created by the Ebola outbreak. A hidden element of the work resides in the work's URL description in Google, which is a link to an article from Ecouterre.com "US offers 1 million prize for better anti Ebola contamination suits" (Malik Chua 2014), which relates Nike's collaboration in crowdsourcing the new fabrics for Ebola's trend. Lol. Using the same online language as the media he is criticizing, Bogosi Sekhukhuni's work acts as an insightful comment on media propaganda. (189)

Following an exploration of Sekhukhuni's work, Rezaire goes on to explore the CUSS Group *Webisodes*, which was referred to earlier in the fieldwork. Much of her discussion with CUSS is reflective of what was presented on their work previously and I will therefore not repeat it, yet Rezaire writes:

In conversation with Jamal Nxedlana, he told me that one of his intention was to "help to build the Internet" as if still under construction. True indeed, especially for Africa, where Internet has not been yet invested and occupied fully. Yet, it is true also for the rest of the world, as we all need to contribute to a better, safer and fairer online environment. (192)

Again we see these artists acting to change how the online space are viewed, understood and used.

Carly Whitaker's paper is the second paper to explore Internet art in Johannesburg. Whitaker's paper "Floating Reverie: a networked curation experiment" (197) is not political in the manner of Rezaire's, but rather addresses the practices that occurred in her *Floating*

*Reverie*⁵³ online residency. Whitaker produced this online location as a short two to three-week residency cycle, at which she invites artists to work online. Whitaker states:

Floating Reverie becomes a gallery, a facilitator and network. The relationship between technology and culture in a contemporary South African context is explored in the entire process; it becomes a critique of this space and a response to what exists. The different conversations and dialogues that are formed throughout this process allow for the repositioning and reassessing of contemporary culture in relation to a digital creative practice in South Africa. (204)

Whitaker's goal is to have more artists working online and engaging the online space – again an invitation to interrogate these spaces from a South African perspective. Whitaker is driven by the fact that most contemporary South African galleries do not support online and digital work, and yet it is an important location.

The paper that follows by Alette Schoon, moves away from the online space and reflected my own interest in music as a community orientated forms in South Africa. Something I had begun to explore in relation to Smiso Zwane and Rasethaba's *Future Sound of Mzansi* documentary in the fieldwork. I found Schoon's paper resonated with what I had explored with them.

Alette Schoon who is based at Rhodes University presents an article, "Digital Hustling: ICT practice of hip hop artists in Grahamstown" (207). The article takes an ethnographic approach to understanding the use of digital media by young hip hop artists in Rini township in Grahamstown in the Eastern Cape. The Eastern Cape is one of the poorest and underdeveloped provinces in South Africa. Schoon addresses the use of digital media as mechanisms for communally dealing with extreme poverty. Poverty is presented in light of the increasing and negative influence of neo-liberal ideologies in defining poverty and underdevelopment. (Bristow, 2015: 171)

Schoon explores the violence of neo-colonialism and the emergence of a 'hood' culture:

⁵³ <http://floatingreverie.co.za/> (last accessed December 2016).

The habitus therefore focuses the stresses and tensions of everyday hardship and the anxiety resulting from the stigmatization of society's 'symbolic violence' towards the poor (Bourdieu Richardson and Skot-Myre 2012) inwards, towards others in the 'hood', instead of confronting outside power structures.

[...] South Africans youth in the past had a strong collective political culture that kept alive the hope of a better future, but this has dissipated and has increasingly been replaced by a culture of individual consumption and aspirations for personal enrichment (Posel 2010). Those who are unable to get onto the ladder of social mobility due to lack of qualifications or political and business connections remain on the margins in the townships with little hope. (210)

While Schoon's study is specific to a group of young makers living in one of the poorest townships in the country, she has located, as had I, what the community form offered these young men through music. Schoon does not go into detail in this paper on the consequence of 'aspirers', but it is clear that she has identified neoliberalism as playing a significant role in poverty reproduction.

The following paper by Lesley Lokko is a little bit of an outlier as it concerns architecture and education and does not touch on digital or technology culture directly. I included it, however, as it addressed concerns around the effects of colonial education. "Lokko, an architect and academic based at the University of Johannesburg, writes an article titled 'cut and paste' (page 219) that addresses mimicry in education in the age of digital technologies and architectural styles in contemporary Africa" (Bristow, 2015: 171). Cut and paste as a technique is particular to the copying of Euro-American styles by African students. Lokko understands that there is a vast and rich history of African architecture that is not being engaged nor addressed in African architectural education.

Lokko presents developments at the University of Johannesburg⁵⁴ that plan to shift the way architecture is taught and understood. In the article she proposes an architectural brief, which she describes as "for an (as yet) Unnamed African

⁵⁴ A Unit System at the University of Johannesburg that was inaugurated literally a week before the conference. The system consists of Units 1, 2 and 3 that propose foregrounding concepts in construction rather than historical rhetoric in the teaching of architecture.

Architectural Student, in an (as yet) Unnamed African Location [...] which fuses art, culture and digital technology to demand a radical, post-Afro urban example". The article presents an interrogation of the recent histories of African architectural practice and the need for new and specifically African ways of transforming, doing and thinking. (Bristow, 2015: 171)

In this Lokko borrows from the panel title and affirms the use of a "post Afro" as a new decolonising and actional form.

The second selection of papers was by artists reflecting on their own practices. All are South African, thereby offering a view on the landscape of digital practice in South Africa. The first two are not distinctly political and are rather explorations of artistic practice that intersect with Johannesburg's strong culture of commerciality:

The first, by Nathan Gates is titled "'Office Exercise': Towards a more sensible boredom with technology in the office" (page 273). In this article Gates takes a satirical approach to the technology and communications industry in-which he has been working over the last two years as a 'creative technologist'. Through his 'Office Exercises', Gates takes the opportunity to critically engage a market driven approach to technology and its disregard for cultural engagement. Gates in this instance investigates the role of the digital artist in attempting to address this divide.

In staying with technical articulations, the article following titled "This is not an app, this is not an artwork: Exploring mobile selfie-posting software" (page 281) is by Maia Grotepass. Grotepass is a software engineer living in Cape Town who moonlights as an interactive digital media artist. Grotepass sees materiality in code and presents both its beauty and conceptual flaws. Her article addresses two related artworks that use algorithmic forms to interrogate the selfie and portraiture in art practice. The article additionally allows for an interrogation of the limitations of the South African art scene in being able to adequately transform or to include digital and interactive work in its genre.

Both Gates and Grotepass find themselves at a disjuncture between the difficulties of the digital industry and the art scene. While Grotepass's work battles to find its role between application and artwork, Gates takes a direct look at the working practices of the marketing industry that currently dominates creativity and technology in South Africa.

The next two works are by artists that are firmly embedded in the art world. Their work, despite being very different in approach and content, both deal with the notion of archive in relation to the notion of Africa.

In the co-written article “Disrupters, This Is Disrupter X: Mashing up the archive” (page 293) by Pamela Phatsimo Sunstrum and Thenjiwe Niki Nkosi, the artists present a project that has been developed across two locations thus far. Their ‘anti-opera’ *Disrupter X* presented in the article, goes beyond just an interrogation of archive and the technologies and mind sets that bring them into being, to look at the radical views that can transform an understanding of Africa and understanding its future histories. (Bristow, 2015: 172)

Sunstrum, whom I have mentioned previously in relation to her interrogation of Afro vs African Futures, presents the work as mythological future / past of archival practice on African art. *Disrupter X* went on to show its third iteration as a performed panorama in the *Post African Futures* exhibition, I will therefore only look at its detail in the next section. The work however is essentially a performed science fiction, that manifests a different aspect of the story of *Disrupter X* in each iteration. Each time, however, *Disrupter X* acts to save the world from *The Agency*. While not distinctly actional, the *Disrupter X* story makes a link between colonial archives and contemporary culture.

The final paper by Mocke Janse van Veuren and is an interrogation of Johannesburg itself. The work is reminiscent of the concerns seen with African Urbanism, as it engages alternative modes of documenting Johannesburg’s urban environments.

[...] van Veuren explores in some depth a long-term collaborative project titled “Jozi Rhythmanalogues” (page 309). The project focuses specifically on Johannesburg, documenting and analysing the ‘rhythms’ of its urbanism. In van Veuren’s words, the project:

[...] attempts to make sense of these rhythms [of the city] by employing sensory experience as a process [...]. In the course of this project, public spaces are

documented over long periods through time-lapse films, which are analysed to reveal [...] a kind of 'automatic writing' of the city's rhythms.

van Veuren in the article and through his intensive experimental recordings and documentations of Johannesburg, invites us to look more deeply at the histories and consequences of sampling and analysing these environment as data, environments that really write themselves into being.

Both van Veuren and Sunstrum and Nkosi, in very different ways, use their contemporary creative practice to ask us to further interrogate the role of sample and archive for the African landscape. These projects ask us to better understand the places we inhabit and the views created through an archival perspective of them. (Bristow, 2015: 172 - 173)

Van Veuren's *Jozi Rhythmanalogues*, in its documentations of taxi ranks, street corners and public spaces, presents an understanding of Johannesburg in its rawest form, and its ability to construct itself. This is juxtaposed with the idea of formal data capture; opposing it by showing that the rhythms and complexities of the city are not easily contained as a data set.

The papers chosen for publication show the volume of evidence of actional methodologies within the artworks discussed. Not all of the nine artists, but most, attempt to transform, mobilise or heal in their practice. All, apart from Whitley, Schoon and Grotepass, are situated in Johannesburg, and clearly respond to its particular culture of technology. The papers thereby affirm the framework development of *Post African Futures*. All the contributors speak in some capacity to context specificity, to the border engagements between African thinking and contemporary technology practices and the needs to re-invent and reimagine systems of use and engagement.

4.2.2 Post African Futures Exhibition

I worked with the Goodman Gallery to identify the artists and cultural practitioners I would invite to respond. The majority of the list was made up of artists and creatives I had encountered through the fieldwork, artists I had encountered in the processes of the

research in other parts of the continent and artists that the Goodman Gallery identified as being known to be working in the field. The final list of respondents in alphabetical order included:

Dineo Sheshe Bopape (South Africa)
The Brother Moves On and Itai Hakim (South Africa)
CUSS Group (South Africa)
Sam Hopkins (Kenya)
Members of the iMagineering Lagos Collective (Nigeria)
Jepchumba (Kenya)
Just A Band (Kenya)
Wanuri Kahiu (Kenya)
Jean Mukendi Katambayi (DRC)
Kapwani Kiwanga (France)
Nthato Mokgata and Lebogang Rasethaba (South Africa)
Thenjiwe Niki Nkosi (South Africa)
Mũchiri Njenga (Kenya)
NTU Collective – Bogosi Sekhkhuni, Nolan Dennis and Tabita Rezaire (South Africa)
Emeka Ogboh (Nigeria)
Brooklyn J. Pakathi (South Africa)
Pamela Phatsimo Sunstrum (South Africa)
Tabita Rezaire (South Africa)
Haythem Zakaria (Tunisia)
Smiso Zwane (South Africa)

The exhibition opened at the Goodman Gallery on 21 May 2015 and ran for four weeks. A downloadable catalogue was produced and is available at <http://postafricanfutures.net/> (last accessed July 2017). The catalogue consists of an introductory text which reflects some of the contextualisation given in the first chapter of this thesis. It includes details of all the works presented, including those that were part of the screening program. It additionally includes an essay by Goodman Gallery curator Emma Laurence titled “The Afterlife of Mr Gold: Episode 4”, on the final musical performance. It briefly, furthermore, describes the

podcast series that was produced by Jepchumba, and finally lists all participant biographies. In this section of the thesis I will reproduce and expand on the text that describes the works that formed part of the exhibition. Images of the different works are presented in the sections following the descriptions. Please also see Appendix D for press coverage and reviews of the exhibition.

4.2.2.1 Programme

The Goodman Gallery, generous in supporting every aspect of its curation and production (even commissioning new work), has a good history of supporting alternative forms; but it is still very much a commercial art gallery and my concern was that many of the forms would be mis-read and mis-placed in this environment. Due to this, I worked with each respondent to find a way of presenting their work that would not deter from their intentions. In this, however, the presentation of works was not always directly actional, but did represent their actional qualities.

I additionally decided to not only have a gallery exhibition, but also produce a programme of performances, talks and screenings. These were intended to engage the public in discussion and interactions. The programme ran as follows from the opening on 21 May to the closing performances on 20 June.

Exhibition Opening: 21 May 2015

Opening Performances:

18:30 The DISRUPTER X Project: NOTES FROM THE ANCIENTS

By Pamela Phatsimo Sunstrum and Thenjiwe Niki Nkosi (ZA)

Featuring Dion Monti and Lisa Jaffe

19:00 Anamnesis

Initiatory vision by Joel-Claude MEFFRE for artist Haythem Zakaria (TN)

Talks and Screenings

DIGITAL AFRICA & NARRATIVE, 23 May 2015

14:00 Hallu-Ci, talk and screening by Brooklyn J. Pakathi (SA)

14:30 Lagos 2016, talk and screening by Olamide Udo-Udoma of iMagineering Lagos (NG)

POST FUTURES, KENYA: TRADITION AND THE GLOBALISED DIGITAL, 28 May 2015

18:30 Kichwateli, screening and Q & A with Muchiri Njenga (KE)

19:00 Silicon Savannahs & Digital Landscape, talk by Jepchumba (KE)

19:30 PUMZI, screening of Kenyan Sci Fi by Wanuri Kahui (KE)

DATA FUTURES, 6 June 2015

14:00 SWAARTNET, talk by NTU (ZA)

15:00 WWW GLOBAL COM, screening and artists talk by Tabita Rezaire (ZA)

SOUND & AFRICAN CULTURES OF TECHNOLOGY, 18 June 2015

18:30 Just a Band & Makmende, screening and talk by Just a Band (KE) and Future Sound Hack-a-thon by Create Africa (ZA)

19:30 *Future Sound of Mzansi*, screening of documentary film by Lebogang Rasethebe (ZA) and Nthato Mokgata (ZA)

The final performance on 20 June was titled *The After Life of Mr Gold: Episode 4* and held at King Kong, a music performance venue in downtown Johannesburg run by the *Keleketla Library*. Most of the talks and screenings took place in a specially constructed screening room at the Goodman Gallery. The *Sound and African Cultures of Technology* talks and screening were held in a venue in Braamfontein, downtown Johannesburg. In addition to the programme, a weekly podcast of interviews with respondents was produced. The following sub-sections discuss the exhibition in parts: the gallery show, the podcast series, the screening and talks programme and the final musical performance.

4.2.2.2 Exhibition

The works on exhibition were an exploration of various personal and community orientated engagements. Most explored aspects of African knowledge systems and the intersection with contemporary digital and technology cultures. The distinctions between particular cultures of technology were, however, particularly clear and reflected strongly the themes and trends identified from the fieldwork conducted in Johannesburg and Nairobi. The exhibition did however include work from Nigeria, DRC and Tunisia. In the following I

outline each work, starting with Rezaire, CUSS and NTU as Johannesburg-orientated works and then continue to describe each work in broad thematic discussion.

Tabita Rezaire's *Sorry for Real* (2015) (Figure 8 and 9) was a new work produced in repose to *Post African Futures*. *Sorry for Real* is a 17-minute, beautifully constructed digital video of a smart phone in holographic space within a dark and smoke filled room. The work is described by the Rezaire as:

[...] a virtual apology on behalf of the Western world. This fantasised smart-phone conversation questions the power imbalances within the apology-forgiveness narrative. What is the function of an apology? Who benefits from the apology? What are the power structures hidden behind our apologetic age? The work virtually captures the violent histories of slavery, colonialism, the continuous exploitation of African and Indigenous' bodies and lands, and the way these legacies shape current global systems of institutionalised oppression. Unapologetically, this cyber exchange addresses the politics of "reparations", and the need to decolonize our technologies and healing strategies.

In this fantasised phone call from the 'Western World', a computerised voice is apologising for its exploitations and histories in Africa. Simultaneously, text messages pop up on and around the screen; these text messages are from 'Africa' and question the role and validity of this apology, thus reflecting Rezaire's own questioning of the validity and exploitive nature of reparation.

CUSS Group also produced a new work for *Post African Futures*. A large billboard advertisement that was situated in the primary street facing windows of the Goodman Gallery. This looks over Jan Smuts Ave, a busy artery that runs the length of Johannesburg. CUSS Group, as mentioned previously, focus in their practice on issues that exist around the commercialisation of creative work; and the fine line between critical creative practice and where corporatisation makes indistinct the work of young creatives in the city. *Coming Soon (Change Initiated)* (2015) (Figure 10) is described by the artists as:

A cross section of a number of elements prevalent in new Johannesburg urban regeneration. Trends that have appeared within youth culture as well as inner city property developments. The vacuousness of language and the change that is being contrived.

Stock trend creates less room to breathe within this world class African city, removing the chance of a unique voice being forged. Lifestyle, repackaged and sold back to people repeating the same colonial cycles mined previously. The city as a blank canvas, urban clichés, redundant renewal, all features of these flagship precincts.

We rented it once and we'll soon be able to rent it again.

Coming Soon (Change Initiated) questions how Johannesburg's urban popular cultures and cultural livelihoods are threatened by corporate interests; "we rented it once and we'll soon be able to rent it again" is a tongue-in-cheek slogan implying both the possibility of self-determination and overwhelming inability maintain a level of ownership. Using the billboard, CUSS enters the corporate space on its own terms. The image is a collage of street scenes and their own portraits. The visual aesthetic is purposefully stark. This piece is distinctly actional in its method, distinct to the types of practices seen in Johannesburg, infiltrating and disobeying the rules of a space that is culturally threat.

NTU (short for BANTU) formed as a new collective to produce a new work for *Post African Futures*, and is made up of Bogosi Sekhukhuni, Nolan Dennis and Tabita Rezaire, who are all Johannesburg based. They describe NTU as:

NTU is an agency concerned with the spiritual futures of technology. NTU seeks to enhance intersubjective virtual user possibilities by providing decolonial therapies for the digital age. Drawing from African spiritual philosophies, NTU embrace the interdependency of the organic, spiritual and technological realm to restore energetic imbalances.

NTU have gone on to produce more works since *Post African Futures*; these focus on notions of healing, in response to what they see as a need to heal South African culture, particularly where it intersects with the technological and commercial.

NTU produced *NERVOUSCONDITIONER.LIFE.001* (2015) for *Post African Futures* (Figure 11 and 12). This was a large gallery installation presented as an office environment with NTU corporate signage (Figure 11). In this space, the primary focus is a server held in a specially constructed server box designed with smoky reflective glass (Figure 12). This was positioned alongside a workstation (like those found in Internet cafés), at which visitors could access a chat room and private uploading space that was hosted on this server, via a local network. The artists describe the work as:

An independent online network, created to explore the possibilities of a safe and independent space on the Internet: free of discrimination, speech control and surveillance.

NTU created its own web server on which to host *NERVOUS CONDITIONER.LIFE.001* a closed network prototype on the deep web. Nervous Conditioner was specifically conceived as a safe place for people of colour to discuss, share and organise, free of the white-supremacist-patriarchal-hetero-normative suppression that governs the public Internet. While it is run via public Internet protocols, *NERVOUS CONDITIONER.LIFE.001* exists on a private server, which is controlled by NTU, and accessible only when installed under secure NTU conditions.

The work challenges where ownership of networked information lies and questions the world-wide web, which is seen from the perspective of many Africans as a largely bigoted, radicalised and unsafe space. Most of the worlds servers exist in America and Western Europe, meaning that most traffic and information stored is orientated towards those cultures. By creating their own closed off server, the artists present their feeling of insecurity associated with the world-wide web. This work is distinctly actional, as it constructs a closed server with limited access. This is an act of both protection and exclusion, acting to transform ideas about online spaces and thereby challenge audiences to consider how the world-wide web is constructed and used.

Rezaire, CUSS and NTU all address power in their work, the power of coloniality and its effects in continuing institutional power dynamics that govern 'public' spaces. Each of these

clearly respond to the dynamics of Johannesburg's culture of technology; they interrogate the normalising of these power dynamics through commercialisation. Each asks the audience to look closely and carefully at its effects.

In staying with online spaces, the following two engage the networked space from a populist position. Both artists produced digital graphical works that were printed and framed for the exhibition. The first is by Jepchumba (the artist who developed the podcast series) who is Kenyan, but was living in South Africa at the time. Jepchumba presented two large printed works as a series titled *Don't Shoot* (2014) (Figure 13) Of the work, she states:

This two piece graphic series is the exploration of African and Black representations of masculinity largely inspired by the #blacklivesmatter movement. The work explores how black masculinity is constructed, codified and disseminated over the Internet. *Don't Shoot* places the black male body at the centre of inquiry, identifying the influence of social media movements that have politicised the black body. The work incorporates various digital mixed media and thereby serves to set an emotional and divisive tone of raced gender performance in today's highly charged online political environment.

Jepchumba interrogates the politicisation of the black male body in online and popular media. In some way, this reiterates NTU's actions; Jepchumba's work, however, inverts the objectification by focusing on the fragile black male.

The second print series is titled *iosupdatemylife* (2015), by Johannesburg based Brooklyn J. Pakathi (5). Brooklyn was not part of the initial fieldwork and was invited to respond by the Goodman Gallery. The work explores existentialism via digital communications media. Viewed through the eyes of perhaps the youngest artists on *Post African Futures*, this series plays out an emotional short-handed SMS conversation with an iOS interface. The work speaks poignantly of loss and an isolation from a community, and resonates with ideas explored around the difference between African and Western cultures, the communal versus the individual.

Moving away from online spaces and towards African cultures within the colonial archive, the Internet at this point could be considered a colonial archive too. Pamela Phatsimo Sunstrum and Thenjiwe Niki Nkosi presented in the exhibition a third iteration of the *The Legend of DISRUPTER X*, their ongoing collaborative work which, as mentioned, has been in development since 2013. In this version Nkosi and Sunstrum presented an iteration titled *DISRUPTER X: NOTES FROM THE ANCIENTS* (2015) (featuring Dion Monti and Lisa Jaffe) (Figure 15 and 16). The Legend of DISRUPTER X is briefly as described by the artists as:

X is a soldier in the Disrupter Army. The Disrupters are dissidents. They are the only force in The World still fighting against The Agency. The Agency turns living things into programmable, interchangeable pieces of data for their army. The Agency will stop at nothing to incorporate everyone and everything into their data-army.

The legend was constructed by the artists in response to debate around the archive and how museums have archived African culture and African art. The artist respond with a futuristic tale of X who is able to understand the messages of The Agency, and in so doing is able to avoid capture and fight for the Disrupters.

The artists describe the *Post African Futures* iteration as follows:

NOTES FROM THE ANCIENTS was a diorama featuring the work of The Archivists – the custodians of the legend of DISRUPTER X, who travel the world telling her tale. Audiences could explore the diorama to learn about DISRUPTER X's relationship to The Geomancer:⁵⁵ a beautiful but powerful weapon that plays a vital role in her fate. The background of the diorama depicted DISRUPTER X's terrain – a lifeless landscape of abandoned mine dumps. The diorama included a live performance by The Archivists; a video display of DISRUPTER X's lineage; a recording of the legend sung as an operatic aria; a live-feed into a storeroom of the Iwalwewahaus African Art Archive in Bayreuth, Germany where her ancestors lie; and a centrally displayed hologram of the spinning Geomancer.

The panorama installation remained in the exhibition as an interactive video and sound installation for the duration of the exhibition. Sunstrum and Nkosi performed the legend on

⁵⁵ The artists note: "The hologram stood in place of the actual Geomancer object, which at the time appeared to have been lost at sea".

the opening night of exhibition. *NOTES FROM THE ANCIENTS* unravels a science fiction narrative of the Disrupters and the Agency, thereby exploring archival practices both historically and contemporary engagements with Africa. The live camera links to the Iwalwewahaus African Art Archive, acting as a reminder of all the unlabelled and unidentified African artefacts in archives across the world.

Kipwani Kiwanga was not part of the initial fieldwork. Kiwanga, an artist based in France was invited by the Goodman Gallery in extension of her practice, which explores contemporary Africanness juxtaposed against European forms. With *Ifa-Organ* (2013) (Figure 17 and 18) Kiwanga explores the role of mathematics in African religious rites in a playful alignment of Western and African binary systems through in the recreation of an Ifa divination. The artist states:

Ifa-Organ (2013) associates Ifa; a binary divination system practiced principally in Nigeria, Benin, and their diasporas; and the barrel organ originating in eastern and central Europe. An Ifa priest in Benin performed a remote consultation at my request. This divination produced a series of signs that were then transposed onto a card for a barrel organ through perforations. When played, the card produces a repetitive music which broadcasts the oracle into public space. The perforated card is at once a sonic and visual object. When inactivated by the organ, the card is displayed in the exhibition space inviting the viewer to decipher the divination codes.

The work was presented at *Post African Futures* as a video, of Kiwanga performing with the barrel organ in the streets of Paris in France, and the original card book with the divination punched into it. *Ifa-Organ* is a playful inversion of the role of archive as presented by Sunstrum and Nkosi and challenges notions of knowledge and interpretation. The work is also reminiscent of the explorations Ron Eglash's *African Fractals* (Eglash, 2002), in which he aligns divination and binary systems. *Ifa-Organ* however playfully juxtaposes two previously unaligned forms of binary production, thereby allowing for a questioning of the origins of these knowledges in their juxtaposition.

Jean Mukendi Katambayi's *When the sphere deviates to the Right, Migration or Mutation?* (2014) (Figure 19 and 20) is mechanical in the same manner as Kiwanga's barrel

organ, but is a machine of Katambayi's own making. Katambayi is a Congolese artist who I had met and engaged with when developing the *MCD Digital Afrique* publication (T. Bristow, 2013a). Katambayi is really more of a self-taught programmer and mathematician than artist. He builds – out of paper, card and wire circuits – working machines that engage concepts he is either trying to solve or understand. He never intended them as artworks; in fact his first machine was built in an attempt to solve the power issues experienced in Lubumbashi. Katambayi and Kiwanga both present conceptual, paper-based machines that hint at early computing in form, but not in content. The machines thereby become conduits for new ideas.

In late 2014, Katambayi was on a residency with VANSAS⁵⁶ in Johannesburg and produced this work, which then became his contribution to *Post African Futures*. *When the sphere deviates to the Right, Migration or Mutation?* (2014) is an interactive sculptural work that explores a mathematical understanding of African migration to Europe. Like his other machines, the work is constructed from paper and card, includes electronic circuits and components and is a working and interactive sculpture that activates both sound and light when engaged. The piece was presented at the exhibition with Katambayi's, with detailed hand-drawn diagrams explaining the problem and its solution in the paper machine.

Katambayi explores in this work a playful theory around why more Africans should spend time in countries closer to the poles. His energetic theory is based on the fact that Africans live close to the equator, and therefore are in the world for more time – his theory is that the centre of the equator is the thickest part of the earth and the rotation therefore larger; people close to the poles therefore spend a lot less time in the world due to a shorter rotation. Katambayi states that it is therefore necessary for people to occasionally exchange locations and consequently the amount of time spent in the world. The artist states:

I'm looking the optimum meeting point of the cosmos energy. It's permanent research and a kind of performance for me because I'm in the same way the object, the subject and the agent.

⁵⁶ Visual Arts Network of South Africa.

Katambayi's explorations engage how people in the world share the same energy and that we are only changing parameters of that energy in our passage through time and space. His exploration of African immigration to Europe is particularly steeped in the idea that the energies are unbalanced and he thereby attempts a conceptual energetic solution.

Katambayi's conceptual machine brings us to an important and unexpected theme that emerged in *Post African Futures*. This is the role of consciousness and where knowledge meets spirituality.

Tunisian Haythem Zakaria's *Anamnesis* (2015) (Figure 21) is an exploration of Sufism in Islam. Haythem was not part of the fieldwork but I had worked with him, like Katambayi, in the *MCD Digital Afrique* publication. *Anamnesis* (2015) was produced for *Post African Futures* after a trip that Zakaria had just taken to the Maghreb. The digitally altered photographic work was presented with a text written by poet Joël-Claude Meffre (translated by Delia Morris) that explore notions of the post-human. The text reads:

Any image with visionary force implies that it has emerged through a gap in consciousness, like a calm but intense flash whose origins are thrust deep into distant and unimaginable territory. It appears, then, as a revelation that we cannot quite grasp because of its allusive power – it leaves a trace scratched as though with a steel nib on the screen of dreams.

The image – and such is the case here – is supposedly a vision aimed at our gaze alone, but by way of analogy, it can also lead to an aural vision or can even have a taste, a subtle perfume. It is the result of a revelation that would normally depend on our understanding and this is still implicit; though it belongs to the realm of the Hidden, it is now in the Visible through the medium of its expression. That which is hidden is but the reverse side of a fabric known as the Apparent or the Efficient.

Three entities are visible here, three identical forces, linked to the same source by the same underlying connections, now lying there motionless above the vast desert. What are they? Dark spaces, manifestations of a hyper-human. Each one contains the same concentrate in the same congruency of all the words that make up the body of thinking represented by logos, the memory of the logos in echo of its own

reflection in its ruin, any possible future, power, or summons to the spoken word. At the same time each contains the substantial noise of Words in a quivering magma, an impending scrambling. Beyond, a single, transparent thread of explicit word(s) could detach itself and come into the world to fulfil its task of annunciation.

These three forces may also be defined projections of a well Guarded Table specific to the Pleroma of which one aspect suspended mid-air on the edge of the world can just be glimpsed, there in the middle of a desert that lends itself to a possible post-human parousia.

Haythem Zakaria's photographic vision renders visible what should only belong to the realm of the Hidden. The three polyhedral forces are only there because they contain a nebula of words compressed into the revelatory powers of an imagined effervescence. And because of this, the image leaves an atmosphere of suspense, expectation, the all-absorbing, deafening presence of an imminence about to explode. It could illustrate what Ibn Arabî has to say of the Hidden and the Absolute: "Ordinary people are utterly mistaken in their belief that the visible world is what can be seen and the Absolute a hidden mystery. In fact, the Absolute is the eternal Apparent which never went into hiding.

This text was read in performance at the opening of the exhibition and was made available as a takeaway from the exhibition. Zakaria's work, in line with his Tunisian roots, explores how the digital as a conceptual form can be used to engage the infinite. A juxtaposition between the hidden and the absolute. The work deviates quite heavily from what has been presented thus far, and is indeed an outlier on the exhibition. I included it, however, as it showed another culture of technology, one that is North African in origin, intersecting with Islam and intellectualism. It also resonated with and complemented the work of Dineo Seshee Bopape shown in the exhibition.

Dineo Seshee Bopape's video work, *is I am sky* (2013) (Figure 22), briefly described in the fieldwork section, is inspired by Afro-Futurist Sun Ra; an exploration of how the materiality of the digital can speak about slipping between the physical and the spiritual. *is I am sky* is a video work that explores effects in digital video to glide between the felt, the

emotive and the known. The work is accompanied by a poem rather than a description, in this Bopape explores notions of being:

is i am sky...

closer to the sky (I) sang some songs,

(I wondered if/

how one can marry the sky)

On my mind for a number of years has been the 1985 poem by SunRa called 'the endless realm'... there might be a line in the poem that says- is I am sky...

Which is where the title of the video has come from...

is I am sky... am I the sky? Is the sky i? am I the sky? Do I exists as the sky?

(beginning with existence)

'All that and this are mine, and all together they are nothing.... How treasured rich

I am...'

I have been thinking about interiority and exteriority... mirrors...

Internal mirrors/external mirrors...

One's sense self... possession/loss

The loss of self, the capturing/possession of one's self

Where and also how is the self located? (How to find it once it is lost)

Whose sky? whose green grass- all that is nothing, together they are mine, mountains of nothing, eternal nothing

Which self, whose self, how self?

What is the sky?

Can the sky see me? could I see me?

Like in the abott book- flatland:a romance of many dimensions...

And like 'the way a pepperoni on a pizza pie cannot see the whole pie...'

During the making of it, I have visited the work of tlokwe sehume, george lewis, sun ra and others unconsciously too!they are on a cosmic groove that I get dazzled by from the inside...

Kerry James Marshall's works also sprung to me whilst editing the work too!!

Cyprian Shilakoe.... Ralph Ellison...

There is something about the night too...

the sky too...

this nothing too,

how treasured rich I am...

I have the beauty of nothing
Looking into space- empty space- nothing space filled with nothing- (stars
planets inbetween all the nothing)
The self recedes into nothing
Shinny shimmering nothing
the eve of nothing, (a beautiful death)

Bopape's work is not new but was chosen as it was a work that we spoke about during her fieldwork interview. Bopape's contribution is in addressing the screen as a central part of Johannesburg's culture of technology, which then becomes a membrane through which to explore and experience forms beyond content, and towards systems and consciousness. Zakaria and Bopape's work were two in the response to *Post African Futures* that addressed these concerns. Their interpretations are of course deeply personal, but show a relationship to the digital that had not been identified clearly in earlier explorations.

As I explain above in Chapter 3.1.1, I had started addressing Lagos in Nigeria as a possible location for the fieldwork for *African cultures of technology*, but various restrictions had stopped me from continuing in West Africa. It was therefore very exciting to me that two of the works on the exhibition were from Lagos. The first work is a moving image and sound work by Nigerian sound artist Emeka Ogbho. This two-channel video work titled *Àlà* (2012) (Figure 23) constructs Lagos as both an imagined and real location. The artist states:

Àlà brings the sights and sounds of the megacity Lagos together in an installation that explores Lagos' continued capacity to capture the imagination of people near and far, who arrive daily with aspirations of carving out a living and eventually finding their "golden fleece". In a dizzying display of manipulated images and intricate sound mixing, Lagos is painted as a space of intense hope and desire, laying bare the "dream" (àlà) that keeps it churning, yet which for many is a fleeting illusion.

Much like van Veuren's *JoziRythemanalogue*, *Àlà* embeds us in a kaleidoscopic vision of what it feels like to move through Lagos, thereby bringing Lagos into the exhibition.

Ogbho's work is complemented by *Lagos2060* (2015) (Figure 24), which was produced by the collective iMagineering Lagos. The iteration of *Lagos2060* shown at *Post African*

Futures is a video work that unpacks narrative from Lagos in the year 2060. The narratives deal with contemporary concerns such as large-scale religion, traditional medicine, housing and transportation in speculative short narratives of a future only forty-five years away. The group states:

Lagos2060 is an initiative led by iMagineering Lagos, a collective of creative technologists, writers and cultural producers. With the current trend of future thinking and growing importance of technology, especially in emerging markets, the collective are ambassadors of scenario planning as a way to encourage radical thinking that involves a wider cross-section of society beyond the formal means of city-making and social commentary. The vision is not to leave the future of cities solely in the hands of policy makers or even creatives but to engage citizens in policy and change-making discourse in response to the fast-paced dynamics of the cities we live in.

Located somewhere between science fiction and societal debate, the *Lagos2060* project is an interactive installation that combines video with performance art, juxtaposing future global aspirations against local realities without shying away from the possible contradictions that may arise. Through such explorations, the collective adopts scenario-planning to contextualise our own 'futures' and 'futurism'. The result is an interactive thought experiment that revolves around prospective socio-cultural technologies borne of but not restricted to the future city of Lagos with the aid of various storytelling tools. In this way, it allows for creative liberties and a retrospective distance for critical engagements with 'the now'.

Lagos2060 was presented as a video work showing a series of narratives played out in a futuristic public broadcast system driven by drones. The narratives are funny and challenging, bringing Lagosian obsessions into an accessible technological imagining.

Narrative is a strong mechanism with which to explore new imaginings with technology. And narrative is a particularly well-used mechanism in Nairobi. The last two works are by Muchiri Njenga and Sam Hopkins, both from Nairobi, and both engage narrative and community forms. As in *Lagos2060*, narrative is partnered with community engagement, and is thereby actional rather than representative.

Njenga's *KT2* (2015) (*Kichwateli 2*) was made for *Post African Futures* as a continuation and sequel to his short film *Kichawateli* (2011). *Kichawateli*, as mentioned in the Nairobi fieldwork section, is a short film that questions the informational role of media in relation to traditional knowledge and traditional systems of thought. As stated previously, the short film interrogates not only the effect of media, but the systems through which it is constructed. *KT2* was presented at *Post African Futures* as the planning for the sequel; as photographic and sculptural exploration of the props and scenes constructed and envisioned for the sequel (Figure 25 and 26). On these, Njenga states:

KT2 explores the relationship between African traditions, which can themselves be futuristic in nature, and future technology. *KT2* explores the dynamic between environment, local subcultures and high technology within a dystopian Africa. I believe that African Sci-fi can be used as social commentary: depicting emerging trends in technology, threats caused by global anxiety and perhaps providing an alternative narrative in a globalised world.

As was the case in *Kichwateli*, the exploration and construction of the props and scenes for *KT2* was done by Njenga with a community of makers and crafts people in Nairobi. Rather than use professional set-building services, Njenga built the props with Jau Kali crafters and local participants, thus opening up the role of communal production as a mechanism in his work. For Njenga this is a means to bring back a communal form, one that ensures both participation and ownership by a local community.

Sam Hopkins' *Carol* (26.11.2012) *Lucy* (11.10.2012) *Moroko* (08.10.2012) explores the construction of narrative in the everyday and the role of these narrative within the mobile phone culture in Kenya. Hopkins explores through this series how communally constructed stories then become manifest in the digital and mobile space of everyday events. Of the video series, Hopkins states:

[...] the opening up a space for the articulation of narratives which disturb and disrupt official narratives. These counter-narratives are singular, every day and authored by the character in the film. The artist's criterion is not to represent a

universal and objective truth; based on a subjective, and possibly idealised diary, these films are intended to be documents of a process, not Documentary films.

Hopkins was very particular about how the videos should be watched and would only have them viewed by people on their personal mobiles, staying true to how such narratives are commonly shared.

The works were not shown in the gallery; rather a series of posters were plastered on the outside wall of the gallery. These posters, designed by Hopkins to look like posters advertising fake traditional medicines services, witch doctors and bum enlargements (posters which are common in Johannesburg and not Nairobi), included an SMS code (Figure 27 and 28); participants could then SMS the code and received a URL on their phone from which they could watch the films on their own devices. It was important to Hopkins that the work be a public and 'everyday' encounter.

Hopkins describes the three videos as follows:

Carol (26.11.2012), LENGTH – 7m 57s, SYNOPSIS – Carol Kariuki is an estate agent who works between Nairobi and Thika. She works for the family business 'Cornerstone Real Estate' and lives with her husband and daughter in Chania Village, just outside Thika. The film shows her daily routine, from morning run, to evening bedtime.

Lucy (11.10.2012), LENGTH – 8m 21s, SYNOPSIS – Lucy is a young fashion designer who lives in Nairobi West. The film shows the extremes of her day, from chilling in the evening, watching TV painting her nails, to rushing around all day between clients and her tailor.

Moroko (08.10.2012), LENGTH – 8m 55s, SYNOPSIS – Moroko, or Robert Maurice Lenakore, is a rapper who lives in Woodley Estate, Nairobi with his brother and sister. The film traces his current daily activities, from dropping his sister at the school bus in the morning, to doing up the Phoenix Records recording studio, to hanging with his pals.

Both Njenga and Hopkins, in staying true to Nairobi's culture of technology, presented work that was strongly community and narrative oriented, and are thereby actional.

As can be seen, most, though not all, of the artists and cultural practitioners engage actional methodologies. The works, though presented within the gallery, are strongly orientated in either their methods of making or presentation towards shifting the status quo and moving towards new ways of doing and being within in contemporary culture. All are of a border epistemology, interrogating what lies at the border of the subaltern and the globalised information economy.

4.2.2.2.1 Exhibition Images



Figure 8: Photograph of *Sorry for Real* (2015) by Tabita Rezaire in installation at the Goodman Gallery, Johannesburg.

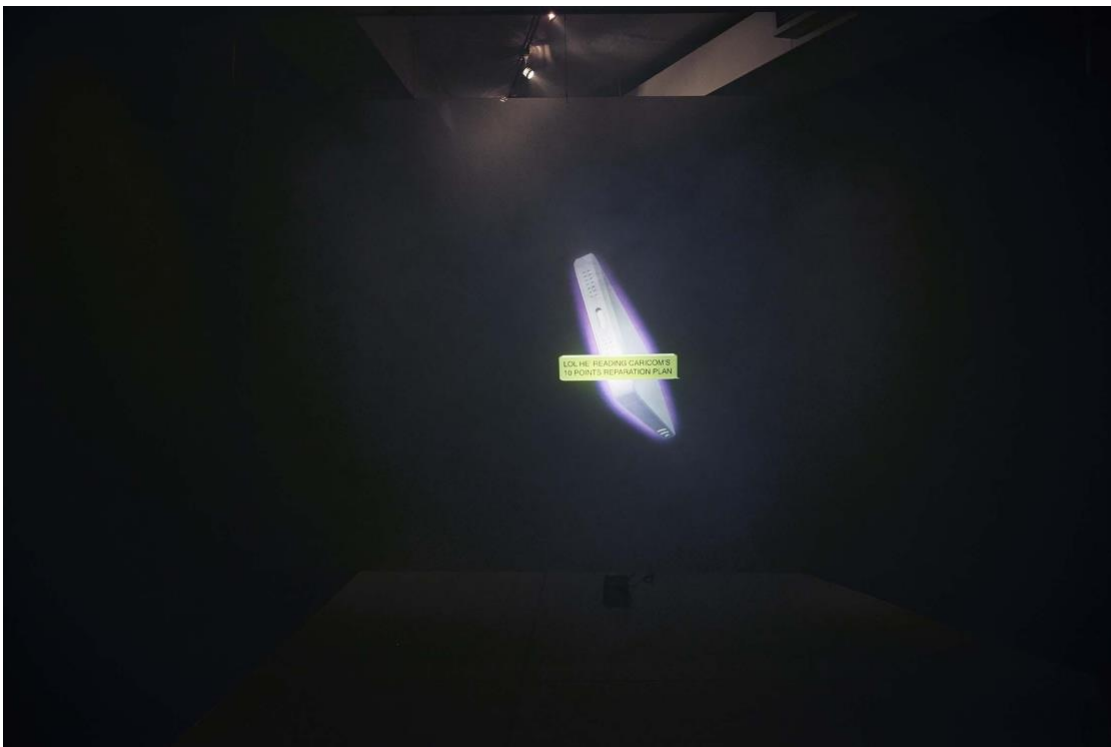


Figure 9: Photograph of *Sorry for Real* (2015) by Tabita Rezaire in installation at the Goodman Gallery, Johannesburg.

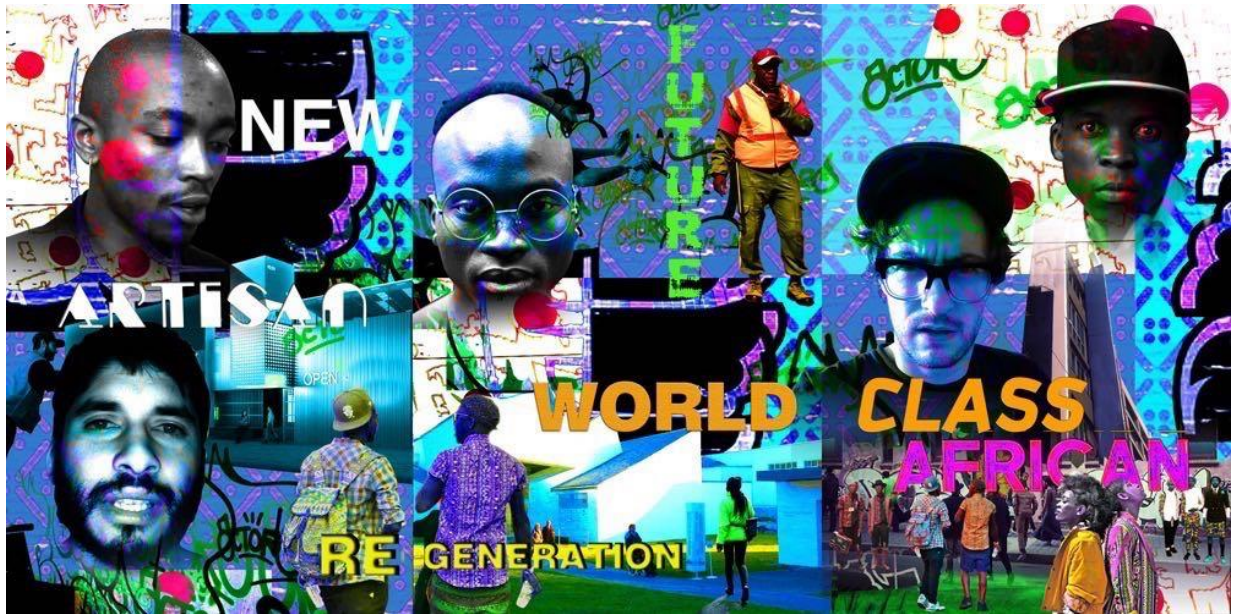


Figure 10: Digital reproduction of CUSS Group's *Coming Soon (Change Initiated)* (2015).



Figure 11: Photograph of *NERVOUSCONDITIONER.LIFE.001* (2015) by NTU, in installation at the Goodman Gallery, Johannesburg.



Figure 12: Photograph of *NERVOUSCONDITIONER.LIFE.001* (2015) by NTU, detail of installation at the Goodman Gallery, Johannesburg.



Figure 13: Digital reproduction of *Don't Shoot* (2014) one of two in the series by Jepchumba, at the Goodman Gallery, Johannesburg.

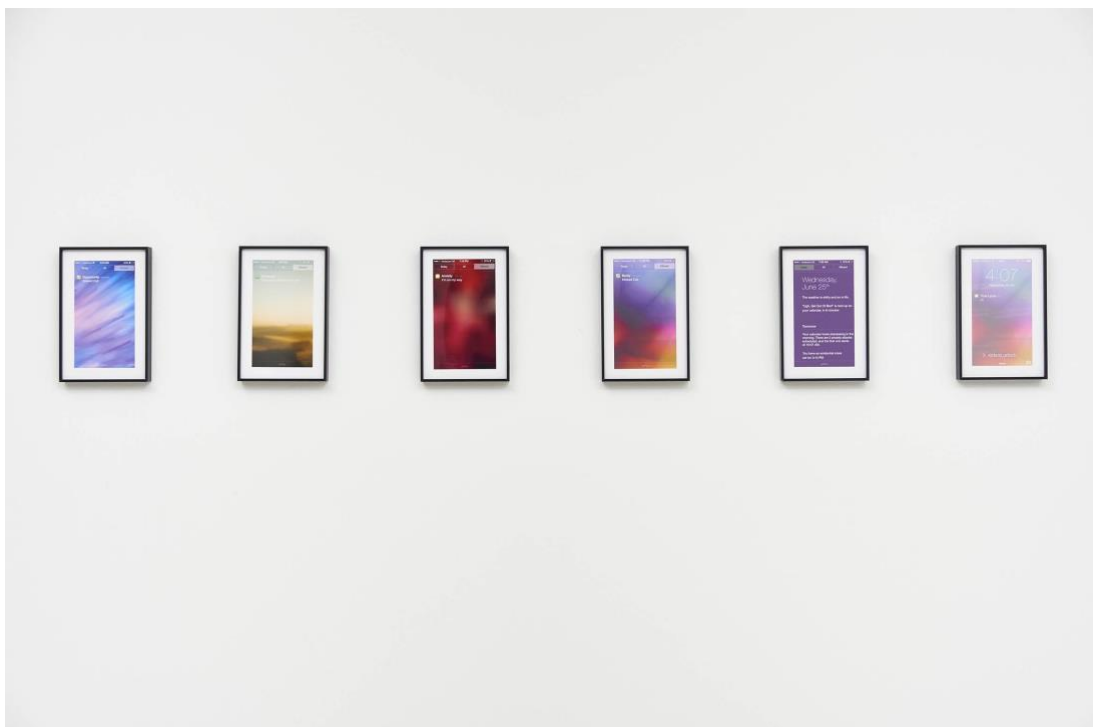


Figure 14: Photograph of *iosupdatemylife* (2015) by Brooklyn J. Pakathi, detail of installation at the Goodman Gallery, Johannesburg.



Figure 15: Photograph of *DISRUPTER X: NOTES FROM THE ANCIENTS* (2015) by Pamela Phatsimo Sunstrum and Thenjiwe Niki Nkosi in installation at the Goodman Gallery, Johannesburg.

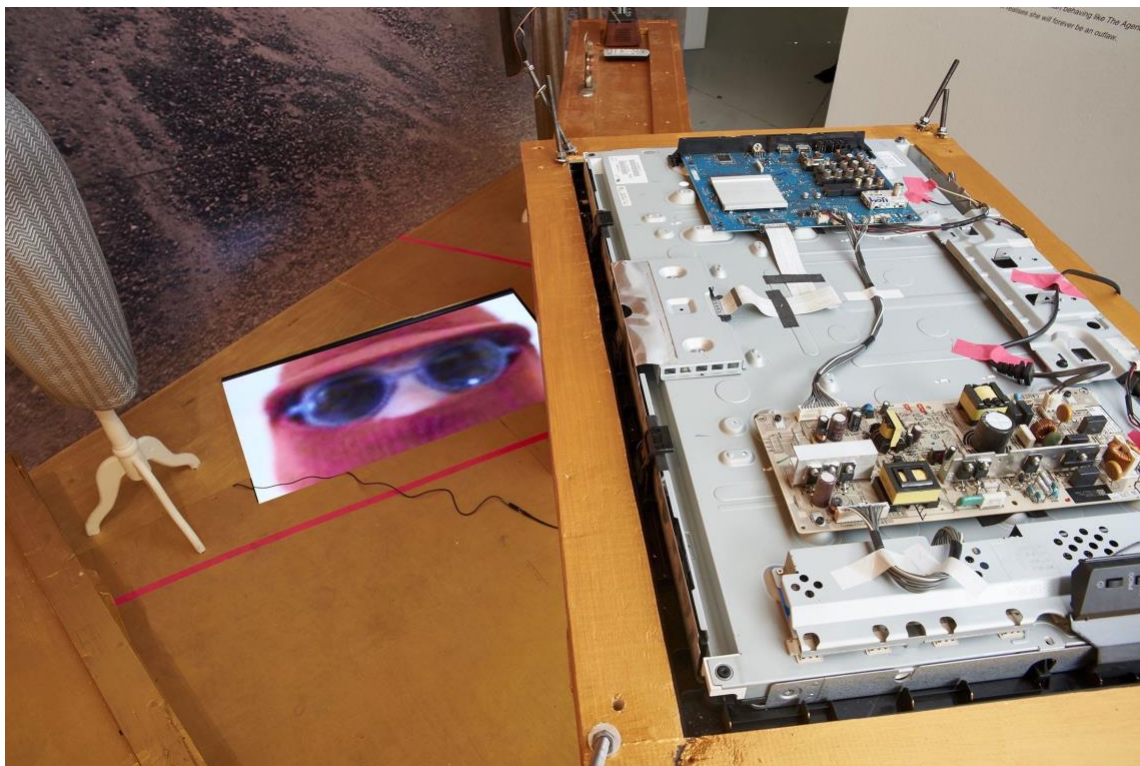


Figure 16: Photograph of *DISRUPTER X: NOTES FROM THE ANCIENTS* (2015) by Pamela Phatsimo Sunstrum and Thenjiwe Niki Nkosi (detail of installation).



Figure 17: Photograph of video performance piece for *Ifa-Organ* (2013) by Kipwani Kiwanga, on the right (*iosupdatemylife* (2015) on the left) in installation at the Goodman Gallery, Johannesburg.



Figure 18: Photograph of the punch card for *Ifa-Organ* (2013) by Kipwani Kiwanga, in installation at the Goodman Gallery, Johannesburg.



Figure 19: Photograph of *when the sphere deviates to the Right, Migration or Mutation?* (2014) by Jean Mukendi Katambayi, in installation at the Goodman Gallery, Johannesburg.



Figure 20: Photograph of *when the sphere deviates to the Right, Migration or Mutation?* (2014) by Jean Mukendi Katambayi, detail of installation at the Goodman Gallery, Johannesburg.



Figure 21: Digital reproduction of *Anamnesis* (2015) by Haythem Zakaria, Goodman Gallery, Johannesburg.



Figure 22: Photograph of *is I am Sky* (2013) by Dineo Sheshe Bopape, in installation at the Goodman Gallery, Johannesburg.



Figure 23: Photograph of *À/à* (2012) by Emeka Ogbho, in installation.



Figure 24: Photograph of *Lagos2060* (2015) by iMagineering Lagos, in installation at the Goodman Gallery, Johannesburg.



Figure 25: Photograph of *KT2* (2015) by Muchiri Njenga, in installation at the Goodman Gallery, Johannesburg.



Figure 26: Photograph of *KT2* (2015) by Muchiri Njenga, in installation at the Goodman Gallery, Johannesburg.



Figure 27: Digital reproduction of *Moroko* (08.10.2012) by Sam Hopkins.



Figure 28: Photograph of posters for *Carol* (26.11.2012) *Lucy* (11.10.2012) *Moroko* (08.10.2012) by Sam Hopkins, at the Goodman Gallery, Johannesburg.

4.2.2.3 Talks and Screening

The talks and screening programme was developed to support access and conversations over the period of the *Post African Futures* exhibition. This was not only to develop discussion and interaction between cultural practitioners, but acted to ‘educate’ and engage the Goodman Gallery audience (mostly made up of upper middle class white South Africans, and a host of ‘art world’ intellectuals and interested publics). As presented in the exhibition programme, the talks were organised in thematic groups complementing the screenings at the same event.

Under the theme *Digital Africa & Narrative*, Brooklyn J. Pakathi screened his short film *hallu-ci* (2014) (Figure 29) and spoke to the narratives of African millennials online in relation to *hallu-ci* (2014) and *iosupdatemylife* (2015). Pakathi writes:

hallu-ci (2014) chronicles concisely the story of Frank Nzima Lin, a 20-year-old South African youth born of a Zulu father and a Korean mother. We follow his interactions online as the URL visor, through which he discovers, defines, and conceals self – begins to breakdown.

While Frank struggles with an inherited cultural dichotomy, a similar dichotomy extends itself to the majority of youth and addresses a typical experience of contemporary youth culture in the age of the Internet. Through its dissemination online: culture, is changing more rapidly than ever and it is a constant flux trying to define self through art, music, fashion, and the Internet. The Internet is a gateway into a new South African youth where you are the curator of your life; however, we often find that we mask anxiety, depression, and confusion behind a veil of illusion and reimagined personas of self.

This was followed by Olamide Udo-Udoma of iMagineering Lagos screening *Lagos2060* (2015) in full. Udo-Udoma spoke about the cultures of technology in Lagos and how the project was developed as a narrative engagement with future thinking for Lagosians in response to new urban planning.

In the theme *Post Futures, Kenya: Tradition and the Globalised Digital*, Muchiri Njenga screened the original *Kichwateli* (2011) and took part in a question and answer session. This was followed by Jepchumba, who gave a talk titled *Silicon Savannahs & the Digital Landscape* that addressed concerns around ownership and corporatisation in the mobile media and creative practice in Africa. These were followed by a screening of short sci-fi film *PUMZI* (2009) by Kenyan filmmaker Wanuri Kahui (Figure 30). *PUMZI* is described thus:

Set in a post-apocalyptic world in which water scarcity has extinguished life above ground, the short film follows one scientist's quest to investigate the possibility of germinating seeds beyond the confines of her repressive subterranean Nairobi culture.

Nature is extinct. The outside is dead. Asha lives and works as a museum curator in one of the indoor communities set up by the Maitu Council. When she receives a box in the mail containing soil, she plants an old seed in it and the seed immediately starts germinating. Asha appeals to the Council to grant her permission to investigate the possibility of life on the outside, but the Council denies her exit visa. Upon resisting the Council further, hostile agents are sent to the natural history museum and proceed to destroy the surrounding exhibits before forcibly dragging Asha from her workstation.

However, Asha, still in possession of the seed, manages to escape into the desert-like outside world with the help of a bathroom janitor soon after being captured. Following a compass given to her by the janitor, Asha manages to find the tree from her dreams after nearly fainting in the oppressive desert heat. With her final strength, Asha plants the seed in the ground by the tree and pours her remaining water over it before further nourishing the seed with her sweat. The movie concludes with Asha passing out on the desert floor as the camera zooms out revealing an unseen lush forest beside her.

PUMZI is a well-known Kenyan science fiction exploring the important role of nature and agriculture in Kenya. The futurist setting, while presenting the worst possible outcome for Kenya's environment, explores the strong spiritual connection between people, nature and community found in Nairobi. This session resonated strongly with and acted to present what was found to be the unique *culture of technology* for Kenya.

In the following theme, *Data Futures*, we focused back on Johannesburg. NTU gave an interactive lecture titled *SWAARTNET*, which addressed closely the concerns they had explored in their work. The title of the talk made reference to the Apartheid phrase 'die swaart gevaar', which translates as 'the black danger', a term used during Apartheid to describe the Afrikaner volk's biggest fear: a self-determining black person. Following the talk and much debate between the audience and NTU, Rezaire screened her video work *WWW GLOBAL COM (2013)* an earlier work produced when she first moved to Johannesburg that explored similar themes to *SWAARTNET*.

Sound & African Cultures of Technology, as mentioned previously, was not held in the gallery but at a venue in downtown Johannesburg. This was a youth culture venue and more accessible to young creatives living in the city. In this Kenyan band *Just a Band*, who had flown out for the final performance, gave a talk on a fictional character Makmende, who they had developed in the making of the work *Ha He*.⁵⁷ Makmende, the name, comes from Clint Eastwood's *Dirty Harry*, in which he states: "go ahead; make my day" before a fight. Makmende (make-my-day) is the name commonly given in Nairobi to any tough-playing neighbourhood kid. In their talk, *Just a Band* explored the mythology of Makmende and the fame that developed around this mysterious hero vigilante (Figure 31) in Nairobi. A construction that was believed to be true by many in Nairobi. *Just A Band* also explored the lo-fi and community orientated production processes used when making their music videos and how this intersected with the myth of Makmende. The talk was in preparation for the closing musical performance in which *Just a Band* would explore four fictional mythologies: Makmende, Luwanda Mgere, NairobiDhobi and Ricky Seude.

Following the talk, a short introduction was given to a community hack-a-thon that had taken place earlier in the year in response to Rasethaba and Mokgata's *Future Sound of Mzansi* (Rasethaba, 2014a) (Rasethaba, 2014b) (Rasethaba, 2014c). Following this, the feature length documentary *Future Sound of Mzansi (2014)* (Figure 32) was screened. *Future Sound of Mzansi* is officially described thus:

⁵⁷ Watch at https://www.youtube.com/watch?v=_mG1vleETHc (last accessed December 2016).

Future Sound of Mzansi (2014) is a documentary, which aims to explore, express, and interrogate South Africa's cultural landscape. A chief vehicle of this exploration is electronic music, a staple of South African popular culture. The film explores the past, present and future of the scene and its multiple sub-genres, presented through the eyes of internationally acclaimed artist Spoek Mathambo. *Future Sound of Mzansi* is directed by Nthato Mokgata (Spoek Mathambo) and Lebogang Rasethaba of Egg Films, produced by Black Major with support from the Red Bull Studio and clothing label WESC.

The film does not aim to be an exhaustive account of the history of electronic music in South Africa nor does it try provide a comprehensive and all-inclusive overview of the genre. This is what filmmakers Nthato and Lebo have to say about the process and their approach during this journey that has spanned over almost two years: "We travelled around South Africa to explore our rich electronic music scene. For years there's been a strong movement of producers, instrumentalists, vocalists and most importantly, party goers, giving themselves to new ideas of African electronic music. We have seen a couple of generations unafraid to be proudly South African, proudly party rocking, proudly futuristic, international stake raisers, and hell raisers. The future looks awesome, blindingly beautiful and bursting at the seams with youth energy and talent. Still a country steeped in poverty, crime, and injustice, South Africans party like their lives depend on it. From the sounds of deep house to glitch hop, kwaito-house, township tech, sghubu sa pitori; durban gqom, daintly melodic electronica to dubstep; super fast khawuleza and shangaan electro. The groove is thick and infectious. And they give themselves to it. Our mission was simple, to meet up with some of our heroes, colleagues, competition, and co-conspirators...an ever-potent gang of electronic music pioneers sculpting The Future Sound of Mzansi".

The talks and screenings were important in developing debate and discussion, as well as allowing audience members to share their own experiences and concerns about culture and technology in Africa.

4.2.2.3.1 Images Relating to the following text on the Gallery Show

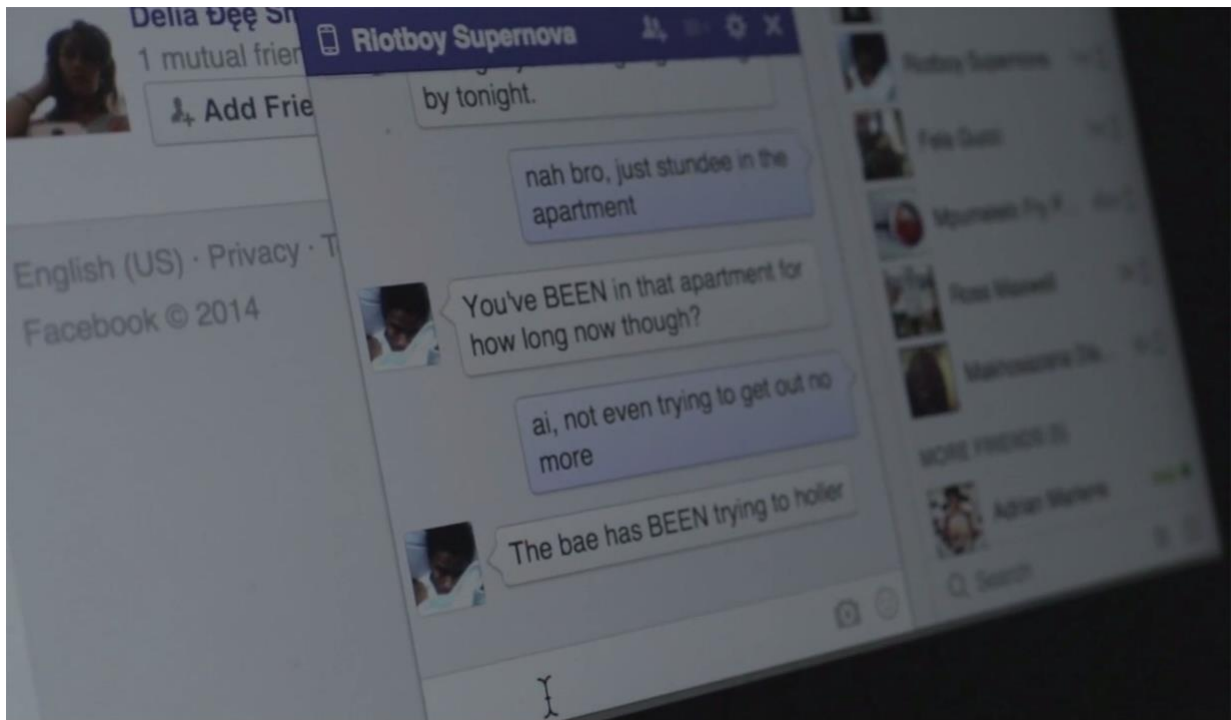


Figure 29: Still from *hallu-ci* (2014) by Brooklyn J. Pakathi. Supplied by artist.



Figure 30: Poster for *PUMZI* (2009) by Wanuri Kahui.



Figure 31: Fake *Time* magazine cover for Makmende by Jim Chuchu.

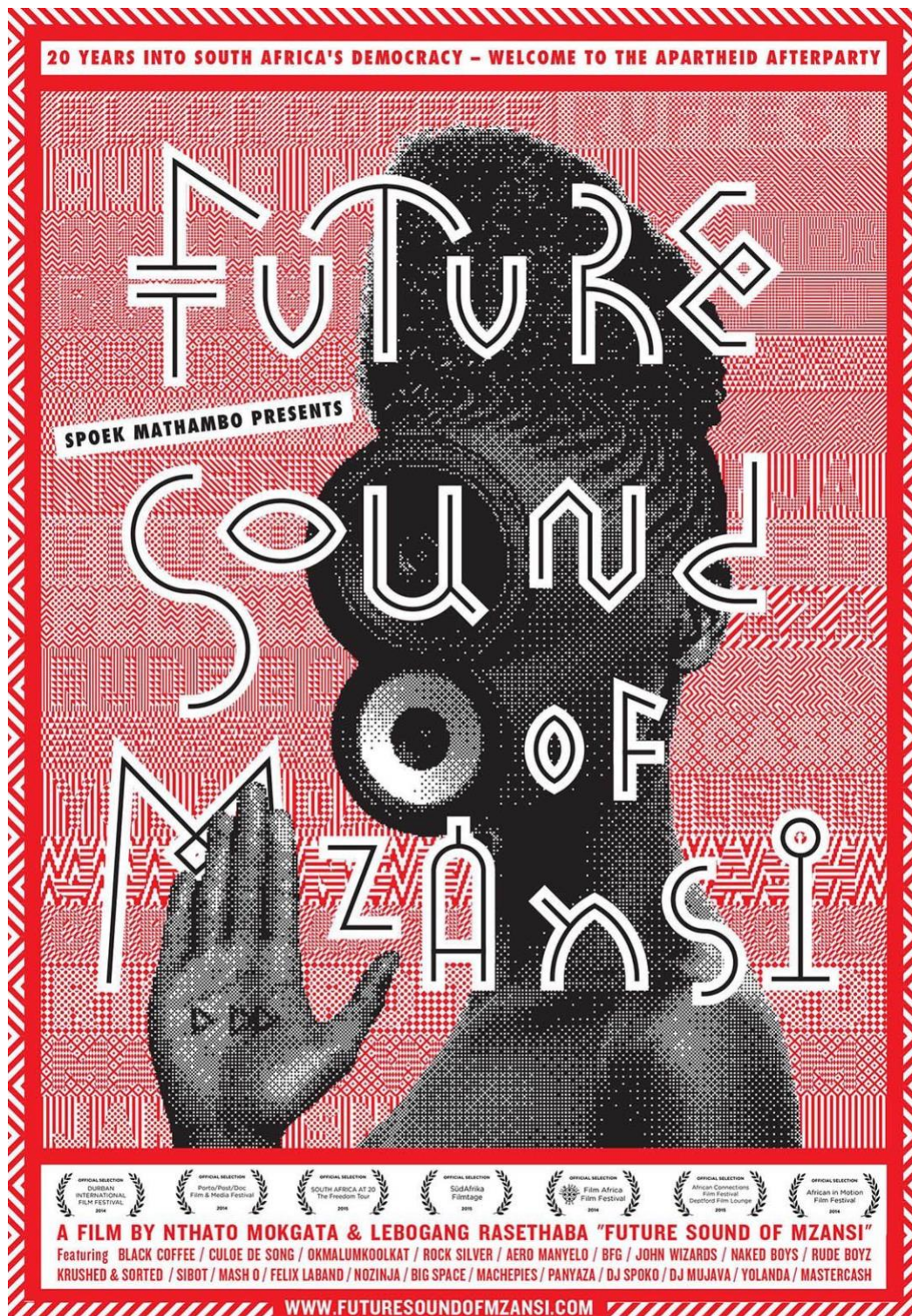


Figure 32: Poster for *Future Sound of Mzansi* (2014) by Lebogang Rasethaba and Nthato Mkgata.

4.2.2.4 The Afterlife of Mr Gold: Episode 4

As I began to develop the exhibition and its programme it became clear that a musical performance was required. This was specifically due to the importance of music and performance as a cultural meeting point for African cultures and as a location between contemporary technology practices and culture. In the fieldwork I had engaged Nairobi based *Just a Band* and in response to the call they asked to perform with Smiso Zwane, aka *OKMalumKoolKat* (Ok Uncle Cool Cat) of whom they were massive fans. The Goodman Gallery was furthermore interested in bringing in South African band *The Brother Moves On*. The final performance of *Post African Futures* was therefore a concert rather than a simple performance.

The Brother Moves On are an eclectic futurist band that bring together traditional South African forms with opera and guitar rock. Their work develops contemporary myths alongside traditional music to bring narrative into their performance structure. It was decided that a concert would be produced using the framework of an existing *Brother Moves On* narrative. This was the narrative of the fictitious character Mr Gold, an allegorical figure representing Johannesburg's Rand Lords. Mr Gold was presented by the band in 2009, when the band performed his funeral. Mr Gold has since appeared in their performances from the afterlife and in the company of 'Salman Rushdie'. It was decided that the *Post African Futures* concert would be a collaborative fourth episode of *The Afterlife of Mr Gold*: an interactive musical talk show that ended in Qgom dance party with *OkMalumKoolKat's* performance. The talk show was hosted by the lead singer of *The Brother Moves On* performing as Mr Gold. In a *Saturday Night Live*-styled afterlife, Mr Gold hosted various fictional characters: *Just A Band's* Makmende, Luanda Magere, NairobiDhobi and Ricky Seude. A surprise guest appearance was included, this was West African mythical figure Mama Wata, who was carried in a bathtub painted by NTU artist Nolan Dennis.

In this, the artists explored the role of narrative and allegory in contemporary African music, infusing politics with groove and heavy dance. Each character represented aspects of popular contemporary culture from their respective cities, playful engagements between

urban inhabitants and metaphorical imaginings. *OkMalumKoolKat* is particularly interesting as a musical persona: his naming does not end with just *OkMalumKoolKat*; he also brings into his performed selves the *FutureMfana* (young man of the future), *smart mompara* (clever stupid man) and *zulu compura* (zulu computer). His lyrics are laden with smart wordplay and innuendo. He is also has a huge cult following in South Africa, which brought an enormous crowd to the event.

By way of explanation I am reproducing here in part what was written by Goodman Gallery curator Emma Laurence on *The Afterlife of Mr Gold: Episode 4* for the *Post African Futures* exhibition catalogue:

In an interview about his most recent novel, *Two years, eight months and twenty-eight nights*, Salman Rushdie speaks of the 'colossal fragmentation of reality' in the 20th century. Fragmented reality and the fantastical are at the core of the collaborative performance, *The Afterlife of Mr Gold: Episode 4*. A labyrinth of bizarre narratives and inexplicable characters in the performance probe the structure of history and the confines of identity.

Staged as an entrance into the afterlife, the performance takes place in an imagined space where the invented mythologies of the South African collective The Brother Moves On, Kenyan musical group Just A Band and South African musician Smiso Zwane – aka Okmalumkoolkat aka all black black kat, aka smart mompara aka bhut'yang'chaza aka ikati elimnyama aka The Sjambok Ambu – meet.

Mimicking the format of a late night show the performance opened with a monologue by Mr Gold, a partly allegorical character created by The Brother Moves on. The parable of Mr Gold, whose life is continually played out in performances, albums and videos by The Brother Moves On, investigates urban identity, modern value systems and lost faith.

Mr Gold was introduced to audiences in 2009 when his funeral was staged during a performance by The Brother Moves on at the South African Broadcasting Commission. At the time very little was known about Mr Gold, and the funeral was enacted so that The Brother Moves On could begin telling his story in a non chronological order, starting with his death. In *The Afterlife of Mr Gold: Episode 4*, Mr

Gold opens up the afterlife to the physical realm and begins a narrative of time travel, magic and post-colonialism.

In a cross genre narrative worthy of Marvel comics, Mr Gold introduces the audience to the Kenyan superhero Makmende who exists in Kenyan urban mythology as a vigilante. The mythical figure is believed to have been formed after a mispronunciation of Clint Eastwood's famous line 'Go ahead make my day' in *Dirty Harry*. While the myth of Makmende exists in the collective stories of many Kenyans, he was brought to life in Just a Band's music video *Ha He*.

Referencing the style and narrative of Blaxploitation and Kung Fu, the group developed a narrative fiction around Makmende and the video became an Internet sensation. A satirical take on Western interpretations of black male identity, Makmende is a re-appropriation of Hollywood stereotypes and a vessel through which the volatile nature of post-colonial identity can be navigated.

Makmende remains a supernatural figure, existing only as a figure on the Internet with a Facebook page, a Twitter account and a blog. In *The Afterlife of Mr Gold: Episode 4*, Makmende appeared on a video call – and interacted with Mr Gold only via text messaging. During the performance the characters talk about meeting each other in “the other world” brought into existence by human thought and a desire to understand their past and future. Just a Band's mythology extends beyond Makmende and the audience was introduced to Luanda Magere, the magical archivist, NairobiDhobi a time travelling sage and Ricky Seude a space cowboy with the power to exist in a fourth dimension.

Enter Future Mfana aka Okmalumkoolkat aka all black black kat, aka smart mompara aka bhut'yang'chaza aka ikati elimnyama aka The Sjambok Ambu part of the ever-evolving identity of Smiso Zwane. Determined to escape a constrictive definition of himself, the musician continues to invent alter egos and characters each of which is added to his name. Like his counterparts, Future Mfana is an enigma who exists in the past, future and present and who proves that the past is just as uncertain as the future. The different facets of the character are at once physical manifestations of urban slang, political motivations and spiritual introspections.

In a frenzy of narrative fiction, enactment and improvisation – the artists appropriated each others' histories, re-invented their pasts and added to their own ever-evolving identities. If, as Rushdie notes, it is through the fantastical that truth is accessed, then in *The Afterlife of Mr Gold: Episode 4*, the truth is shown to be just as volatile as the past, the future, Mr Gold's life, Makmende's geography or Okaymalumkoolkat's name.

4.2.2.5 Future Lab Africa: Podcast Series

On receiving the call to action, Jepchumba came back with a request to produce a podcast series to interview artists and groups who were to participate. Jepchumba's proposal was in response to what she perceived as a lack of information and conversation in the media with and about African artists. She aligned her proposal with the international art world's interest in Africa as a new destination in which only the airports are visited and little attention is given to the greater context. The podcast series, titled *Future Lab Africa*, was developed as a commission from the Goodman Gallery. The series offers insight, through one-on-one conversations with the creative practitioners, to their work and the *Post African Futures* position.

After the exhibition, Jepchumba and I went on to develop *Future Lab Africa* to include interviews with artists participating in the Fak'ugesi Digital Africa Residency, and other practitioners we encountered in our work. The series has since been awarded a grant from the Creative Disturbances Fellowship (Leonardo) and is now listed with Creative Disturbances,⁵⁸ as well as the *Post African Futures* catalogue site www.postafricanfutures.net and the podcast series home www.futurelabafrika.org. The interviews produced by Jepchumba for *Post African Futures* are:

Post African Futures with Tegan Bristow.

Storytelling, China & South Africa with Lebogang Rasethaba.

Cyberspaces and the Power of Representation with Tabita Rezaire.

Just A Band with Just A Band.

The Disrupters with Pamela Phatsimo Sunstrum & Thenjiwe Niki Nkosi.

The State of the Internet with NTU.

⁵⁸ <http://creativedisturbance.org/disturbances/> (last accessed December 2016)

Memory with Dineo Sheshe Bopape.

Lagos 2060 and Future African Cities with Olamide Udoma.

CUSSGROUP with CUSS Group.

Sam Hopkins with Sam Hopkins.

Chapter 5

sazalwa nabanye, siyofa nabanye

Zulu proverb. Translation: We are born with others, and we will die with others.
The proverb expresses the idea that we are born with and raised by a generation with particular views, but die with another generation with different views.

5.1 Conclusion

Post African Futures, as a culmination of forms and responsive trajectories, became an aesthetic movement. As research, it acts as a grounding introductory framework to African culture and technology: how it should be understood, and more importantly how it should be engaged methodologically in light of Western scholarship on Africa and technology in Africa. Furthermore, it acts as a position from which the globalised information economy can be critiqued from an African perspective.

Post African Futures, the exhibition, marked a line in the sand that gave the contributors and the public a location from which to launch a creative, yet critical interrogation of vernacular concerns for technology and culture in Africa. By calling for responses to the suppositions of *African Cultures of Technology; Post African Futures* as an action embeds the exhibition and its future trajectories in the hands and critical practices of those that formed it.

Post African Futures grew from a lived experience of culture and technology in the regions in question. In this actional methodologies not only bring to light the importance of viewing unique cultures of technology, but act to disobey and disrupt what are understood to normative mechanism of use and interpretation for technology.

In the exhibition and through multiple dialogues we have seen how, groups like CUSS Group and NTU challenge the impingement on what is understood as 'public' space (physical, digital and ideological) by information economies and multi-national interests for the African continent. This challenge, reflecting a particularly Johannesburg and South African experience of a culture of technology, drawing on what is 'owned' - bodies, cultures and places – both historically and in contemporary culture. In the same manner, in an instance of Nairobi's culture of technology, we see how Njenga and Hopkins reinstate communality through narrative in digital spaces; this with particular attention is paid to how narratives are formed and by whom. A good reflection of Nairobi's greater culture of technology, where technology meets a history of communality. In these, regional and vernacular cultures of technology offer an alternative repository. A repository of knowledge

and knowing that assists in challenging the status quo of digital infrastructures and the powers within them.

Post African Futures as an exhibition held various cultures of technology within it, bringing to focus the contexts from which they evolved and pulling on the important golden thread of context specificity. Thereby holding together both, forms of knowledge and methods of engagement. Again, an understanding of how actional methodologies contain ontologies distinct to the subaltern: rich with histories of insurrection and the vernacular, that rightly do not fit into expert knowledge regimes.

As celebration after the exhibition, *The After Life of Mr Gold: Episode 4* brought together the cultures of technology of Johannesburg and Nairobi. In this we saw a sophisticated political critique of Johannesburg's digitality and media culture, with Nairobi's mastery of narrative. *The After Life of Mr Gold: Episode 4* additionally brought this cultural advance to a popular cultural setting. In dance and music, so important to South Africa's post-Apartheid development, with a mythical reimagining of Southern and East Africa's future pasts. This celebration firmly placed the explorations of *Post African Futures* into an existing and public cultural infrastructure.

Works in the exhibition were able to speak to the concerns of the continent; in particular, the coloniality of power and its impact on knowledge systems. With Kiwanga, Mukhendi and *Disrupter X* in particular, who re-imagine the power dependant archival relationship between Africa and the West; using performed objects to take us actionally into this encounter. These objects, like traditional African objects, demand a move towards participatory engagement and away from representation. Thereby exacting responsibility in the future.

Important personal encounter with technology are further played out. Jepchumba, Pakathi, Zakaria and Bopape – each in their own way appear at the border between the African body and the information space. This is not a liminal encounter, but an interrogation of systems that distress the function of body and soul.

Much like Simone's 'people as infrastructure', *Post African Futures* draws on an interconnecting infrastructure of peoples and practices; towards an unpacking and critique written for and by the subaltern. This infrastructure is a continent-wide reflection of being that has been premised by sensitive and contextual knowledges.

In the dissertation, the fieldwork and the exhibition, as methods, helped to both inform and form a *Post African Futures* infrastructure. They thereby become formative frameworks, as well as a model for engagement. Both fall to the decolonial turn, asking critical questions in a methodological response. A methodological encounter that acts to challenge the histories of technology at the interstice of modernity and coloniality and this extension into the information age.

Post African Futures resonates Berryman's aims for decolonising methodologies and the illumination of the culturally responsive dimension, namely: holistic contextualisation, long term continuous sharing and dynamic, organic, transformational data. In light of Mignolo and Mudimbe, who view culture as one of few repositories of traditional and alternative knowledges that pertain to Africa; *Post African Futures* locates cultures of technology as a site for knowledge production. Knowledges that not only aim to challenge and heal the histories of modernity / coloniality, but are a source for alternative ontologies. Vitality, the actional methodologies that evolve from these repositories must therefore disobey and shift the trajectory of the globalised information economy and its relationship to regions and cultures in Africa.

5.1.1 Contributions to the Field and Future Trajectories

As described in chapter one, writing this research has been like riding on a wave and simultaneously writing about it. This is most certainly the value of exploring with a community of practitioners in a responsive manner. In looking forward, the work contained under the title *Post African Futures* has spilled far over this dissertation into other developments and new ways of working, not only for myself, but in the communities I have engaged.

The specifics of these are hard to define outside of my own curatorial and development practices, and would require further research with these practitioners and the new players in the field. Yet what is clear, is that the types of actional encounters identified in *Post African Futures* continue as they had before; but asking new questions and evolving critical positions on the role of technology within culture in Africa. What *Post African Futures* and this dissertation has offered is the potential to recognise these actional encounters as significant and critical to knowledge in the field. This identification stands alongside the acknowledgement and positioning held by an understanding of unique *African Culture of Technology*; something which had not previously been done. These together offer scholarship in the field, a new language and position to research, explore and question the roles of technology and culture in Africa.

In the process of offering new positions to the field, this research has opened up new questions. There are many topics touched on in this dissertation that I wish I could have addressed further, but they simply did not fit the frame or scope of what was required of the dissertation. For instance, taking a longer and focused look at technology use and its development during Apartheid era South Africa. I found this particular area (among others) to be largely undocumented and not publically or otherwise engaged by the sector (no doubt there are many reasons for this) and therefore requires further attention. The dissertation research has shown that there is still a good deal to explore in the history and positioning of technology in Africa.

In my own work, at this juncture, the dissertation research has followed significantly into my teaching, curatorial and development work. At the University of the Witwatersrand where the impetus for this research started, I have been able to slowly start shifting a curricular engagement towards a stronger African position on culture and technology. This however still has a long way to go, as the culture of the University and the habits of my colleagues often default to working within a Euro-American scholarly tradition. This dictates scholarly engagement that focuses on literary research, which as this dissertation has shown, can be lacking in adequately representing and interrogating critical positions found

within insurrectionary and vernacular knowledges, which are so vitally required for growth in Africa.

In my attempts to shift curricular engagement it has therefore become important to engage methodological foci that are decolonial, actional and inclusive of vernacular forms. Doing so at the University in its current climate is not easy as it is often incorrectly seen to be breaking traditional Euro-American methods and makes for a further uncomfortable meeting of expert and vernacular forms. In my work, I have been able to explore new methodological encounters in two ways. The first is the *Fak'ugesi African Digital Innovation Festival*⁵⁹ and the second is the start of new digital art theory course that invites a critique of Universities collection of African art, through vernacular knowledges of technology.

The Fak'ugesi African Digital Innovation Festival is an annual festival started by Prof. Doherty, Prof. Dwolatsky and I in 2014. In 2016 I took over the Directorship of the Festival (in first two years prior I had focused on the development of the Festival's Residency and had played a key curatorial role around regional African content). The festival was born out of requirement to develop a platform where young Africans could learn, collaborate and showcase work that relate to regional culture and technology use. Hosted by the Tshimologong Precinct⁶⁰ in Braamfontien - the brain child of Prof. Dwolatsky (interviewed in the Johannesburg fieldwork) - as a University associated, but independent technology innovation hub. Its situation outside of the University is specifically to allow participation by people outside of the formal education environment. The inner-city area where it is located supports a growing community of young creatives and is additionally adjacent to the University. It is therefore well situated to explore the intersection of vernacular and expert knowledge regimes.

The Festival has in the last four years grown from strength to strength and currently has an audience of just under six thousand annual attendees. Its annual program is developed with a community of practitioners and cultural funders who have a vested interest in developing a creative economy that is technology focused. The annual program

⁵⁹ <http://fakugesi.co.za/>(last accessed, Dec 2017)

⁶⁰ "Tshimologong" meaning place of new beginnings in TshiPedi.

varies, but offers events that focus on development, collaboration, learning and critical engagement. Programs and events of the Fak’ugesi are strongly focused on meaningful encounters between digital makers and the public.

One of the festival’s successes has been its Pan-African focus. Since 2015 the festival has had projects that actively brought regional African practitioners together. The festival’s residency for instance, is a month-long residency that mentors three or more digital creatives in the production of new work within a public encounter. Since 2016⁶¹ this residency has focused specifically on young digital creatives from the Southern Africa Development Community⁶², thereby supporting practices that may have previously not been recognised outside of the larger hubs such as Johannesburg or Nairobi. The Festival’s exhibition and game program annually focuses on showcasing Pan-African work, and has been able to annually increase both the volume and quality of this showcase as more young developers and creatives are supported in their practices through the festival and a growing interest in the field.

International cultural organisations that have regional offices across the continent have started seeing Fak’ugesi Festival as an important location for regional collaboration and contemporary cultural development. In 2017 for instance, the British Council ran a project titled *ColabNowNow* for the ten-day period of the Festival, this invited fifteen artists and storytellers from across Africa to work together to explore new positions on culture and technology in Africa. I see this as a direct impact on the value that this research and my work with the Festival has put on the presence and role of unique cultures of technology.

The impact of the Festival in this short time has been immense, even to the point where the British Council in Southern Africa – eager to understand this impact better – have just commissioned an impact report on the Festival. We see this as a clear acknowledgement of the success of the festival and its critical African approach. The festival and the title “Fak’ugesi” are now synonymous with an understanding of technology, art and

⁶¹ With funding from Pro Helvetia and the Swiss Collaboration for Cultural Development.

⁶² Countries include: South Africa, Mozambique, Zimbabwe, Botswana, Namibia, Angola, Zambia, Tanzania, DRC, Lesotho, Madagascar, Malawi, Mauritius, Swaziland, Seychelles.

culture in Africa. This has become more apparent as the Festival in 2017 started receiving a growing list of invitations from regional art institutions in Southern Africa for Fak'ugesi programming⁶³.

The impact of the Festival on the Tshimologong Precinct (its host) has further been important. The attention of the Festival on the Precinct and the visible interest in culture and technology that has grown from the Festival, has led the Precinct towards a greater focus on the support and development of creative technology. Which will require a continued focus on critically engaging the value of innovation in this field for African cultures and knowledges, which I hope Fak'ugesi will continue to do with the precinct.

The new course at the Wits School of Art is the other place where I am bridging the relationship between vernacular and expert knowledge regimes. This course acts to transform an existing theory and writing course aimed at 3rd year and honours Digital Arts, Theatre and Film students. I have introduced a close reading of papers that explore alternative philosophies of technology and positions of the subaltern (some out of necessity are my own writing). With this is an exploratory reading of Eglash's African Fractals, which is used as the core material for an investigation of the African Art collection of the Wits Art Museum. The Museum collection is huge and includes thousands of objects, garments and artworks from across the continent from the last two centuries. Apart from being a fascinating and somewhat fun way (students are allowed personal visits into the collection stores) to learn about the immense history of culture on the continent, the experience has brought up many new questions. For instance, students (engineering and art students) quickly began seeing that the collection was not made with technological knowledge in mind, as the collection does not reflect the diversity explored in Eglash's book and the museum notes on the objects make no mention of the technological attributes of the objects and their cultures. This quickly led to a stronger understanding by the students of how knowledge and power are intertwined, and therefore more critical understanding of the Euro-American archive on Africa.

⁶³ National Arts Festival, Maputo Fast Forward, Centre for the Less Good Idea, Zeitz Museum for Contemporary African Arts and ISEA 2018.

What is most fascinating and has been most gratifying to see, is that the course has proven to give black students in the classes more confidence in how they engage coding and technical challenges. Black students now have a stronger sense of ownership associated to the subject, which goes beyond just being interested in maths or science. Often sitting at the back of the class and in excluded groups, as black students sometimes battle with English language skills and are often uninspired by the continued referral to Euro-American cultures. I have seen students go from a look of uninterested boredom to sheer surprise; visibly sitting on the edge of their seats or moving to the front of the class in the next seminar. I have also found that when students present their research, black students now more quickly take up leadership positions in the respective research groups; both in organising how the research should be done and how it is presented. This has been very satisfying and I look forward to developing on this in further research.

The engagement with the Wits Art Museum collection via the course has sparked a new education project outside of the University too. I recently met a South African woman, Lindiwe Mtlali who uses knitting to teach coding, essentially recreating the patterns that are knitted, into code. She started this when she heard people saying that there were no black female mentors in the tech industry, which disturbed her, as she felt that the skills her grandmother and aunts in the village had, could help teach basic principles in code. In a project that starts this year, I have invited Mtlali to respond to the Wits Art Museum collection – specifically its beadwork and weaving collection. Together we will develop a new workshop series for young learners that focuses on traditional beadwork techniques to teach algorithmic and computational thinking. In this I hope to link the research the University students are doing in the collection into a conversation with Mtlali and the young learners she works with.

I have further proposed taking this engagement with beadwork as a project to the 2018 ISEA. The 2018 event is being hosted in Durban, South Africa – which is the home the Zulu nation - who have a strong history of beadwork and weaving in their culture. In this we are exploring how we will bring not only learning, but a critical conversation about vernacular knowledges into dialogue around digital cultures. This is a year long project, that I hope will become a significant contribution to curricular development. What is exciting is

that it has already started evolving into a larger regional conversation; as I have just started engaging with counterparts in Mozambique, who have a strong history of vernacular knowledge in architecture and mathematical teaching through weaving that draws on making with local and natural materials.

As mentioned previously there is much work still to be done in the field, not only by myself, but by and with a community. Outside of the Festival and the explorations in curricular development at Wits University, I further aim to publish a version of this dissertation, which I hope will inspire others to ask more questions and develop the field.

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Appendix A: Conference Call for Papers



Papers presented in theme sessions 1 to 3 will also be published as peer reviewed papers in a special edition of the Technoetic Arts Journal (published by Intellect).

The 4th session theme "Technology Dreams" invites partners and participants of the Fakugesi Festival and people involved in the development of Technology Arts Festivals generally, to present, reflect and discuss the role of festivals in the development of the convergence of technology and culture.

ABSTRACT SUBMISSION DEADLINE: 6TH OCTOBER 2014

FINAL PAPER SUBMISSION DEADLINE: 3RD NOVEMBER 2014

SESSION THEME 1 |

The Post-Digital Organic

Convened by Prof. Roy Ascott

What can be said of the divide between the engineered and the organic? Are we looking at boundaries between these fields that are shifting and possibly dissolving? Can we speak of an emergent eNature, or should we consider a broader cybernetic model of worldstates, and personal states of being?

These issues raise questions, proposals, and practices in which Nature is invigilated, explored, and creatively expanded by technoetic agencies that artists and scientists employ in their development of new perspectives.

SESSION THEME 2 |

Post-AfroFuture: Art, Culture and Technology in Africa

Convened by Tegan Bristow

Technology, particularly communication technology and digital art is a way to speak to and understand mechanism of engagement between Africa and the globalised West. Here the convergence of technology with culture presents an opportunity to reposition and reassess this relationship in contemporary culture.

Papers are to address socio-cultural or art practices with technology and digital media. There will be an emphasis on South African research, but research from across the continent will be welcomed.

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Innovate, Collaborate, Educate: Art-Technology Education

Convened by Prof. Christo Doherty

What does the challenge posed by the fusion of new technology and art practices mean for creative practice and technology education in Africa? Is this an opportunity for new forms of education that will break with the inherited colonial models which have dominated African institutions of education since Uhuru? Is this kind of education better located outside of existing institutional frameworks, using the web or hackathons or new forms of delivery and collaboration? What lessons can be learnt from innovative forms of technology-arts education in other parts of the world?

Papers that address these issues with a focus on lessons learnt and lessons which can be applied to Africa, from theoretical reflection to case studies of actual practice, are welcome.

\\\///\\\///\\\///\\\///\\\///\\\///}}}}}}}}}} | | SESSION THEME 4 | | {{{{{{\\\///\\\///\\\///\\\///\\\///\\\///

Technology Dreams : A Panel Reflecting on Technology Art Festivals and the Fak’ugesi Digital Africa Festival

Convened by Tegan Bristow

Presentations (not full acadmic papers) that reflect on the development and importance of Digital / Technology Art Festivals.

The panel also acts to invite partners and participants of the Fak’ugesi Festival to present their work and research. The focus in this case should be on the activities presented at the Fak’ugesi Digital Africa Festival, and the role of festivals in the presentation and development of these practice.

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Abstract Submissions: 6 October 2014

- + Title
- + 6 – 8 keywords
- + 300 Word Abstract
- + Contributors Name, Bio Information (100 words) and Bio Photo
- + Contact details and institutional affiliation

Please send your abstract submissions to tegan.bristow@wits.ac.za clearly indicating the session theme to which you are applying. If your paper or presentation is accepted for the conference you will be informed and invited to submit a full paper for presentation and publication.

NB* Final Paper Submission Deadline: 3rd November 2014

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Appendix B: Conference Schedule



A CONFERENCE AIMED AT CREATING A PLATFORM FOR RESEARCH ON TECHNOLOGY, ART AND CULTURE IN AFRICA. TO PRESENT LOCAL AND INTERNATIONAL RESEARCH WHERE TECHNOLOGY AS A CONVERGENT FORM INTERSECTS WITH SOCIO-CULTURAL, DEVELOPMENT AND CREATIVE PRACTICES.

VISIT: CONFERENCE.FAKUGESI.WITS.AC.ZA

- THE PAPERS AT THIS INAUGURAL CONFERENCE ARE BROADLY DEFINED BY TWO PRIMARY SUBJECTS:
- > POST AFRO-FUTURISM - TECHNOLOGY, ART AND CULTURE IN (SOUTH) AFRICA TODAY.
 - > POST DIGITAL ORGANIC - NATURE, TECHNOLOGY AND CONSCIOUSNESS.

DAY ONE - 4 DEC \\\//\\//\\//\\//\\// THURSDAY / MORNING \\\//\\//\\//\\//\\//

REGISTRATION - WITS ART MUSEUM
9:30 - 10:00
 Please note that registration is also where you will get your pass to get access to the Wits Campus through Wits Art Museum.

OPENING TALKS		
10:30 - 12:00		LUNCH
<p>Tegan Bristow <i>Introduction to Fak'ugesi Digital Africa and the notion of Post African Futures.</i></p> <p>Roy Ascott <i>Art as Organism: cybernetic, technoetic, syncretic.</i></p>	<p>Zoe Whitley <i>Today and Yesterday, Forever: negotiating time and space in the art of Mame-Diarra Niang and Dineo Seshee Bopape.</i></p>	

\\//\\//\\//\\//\\// THURSDAY \ AFTERNOON \\//\\//\\//\\//\\//

POST AFRICAN FUTURES - THEORY IN PRACTICE (CONVENED BY TEGAN BRISTOW)
14:00 - 15:30 **TEA** **16:00 - 17:30**

<p>Carly Whitaker <i>Floating Reverie: a networked curation experiment.</i></p> <p>Tabita Rezaire <i>Afro Cyber Resistance: South African Internet Art.</i></p> <p>Keiran Reid <i>BroForce – a South African tour de force?</i></p>	<p>Alette Schoon <i>Digital Hustling: ICT practices of hip-hop artists in Grahamstown.</i></p> <p>Lesely Lokko <i>Cut and Paste (Post-Afro Architecture)</i></p> <p>Sename Koffi <i>LowHighTech! (Woe Lab)</i></p>
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WORKSHOP - VARIABLE THERE: RECONFIGURING NARRATIVE THROUGH URBAN DATA
13:30 - 17:30
VARIABLE THERE: DAY ONE
Narrative & Environmental Sensing Data Workshop with Diane Derr & Law Alsobrook from VCU Qatar Limited participation over 3 days.

DAY THREE - 6 DEC // **SATURDAY / MORNING** //

INNOVATE, COLLABORATE, EDUCATE: ART-TECHNOLOGY EDUCATION (CONVENED BY CHRISTO DOHERTY)	
9:30 - 11:00	TEA 11:30 - 12:30
<p>Alejandro Quintero <i>Consciousness displaced: art and technology education / collaboration for an aesthetic of liberation.</i></p> <p>Anja Venter <i>Hacking Design: creative participation and mobile technologies.</i></p> <p>Christo Doherty <i>Technology Arts Education in South Africa: mutant collaborations.</i></p>	<p>Nina Czeplady <i>Art and Creative Technology.</i></p> <p>Katherine Bull <i>The Art Student as Data Capturer: Engaging multimedia technology in teaching drawing to Visual Arts students at a tertiary level.</i></p>
LUNCH	

WORKSHOP - VARIABLE THERE: RECONFIGURING NARRATIVE THROUGH URBAN DATA

11:00 - 16:00

VARIABLE THERE: DAY THREE
Finalisation

// **SATURDAY \ AFTERNOON** //

POST DIGITAL ORGANIC - THEORY IN PRACTICE (CONVENED BY WAYNE REDDIAR)	
14:00 - 15:30	TEA 16:00 - 17:30
<p>Pier Luigi Capucci <i>New Perspectives of Nature and Life.</i></p> <p>Quanta Gauld <i>Empathy Beyond the Human: interactivity and kinetic art in the context of a global crisis.</i></p> <p>Gianna Angelini <i>Learning from Nature: what about new educational perspectives?</i></p>	<p>Sita Suzanne <i>Excavating the Ghost from the Meat Covered Skeleton: an aesthetic engagement with technologically mediated medical imagery.</i></p> <p>Blanka Domagalska <i>Liminality and the Emergence of an Integrated Nebulous Being.</i></p> <p>Seth Riskin <i>Light of the Body, Light of the Mind.</i></p>

CLOSING DRINKS & WORKSHOP VISUALISATION PRESENTATION

17:30 -

Please join us for closing drinks and the presentation of environmental data-narratives of Johannesburg produced during the 3 day workshop "Variable There". Venue TBA

* Please note: tea / coffee / water and a small snack will be provided outside the conference venue at scheduled tea times. In the scheduled lunch breaks however, lunch will **not** be provided. There are various places in easy walking distance of the Wits campus to buy inexpensive and healthy lunches, we recommend the following:

- + WAM Cafe - Wits Art Museum.
- + Love Food Kitchen - 4 Ameshoff Street, Braamfontien.
- + Post - 70 Juta Street, Braamfontien.

Conference and publication produced with support from:



Appendix C: Exhibition Press List

Press List for *Post African Futures* Exhibition, Goodman Gallery, 2013.

Author /Newspaper	Title	Page No.	Type	Date	Scanned
Sean O Toole – Frieze: Contemporary Art and Culture. (International)	Screen Presence	25	Review	September 2015	YES
Art Africa – Art Africa, Issue 01	Post African Futures	198 - 201	Review & Curator Comment	September 2015	YES
Zodwa Kumalo-Valentine – Mail & Guardian http://mg.co.za/article/2015-05-21-african-digital-art-in-the-age-of-globalisation	African digital art in the age of globalisation.	4 – 5 Double Spread	Review	22 May 2015	YES
Sue Blain – Business Day Live	Glimpse an Africa of ones and zeros at the Goodman Gallery		Review	16 May 2015	YES
Chris Thurman – Business Day Live - http://www.bdlive.co.za/opinion/columnists/2015/05/29/half-art-artists-get-beyond-having-a-go-at-coconuts	Half Art: Artists get beyond having a go at coconuts.		Review. Comment & Analysis	29 May 2015	YES
Garreth Van Niekerk – City Press	African Art: Black to the Future		Review	20 June 2015	YES
Diane DeBeer – Sunday Independent http://beta.iol.co.za/tonight/news/international/your-chance-to-dial-in-to-a-digital-africa-through-art-1860364	Your Chance to Dial in to a Digital Africa Through Art		Review	19 May 2015	YES
Chris Thurman Half Art Column on Art http://christhurman.net/art-and-culture/item/half-art-othello-and-post-african-futures.html	Half Art: Othello and Post African Futures		Review	28 May 2015	
Kagiso Msini – This is Africa (International) http://thisisafrica.me/life	The Promise of Futurism: Part 1		Review	July 2015	

Post African Futures by Tegan Bristow

style/the-promise-of-futurism-part-1/					
Black Nation http://blacknation.co.za/group-show-at-goodman-gallery-curated-by-tegan-bristow-post-african-futures/	Post African Futures		Listing		
The Fluss http://thefluss.co.za/post-african-futures/	Post African Futures		Listing		
Between 10 & 5 http://10and5.com/events/post-african-futures/	Post African Futures		Listing		
Nisibi Institute – Lagos http://nsibidiinstitute.org/portfolio/post-african-futures-exhibition-joburg/	Post African Futures		Listing		
Artsy https://www.artsy.net/show/goodman-gallery-post-african-futures	Post African Futures		Listing		
Arthrob http://artthrob.co.za/event/post-african-futures/	Post African Futures		Listing		

Appendix D: Papers Published

The following are pre-published (final edit) versions of the papers published. Please respect the copyright of the published works in citation or further reference.

Bristow, T. (2013). We Want the Funk: What is Afro-Futurism for Africa. In N. J. W. Keith, Zoe (Ed.), *The Shadows Took Shape*. New York, USA: Harlem Studio Museum.

Contrary to what the term suggests, the origins of “Afrofuturism” has very little to do with being or living in Africa and everything to do with early explorations of cyberculture in the West. Cue Sun Ra, techno mash-ups of DJ Spooky and the African-American in outer space.

Afrofuturism uses science fiction and cyberculture in a speculative manner, just as cyber-feminism does.⁶⁴ It is an escape from the externally imposed definition of what it means to be black (or exotically African) in Western culture, and cultural rebellion drawing on technoculture, turntables and remixes as technological and instrumental forms. By placing the black man in space, out of the reach of racist stereotypes, Afrofuturism allows for a critique of both the history of the West and its technoculture.

When addressing Afrofuturism and its influences on contemporary cultural practices in Africa, do we need to be conscious of these roots, or are we looking at something else entirely? The practices that refer to being of a contemporary Africa presented in *The Shadows Took Shape*, reflect something new to me—digital and technology culture augmenting already existing sociocultural awakenings occurring in contemporary Africa. In research conducted recently in Nairobi, Kenya, it became clear to me that the relationship between innovative practices and social change is very strong. This drive may be supported by a growing ICT4D (Information and Communication Technologies for Development) scene, but comes from stronger, more traditional roots. There is immense sociocultural cohesion between families and communities in Kenya that often goes beyond family to fill roles in which government falls short of meeting people’s needs⁶⁵.

But before I over define new forms and iterations of Afrofuturism, let me take a closer look at its roots. Possibly the most popularly recognizable visual and musical influence on Afrofuturism was the 1970s funk collective Parliament Funkadelic, which brought images of fantastic universalism and the “black man in space.” The album covers of musical entities under the Parliament Funkadelic banner, designed by Mexican-born artist Pedro Bell, not only inspired the more speculative and critical forms of Afrofuturism, as seen in literary criticism in the early 1990s, but also have been repeatedly referenced themselves for their imagery and idealism. These covers had a huge influence on many African-American artists who encountered them as children or young adults. The band’s influence still resonates across the globe and continues to influence African musicians. Most recently, Kenya’s Just a Band and South Africa’s Spoek Mathambo have begun to adopt some of the

⁶⁴ Cyberfeminism is a term coined by Sadie Plant to critique and theorize with Technoculture, new and communications media from a feminist stand point. Used here as cyberfeminism defined by Donna Haraway in “A Cyborg Manifesto: Science, Technology and Social-Feminism in the Late Twentieth Century” *Simians, Cyborgs and Women: The Reinvention of Nature* (New York: Routledge, 1991).

⁶⁵ Drawn from writers own PhD research on a culture of technology in Africa, cases in Nairobi and Johannesburg, September to January 2013. Also see - Omoka, W.K in “Applied Science and Technology: A Kenyan Case Consideration of their Interrelationship”. *Culture, Gender, Science and Technology in Africa*. Ed. Prah. K.K. (Namibia: Harp Publishers, 1991).

same visual mechanisms, opening doors for a new imagining and exploration of what it means to be in contemporary Africa.

Aside from the futuristic fantasy of universalism epitomized by Parliament Funkadelic performances, Afrofuturism, as a critical and speculative form in the United States, was a product of the 1990s. The notions of the Alien and the Other have been explored as ways to address marginalization and identification. Erik Davis, the author of TechGnosis: Myth, Magic, and Mysticism in the Age of Information (1998), states: “This loosely gnostic strain of Afro-diasporic science fiction emerges from an impoverished confrontation between modern technology and the prophetic imagination, a confrontation rooted in the alienated conditions of black life in the New World.”⁶⁶ Afrofuturism grew critically from Afro-diasporic science fiction to include the subcultures of hip-hop and the remix. The technical possibility of remix through digital and shared media not only revolutionized these forms, but also allowed them to negotiate aesthetically the concerns encountered in a culture of globalization.

The rise of networked communication and greater use of digital media in the 1990s led to an intensive readdressing of a global techno-culture and how it was influencing cultures worldwide. Donna Haraway’s “A Cyborg Manifesto” (1991)⁶⁷ reflects a similar speculative criticism found in Afrofuturism. Haraway explains that in science fiction and cyberculture, the female, the Latin and the African American are depicted as porous—always holding the potential of hybridizing across fantastical human/alien boundaries and therefore interchangeable with the Alien. For Haraway, the porous form is contrasted to the impenetrable culture of singularity and individualism typically found in the postwar West. Haraway identifies the fear of the hybrid as a direct cyber-feminist critique of the impenetrable ivory tower of the heterosexual white male. This further criticizes the centralized and outward-looking approach to techno-culture in the West.

It is not surprising that Haraway’s sentiments are found in Kenya-born filmmaker Wanuri Kihau’s short science fiction film Pumzi (2009). The primary character, Asha, is a female curator/archivist who, activated by her dreams and work, risks her safety and that of her world to nurture a plant in a postapocalyptic Africa. It is a story of rebellion in the face of a too rigid and spiritually poor vision of the future.

Very little has been written regarding African technology culture’s relationship to globalization, but I have found similar sentiments in a paper on narrative traditions, “Protocols for Experiments in African Science Fiction,” (2009) by Delphi Carstens and Mer Roberts.⁶⁸ The authors make reference to Haraway, stating: “Breaking the ‘boundary between physical and non-physical,’ between the past and the future, cyborgs are as much physical beings as they are ‘ether, quintessence in [their] narrative concerns of transgressed boundaries, potent fusions, and dangerous possibilities.”⁶⁹ When viewed in this light, we can easily see a female “cyborg” in Wangechi Mutu’s collages and animations. Mutu (also of Kenyan origin) moves her explorations of the female figure in legend or lore toward what can be called an “organic cyborg,” as she explores the East African myth of nguva, which shares similarities to the Drexciya myth of a black Atlantis and

⁶⁶ Mark Dery, 1999, blog post and message thread titled “Black to the Future: Afro-Futurism 1.0,” Pyrotechnic Insanitorium Blog, accessed 17 July 2013.

<http://web.archive.org/web/19991023003219/http://www.levity.com/markdery/black.html>.

⁶⁷ Donna Haraway, “A Cyborg Manifesto: Science, Technology and Social-Feminism in the Late Twentieth Century”.

⁶⁸ Carstens, D & Roberts, M. “Protocols for Experiments in African Science Fiction.” Scrutiny 2: Issues in English Studies in South Africa. Vol 14, Issue 1. 79 – 94. 2009. (Pretoria: Routledge with UNISA Press).

⁶⁹ *Ibid*, 84.

the Western myth of the siren or mermaid. ("Nguva" is the Kiswahili word for the dugong, a manatee-like animal often considered to have been the source of mermaid myths.)

Carstens and Roberts's paper closely addresses African fiction in relation to the diasporic form of Afrofuturism that links science fiction and myth to a spiritual African past. "African writers [including Ben Okri and Wole Soyinka] may consider shifting to a marginalized genre in order to bypass the colonial (and postcolonial) readings that tend to reduce the entire oeuvre of African fiction to a factual account of sociological reality."⁷⁰ They identify the genre as more closely linked to traditional and oral mythological narratives seen in the writing of Vusamazulu Credo Mutwa, the Ghanaian folklore of Anansi or the Dogon creation myth that have long had a relationship to the Alien. They believe that these forms of storytelling, as found in the work of Kahu and Mutu, are necessary in the contemporary age⁷¹ "to weave and disseminate fictions relevant and credible to modern cultural dialogue."⁷²

I believe that the mechanisms of Afrofuturism extend those found in cyber-feminism by proposing destabilization and decentralization in their aesthetic. In scholar Geert Lovink's interview with Ghanaian/British writer and musician Kodwo Eshun, Eshun states:

We found that we could use all this material as speculative playground and have an adventure of concepts . . . Afrofuturism as a transversal tendency running through popular culture, acting to destabilise what people thought black identity was, what pop identity and culture identity were. There was not only a compulsory pessimism in theory when I started. There was also a compulsory ghetto-centricity of black popular culture. Always this hermeneutics of the street.⁷³

Decentralization is implicit in the processes of the Digital, particularly in its use as a creative medium. Most 1990s Internet art was made to reengage the Internet from a decentralized vantage point, to question its authoritative organization. Networked media is created on Western protocols of development and information exchange. In my experience, Global South artists will rephrase these strict protocols to attempt to be understood in these realms, and as a challenge to the mechanisms of an information age.⁷⁴ Many of the artists presented in The Shadows Took Shape, though not strictly network-oriented, show the potential offered by the Digital to reshape the media-heavy imagining of our time. The mechanisms of the remix and the hybrid are found in Afrofuturism as investigations into breaking notions of identity. These mechanisms are being reexplored as new intentions and outcomes.

Khalid Hafez uses the same mechanism to bring to the fore the memory and understanding of Egypt prior to its fundamentalist influences. Hafez may make fun of the heroic and iconic, but by the same token, he encourages a reimagining of Egypt based on a strong cosmopolitanism in its past. For him, the Digital not only allows for the hybrid, but also begins to destabilize the presentation of time in his work. African philosopher and priest John Mbiti speaks of the "non-time" in African culture: "The future in African thinking is virtually absent . . . actual time is therefore what is present and what is past . . . since what is in the future has not been experienced."⁷⁵ This grasp of

⁷⁰ Ibid, 80.

⁷¹ Wanuri Kahu makes similar associations to stories her mother told and other African myths in her TEDx Nairobi talk, 2012, <http://www.youtube.com/watch?v=PvxOLVaV2YY>. [accessed 15 July 2013].

⁷² Carstens & Roberts, "Protocols for Experiments in African Science Fiction." 91.

⁷³ Lovink, G. 2000. "Everything was to be done. All the adventures are still there." A Speculative Dialogue with Kodwo Eshun. [archived online, accessed 17 July 2013, <http://www.nettime.org/Lists-Archives/nettime-l-0007/msg00112.html> .

⁷⁴ Tegan Bristow "Rephrasing Protocol: Internet Art in the Global South," (presentation, Southern African Visual Art Historians Conference, Johannesburg, 2010).

⁷⁵ Carstens & Roberts, "Protocols for Experiments in African Science Fiction." 83.

a future/present is not the narrative of a futurist utopia found in Western culture, but rather a renegotiation and destabilization of the present.

Pamela Phatsimo Sunstrum, a young Botswana-born visual artist, in her paper “Afro-mythology and African Futurism: The Politics of Imagining and Methodologies for Contemporary Creative Research Practices” (2013) shares my sentiments in differentiating these new African practices from Afrofuturism.⁷⁶ My motivation for this is largely due to the fact that Afrofuturism is rooted in African-American culture and should be respected for this, and that the term has, for many Western film critics and curators, simply come to mean “an African Science Fiction,” which I have clearly shown it is not. Phatsimo Sunstrum prefers the term “African Futurism,” which distinguishes the African strain of creative practice from Afrofuturism and allows it to be understood as a reengagement of the mechanism of Afrofuturism. Of “non-time” in African Futurism, Phatsimo Sunstrum states how the “subtle implication of how imagining the future in the present tense conjures real possibilities for re-seeing the everyday present.”⁷⁷

South African DJ and music producer Spoek (pronounced “spook”) Mathambo has declared, “South Africa is such a complex cultural space, and I’m not really sure ever where I fit into it.”⁷⁸ Mathambo’s performance persona is based on a character from a 1980s South African television horror series. He states that this imagined form represents an attempt to identify a unified hybridity of self. He grew up surrounded by various styles and genres of music, a global mash-up of forms. Using the semi-science fiction horror narrative or “horror tactics,” as he puts it, Mathambo is able to break away from a stereotypical understanding of what it means to be a black South African. He creates carefully, and with a good balance of irony and seriousness, the possibility of a cultural engagement that looks past the apartheid struggle and the political traditionalism to which many South Africans are culturally tied. However, his engagement is not a dismissal of African cultural forms, but a contemporary and healthier reimagining of the culture as it stands.

It is clear that the aesthetic formed in Afrofuturism still flourishes in these and other, still-to-be-written-about contemporary African iterations. It is also clear that these examples are new iterations of the destabilizing and a techno-oriented aesthetic of Afrofuturism. These artists engaging in African Futurism present it not only as a way to move past Western notions of a dystopian Africa, but also as a critical take on the traditions and politics of a continent with a desperate need to encounter its contemporary self. In the words of Phatsimo Sunstrum, “It means neither staying in the box, nor thinking outside of the box, nor yelling at the box, but transcending the box entirely.”⁷⁹

⁷⁶ Pamela Phatsimo Sunstrum, “Afro-mythology and African Futurism: The Politics of Imagining and Methodologies for Contemporary Creative Research Practices”. *Paradoxa: African Science Fiction*, Vol. 25. n.p (prior to publishing). 2013. (USA).

⁷⁷ *Ibid*, n.p.

⁷⁸ Spoek Mathambo, 2011, Lecture at TEDx Soweto titled “The Scare Tactics of Spoek Mathambo” (Soweto, South Africa), accessed 17 July 2013. <http://www.youtube.com/watch?v=5X517T2muuM&feature=youtu.be>. [accessed 15 July 2013].

⁷⁹ Phatsimo Sunstrum, “Afro-mythology and African Futurism: The Politics of Imagining and Methodologies for Contemporary Creative Research Practices”, n.p.

Bristow, T. (2014). Cultures of Technology: Digital Technology and New Aesthetics in African Digital Art. *Critical Interventions: Journal of African Art*, 8 (3). DOI: <http://www.tandfonline.com/doi/full/10.1080/19301944.2014.975509>

Introduction

Questions directed towards the rapid and increasing uptake and use of mobile phones across the African continent, are usually asked by researchers of technology development and innovation. Why and how are asked by communication companies, particularly in trying to secure more subscribers and selling more services. My interest and focus is in looking deeper at the aesthetic impact of these media on socio-cultural practice in East and Southern Africa. In this I am attempting to understand the shift not only of the impact of digital and mobile media on regional urban culture, but additionally in trying to understand the aesthetic responses to this influence. I understand these aesthetic responses in light of the digital, potentially being a medium of cultural globalisation that may hold neo-colonial objectives at its core.

In this article I address emerging aesthetic engagements with communications technologies by exploring particular works of art and uniquely African culture practices that exist around new mobile and digital practices; these observations are drawn from research conducted in Kenya and South Africa.

The division of North Africa and Africa South of Sahara seems to be of some significance and importance to social scientists addressing the influence and impact of communications technology in Africa. According to Grosskurth in *Futures of Technology in Africa* this distinction is applied because; "North Africa is economically and techno-logically much more integrated with Europe. Also, the drivers of technological change, opportunities and threats differed substantially between the regions north and south of the Sahara." (9). This statement makes clear the impression that technological advance is understood by European researchers to be tied to political and subsequent economic stability. While this statement is largely generalised in position, it does bring into question the importance of infrastructure and access when addressing the influence of communications technologies on African cultures. It is true that speed and accessibility play a major role in how communication technology is both used and received.

Grosskurth further indicates that for Sub-Saharan Africa, "[d]espite these developments [in communications technology], the global technological gap is most persistent, poverty is denser than else-where..." (9). Where this understanding is again far too generalised in its position, it does bring into focus one of the reasons why mobile media has had such a rapid up take in Africa. Mobile phones are easily accessible and affordable for almost all income groups in the region, making it one of the first communications technologies after the wireless radio to have such widespread use. In light of this it is important to understand that this low-income penetration is vital to understanding the cultural shifts with digital technology use in these regions.

It is significant to identify that the definition of economic poverty being referred to here is not the image memorialized through the lens of a world aid organizations, the starving child and drought-stricken landscape, but rather in this rapidly developing economy it is a dynamically evolving image of African urbanism, and one that is at the core of what now drives innovation with communications technologies in these regions. Grosskurth reiterates: "[t]he combination of a highly dynamic region with excellent opportunities for development on the one hand, and a desperate need to improve the quality of life for a large part of the population on the other, makes Africa an exciting and worthwhile project..." (9). Where Grosskurth and other researchers in the fields of

communication technologies are concerned with technological innovation to solve unique problems or appropriating Western technologies to better suit an African context; I believe that a form of 'aesthetic innovation' surrounding digital practices is occurring at cultural level. This 'aesthetic innovation' cannot and should not be completely divorced from 'technological innovation' as it has broader socio-cultural reach. Yet this aesthetic innovation may be important to better understand the nuanced relationship between technology and African cultures in order to see the weight of local socio-cultural concerns being played out on a global platform. In understanding this, the task is to create a distinction between these new practices and those of a 'globalisation' of culture. It is in light of 'aesthetic innovation' that I introduce the notion of a culture of technology. Part of the understanding that I have evolved from research in both East and Southern Africa is that each region has its own culture of technology, which is embedded not only in how technology is accessed and used, but is strongly linked to the regions' histories with communication technologies and how they have played a part in not only assisting but also restricting cultural engagements. A region's culture of technology is also strongly associated to practices of knowledge transfer and exchange in each region, each unique to the way those cultures organise themselves in social hierarchy and further, towards their communities as sources of cultural knowledge.

Nairobi and Johannesburg

In Kenya and South Africa the kind of cultural and ethnic diversity found across the continent is found in as diverse forms in the cities of Nairobi and Johannesburg. For the purposes of research I have chosen to focus on these two urban centres, the economic hubs of each respective country. These urban centres are important to understanding the use and influence of telecommunications in the regions; and these two cities are effective hubs for growing mobile cultures. As African urban centres, Nairobi and Johannesburg are very similar and differ most prominently in size, Johannesburg being the larger. They are both extremely cosmopolitan, bringing together not only diverse local ethnic groups, but are home to African immigrants from countries such as Somalia, Ethiopia and Sudan in Nairobi and Zimbabwe, Nigeria, DRC and Mozambique in Johannesburg. They are both commerce driven cities and are population dense. They both have sprawling middle class suburbs as well as what are known in South Africa as townships and in Nairobi as slums. In addition both have urban cultures born out of the diverse ethnic and language groups living closely together and battling similar economic circumstances. It is due to the latter urban diversification that new cultural engagement or what I am calling aesthetic innovation is developing around mobile and digital media.

The influence of foreign African communities settling in each city is particularly important to the communications technology cultures in these cities. The influx of foreign Africans into Johannesburg for instance, has transformed how the Internet is used and has been adopted into the lower income parts of the city centre. Here communication technologies are viewed as being strongly tied to practices influenced by immigrant and migrant communities. These communities present communications technology as a mechanism to expand on and link to cultural engagement in the diaspora (Bristow & Hobbs, 2007). In Nairobi, away from the lower income areas, a great deal of development and innovation practice is attributed to a relationship to the diaspora, between Kenya's living locally and those abroad, bringing together experiences of technology development to strengthen and support local cultures. The iHub in Nairobi and Jephumba Thomas's African Digital Art Network (www.africandigitalart.com) being a key examples of a regeneration by the diaspora of local design and cultural practices through communications technologies.

Media on the Mind

The shifts and growth areas in communication technology locally are most prominent at a grass roots level. Through interviews with technologist and artist in Nairobi and Johannesburg I have begun to unpack how the development in the technology environment is understood in local cultures of technology. What has been resounding is the consistency and coherence of this understanding.

The answer from every interviewee in Nairobi to “what the most influential technology development on Nairobi society has been” and I quote African Noir online comic book writer Chief Nyamweya “[...]without a shadow of a doubt it is MPESA”. (Nyamweya Interview, 2011). MPESA is a mobile banking system developed through practices at places like the Nairobi iHub, technology and innovation hubs supported by professionals locally and in the diaspora. In essence MPESA works like cash, you have an MPESA account that is linked to your mobile phone number and you can add money too this account and use it to pay absolutely anybody with a mobile phone. It is important to understand that the majority of Kenyan’s were un-banked prior to the invention of MPESA. Now a Kenyan can pay to have her shoe repaired on the street corner and send money to her cousin in Mombasa from the very same place on her front step. Yet the most importantly aspect of MPESA is that it has revolutionized an understanding of what the mobile phone, as a reasonably affordable device, is capable of.

A small example of this is a new way of selling music developed by a project called Mdundo (meaning ‘drum beat’ in Swahili) which works on the same principle as topping up your mobile call time through a scratch card. Mdundo was developed by a technology start-up space 88 MPH (based both in Cape Town and Nairobi). The Mdundo system focuses on quick access to music to the mobile phone, the most common media device in Kenya. Mdundo works within a low-income environment, firstly by directly targeting the only media device most listeners can afford; and secondly it is a small amount of money paid each time a song is bought. This habit of buying only what you need is common practice in Kenya, particularly around mobile phone use. Most low-income earners will only top up their call-time for what they will be using short term, i.e. to make a call or send a message. It therefore makes sense that the buying and access pattern should be the same for acquiring and sharing music.

The artist on this particular Mdundo scratch card (Fig. 2) is Juliani a popular hip-hop artist who grew up in Kibera slum in Nairobi. His relationship with Kibera is still deeply ingrained in his practices, and it is his use of innovative technology practices that links him most directly to his community. Not only did he help pilot the Mdundo project, but uses social media to organize his fans to help him on various social development projects (small organized events in which he helps less fortunate members of the community see <http://studioang.tv/work/juliani-the-roadtrip/>). The relationship between innovative technology practices and social change is particularly prominent in Kenya. This relationship it is understood to come from a strong ICT for development movement supported by the diaspora, but may in fact build on stronger traditional roots as there is an immense and long-standing tradition of social-cultural cohesion between families and communities in Kenya, that seems to have been naturally extended by communications technologies. To quote artist and filmmaker Muchuri Njenga:
... people are always open to ideas, that is the one good thing about Nairobi, then everyone will like it and go with it, and understand that this is the soul of Nairobi. [] We don’t need to look at style, technical details and how to do things and what is trendy. I think we spend time with people to understand them in conversations. And maybe this is what makes you African. (Njenga Interview, 2011).

Understanding aesthetic practice around digital communications in Nairobi is to understand the core of these traditions and understand how a nodal communications form has augmented

them. Nairobi, unlike Johannesburg does not have a strong contemporary art scene, rather arts practice is found through narrative forms and filmic or photographic media, all of which are rooted in a communal practice of socio-cultural knowledge transfer as a cultural activity.

An example of a similar actional community form can be seen in the Slum TV project started by Kenyan artist Sam Hopkin. Slum TV was inspired by what he calls “video groups” in Kibera and Muthare slums: “...someone has a little house...[and] fifty to two hundred [people will get together] and they watch football or Hollywood or Bollywood, Nollywood.” (Hopkin Interview, 2012) (see: <http://www.youtube.com/watch?v=bruvlhvQBVg&list=PL4C2517871817C3B6>). With this informal cinema as a starting point Hopkin started a TV production group called SlumTV, made up of young men and women living in the slums who make small local features. They are essentially newsreels about these communities, Hopkin states “maybe four or five minutes long about certain things happening and a drama. A fictionalized version of something; which is actually proving to be more interesting than a documentary.” (Hopkin Interview, 2012). Beyond an extension of social cultural form, it is the shift in content that is significant for SlumTV. For many years Kenyans have predominantly been consuming media from the rest of the world. With new, available and cheaper technologies there is shift towards producing and the ability to contribute content in the world rather than just consume it. (The SlumTV productions are available online and Hopkin is putting together a collection.)

In interviews conducted in Nairobi, when asking interviewees which technology previous to the mobile phone (and this was not exclusive to media technologies) had the most impact, 20% answered “the railroad” and 80% “radio or television”. Through the colonial period and the very restrictive Moi Regime, radio literarily linked communities together, not only was it entertainment, but for many it was a source of education and a shared voice. When interviewing young filmmaker Muchuri Njenga, he stated that radio had replaced the tradition of elders in the community, where information about the world both spiritual and practical was conveyed. Njenga speaks of a lost generation of older people (80 -100 years old), and a loss of information with them. He gives the following example: “They were involved in the community as people who taught...like look at that tree and what you get from there, is it food, medicine, shelter and all that...right now, they are just using it for décor.” (Njenga Interview, 2011). I was drawn to Muchuri Njenga not only because of the quality of the documentaries he is producing about the social changes in Kenya, but because of a short experimental film he created which is titled Kishwateli (see: <http://studioang.tv/work/kichwateli/>). Njenga states the following on Kichwateli: I was feeling that our parents generation lived at a point in a society (Moi Regime) where [they we]ren’t allowed to criticize or analyse or come up with things and say why? And us, we are living in a technology [time] where we are coming out and coming in... you are allowed to interact more. And so, there is this curiosity of wanting to know where [we] have come from and where [we] are heading. (Njenga Interview, 2011).

Kishwateli translates into English as “television head”. Kishwateli is a narrative about a boy who comes into the city from outside, he falls asleep in the slums and wakes with a television as a head, we then watch him move around the city and see how people respond to him. A symbolic critique of a media driven society, Njenga states, “I was trying to come up with a character that [would] project and see a hundred years from now, where [we] want to see ourselves in Africa and what kind of content people would be putting out there.” (Njenga Interview, 2011). In line with this, Njenga spoke of a traditional spirit that represented taking from the past into the present as a way to understand what would happen in the future. This is a strong link to the actions of traditional culture and traditional knowledge forms and something that re-appears more as this new generation of Kenyans begins to grapple with the role of technology and community in their society.

Cussing the Aesthetic

The interviews that I conducted in South Africa indicate the same huge influence of television and radio but unlike Kenya, South Africa during the apartheid had set up its own broadcasting company. Prior to 1994, Afrikaans and often apartheid propaganda drove this broadcast, but post 1994 the content is representative of a larger popular culture, and most often tends towards populist talk shows and dance shows, and the presentation of political and government agendas. It is still government run and therefore presents few alternative views, making it a difficult and criticized place for cultural engagement. South African, unlike Kenya does however have a strong contemporary art and design scene, which like elsewhere in the world is mostly driven by commerce, but does allow for experimental and critical discourse. It is here that the duo of Jamal Nxedlana and Ravi Govender come into focus. Both are fashion designers and have become interested in responding to emerging urban traditions in street cultures in Soweto Township. Soweto was historically an Apartheid township, but is now seen as a growing middle class area interspersed with slums.

The particular work I will be addressing started when Nxedlana made a responsive video on the culture of Izikothane (see: <http://www.youtube.com/watch?v=L4Pb2ve0bVQ>) a posturing type of public performance that belongs to the street culture of townships. In Izikothane there are competitive groups who will dress and perform in the most 'expensive' European and Us labels in clothing and then begin destroying them by burning them along with large amounts of money. It is a presentation of wealth that is meant to evoke both envy and horror in the onlookers. Izikothane is an interesting social phenomenon that has grown out of contemporary youth culture, spawned by the extreme divides in wealth in the country and particularly in diverse urban areas. Divides that are further reiterated through broadcast media and product advertising.

Nxedlana and Govender, started as a collective of four individuals called CUSS Group, that began an online fashion magazines (see: http://issuu.com/cuss/docs/cuss_april) and grew from there to working with video in what they call webisodes. Both these forms gained them a great deal of attention, as they responded to these haphazard street cultures in their productions. Popularizing it with a contemporary arts and experimental cultural scene. What most interests me however, is the aesthetic of the video, in particular the works under the titles Recovered Files (see: <http://vimeo.com/54751869>), these are made up of interviews inter-dispersed with found footage. When interviewing Govender, he stated that being online had shifted their aesthetic from referencing the influences of television, to addressing the online world. Govender added "we have been online a long time and that is how we now reach people, but we have had to tone that down often because of the restrictions and limitations of the Internet here". (Govender Interview, 2013) For CUSS Group the aesthetic of their media is a direct influence of the quality of media being used and shared in these communities. Govender states:

...these cultures mostly communicate via cell phone, and that is a large and important part of South African culture that we access. They don't have access to their own laptops, so it is cell phone dot mobi sites and BlueTooth as a form of exchanging media. They are not the most technologically advanced tools but they work in this current socio-political climate, so it has reference to real life. (Govender Interview, 2013)

I understand the work of CUSS Group to be directly reflective of the media environment in Johannesburg. The broken, low-fi quality of their video is reminiscent of what Michelle White refers to as an "aesthetic of failure" and is a mirror to the type of media circling in these urban environments, both its content and form.

Another South African artist working with media and making reference to very similar forms of disjuncture and glitch is video and installation artist Dineo Sheshe Bopape. Bopape's use of the broken and the glitch speaks less of social commentary and digital media, rather Bopape has begun to explore digital media as communication form, one that represents a communication to ancestors

and the past. Unlike CUSS group, Bopape sees the medium as a representational membrane of sorts, moving between what is seen and what is not seen, and the conscious limits of her very own self. We see in *I am Sky* (influenced by Afrofuturist Sun Ra) Bopape manipulating the digital video in an out of a metaphorical materiality, allowing the image of herself to become part of the membrane of the video itself, as if she were shifting into the media and becoming part of its digital non materiality. Bopape seems to present digital media as a metaphorical spiritual medium, letting it extend and stretch beyond the reaches of a single place in time and space.

Here again, though very differently, the implication of communication and its context in Africa is challenged through an aesthetic engagement with digital media. These actions with communications media are begging us to question the deeper socio-cultural concerns of communications and media. Asking us to look closely at how these media interweave with African socio-cultural and aesthetic traditions.

The artworks and cultural engagements present in this paper reflect not only African socio-cultural concerns with digital media to the rest of the world, but more importantly within the communities themselves. As seen in Nairobi, new media and cultural practices with communication technologies allow for self-driven exploration and critique, an area in broadcast media that has long been the domain of an authoritative other. Working with innovative technology is also an acknowledgement of emergent aesthetics that are vital to how cultures in these regions begin to present themselves to the world, and as Govender points out, it additionally reflects a strong understanding of the socio-political and socio-cultural climate. Though they are quiet diverse, it is important to acknowledge the role of the street level and pop cultures in Africa and how their particular needs are driving forward the cultures technology and aesthetic innovation.

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To introduce the Fak'ugesi Digital Africa Conference and the Fak'ugesi Festival that preceded it; the first task is to understand Fak'ugesi an urban derivative of a Zulu term that translates directly to "turn on the power" or "the electricity". More significantly fak'ugesi is shouted out at dance parties, encouraging those movers to move that much more.

The annual Fak'ugesi Digital Africa Festival was inaugurated in 2014 by the Digital Arts Division of the University of the Witwatersrand and the Tshimologong Precinct, which is Johannesburg's first technology development hub being built just off the University's campus. Christo Doherty and Barry Dwolatsky the respective heads of these entities, along with a team of partners, brought Fak'ugesi Festival into being to activate what is a growing technology and youth culture hub in Braamfontein, Johannesburg. The festival's aim is to curate exhibitions, workshops, residencies and electronic music events in promoting the fusion of creative and technological development in South Africa with an eye on Africa at large.

As a steering member of Fak'ugesi and organiser of the conference I framed the call for papers in thinking towards a possible theorisation of technology use in art and culture practice in Africa. My own research looks specifically at practices and uses that strongly reflect the implementation of aesthetic mechanisms which show what I have begun to call African cultures of technology, distinct in their histories and implications for local cultural engagement.

African specific knowledge around technology is currently dominated by the ICT industry, focusing on market development and somewhat romantic notions of 'indigenised innovation', where an understanding of the cultural implications and evolving aesthetics are too broadly understood. Also within the field of African contemporary art; technology use is a means to an end rather than an embedded cultural phenomenon with very particular aesthetic implications.

In my research I ask people to describe African technologies that may have previously had as much of an impact as for instance the mobile phone. And repeatedly, I get answers around technologies of healing and soothsaying; social algorithms; even pattern development in African fabrics and hair as forms of knowledge and communication. These answers challenge our understanding of culture and technology, asking how Africa can contribute to knowledge in this field.

The Fak'ugesi conference had both a regional and international focus. British media arts pioneer Roy Ascott led contributions under Post Digital Organic, in which he invited papers that addressed the organic as a technology in it's own right. For a full view of the conference, presenter bio's and abstracts can be accessed at <http://conference.fakugesi.wits.ac.za>. As I cannot talk to all of the papers, I will highlight papers of interest, particularly those are more specifically in my field under the heading of Post African Futures and those that will resonate with the contemporary art world.

Within the Post African Futures there were three subdivisions. The first took on a curatorial and theoretical bent. In this was a paper by curator Zoe Whitley, currently based in London with the Tate Modern. Whitley's article 'Today and Yesterday, forever: Negotiating time and space in the art of Mame-Diarra and Dineo Sheshee Bopape' addressed the work of South African Bopape and Senegalese artist Niang. The paper invites new views on the role of performance and installation in

contemporary African art practice. Whitley identified a number of instances of what she calls “time outside of time” addressing time as simultaneously past, present and future. Framed by Derrida’s hauntology, she makes a case for ‘black hauntology’ associated to geography and ritual place. At the conference Whitley’s article acted as bridge for contemporary art in looking differently at technology and culture practices.

This first subdivision also represented to a number cutting edge young researchers, most prominent being Tabita Rezaire, a Danish-Guyanese artist-filmmaker and video curator based in Johannesburg. Rezaire presented the work of young artists embedded in urban based online cultures in South Africa. In ‘Afro Cyber Resitance: South African Internet Art’, Rezaire frames “Internet art practices in South Africa as a manifestation of cultural dissent towards western hegemony online.” Rezaire documents and speaks clearly to the place finding activities of new online art.

The second subdivision focused on knowledge development and education, featuring presenters from South African universities UJ, UCT and Wits, along side a paper from Peurto Rico. Prof Doherty and I presented a paper titled ‘Technology Arts Education in South Africa: Mutant Collaborations’, which addressed the developments at an institutional level; showing informal collaboration as the start to a number longer term success. A sentiment shared by Katherine Bull in ‘The art student as data capturer’ looking at her own practice of bringing new media and screen based technology into a traditional drawing practice.

The last subdivision framed a selection of creative practice cases presented by the artists themselves, all of whom were South African, thereby bringing a unique view on creative practice with technology locally. The topics here focused strongly on modes of disruption and also artists working in the field of technology development (see Nathan Gates and Maia Grotepass). A highlight was the co-presented ‘Disrupters, This Is Disrupter X: Mashing up the archive’ by Pamela Phatsimo Sunstrum and Thenjiwe Nkosi, the artists presented their ‘anti-opera’ Disrupter X, a performance in development that goes beyond an interrogation of archive and the technologies /mind sets that bring them into being, to look at the radical views that can transform an understanding of Africa and hopefully understanding its future. This was in poetic opposition and even at times synergy to a paper by Mocke J van Veuren. Van Veuren explored in some depth a long-term collaborative project titled ‘Jozi Rhythmanalogues’, , documenting and analysing the ‘rhythms’ of its Johannesburg urbanism.

As the research presented under Post Digital Organic is not my direct field of expertise and will not expand the papers presented. I do however encourage you to look further at the website and the work of Roy Ascott. In his keynote Ascott spoke to new perspective that encompass an exploration of an emerging consciousness enabled by addressing adversely the subjects of art, science and technology. The lecture titled ‘Art as Organism: Cybernetic, Technoetic, Syncretic’ made reference to a shifts in knowledge creation and knowledge sharing, from the modern through the post modern towards the syncretic, from content through context to field, from object through process to flow. It is near impossible to present the depth of Ascott’s vision, but what I can state, is that if Ascott’s visionary notions are anything to go by, now is the right time for an emergence of new knowledge from the South that can eclipse the formulations of what technology can or should be.

I hope that this inaugural Fak’ugesi Conference will open doors both locally internationally to new ways of doing, that are associated with other cultures of technology, in addition to acting as a leader in looking at African technology art practice with new eyes.

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African-orientated positions regarding technology cannot be clarified without a closer look at the contextual histories that surround them

Over the last couple of years I have been researching the unique positions that people living in Africa have on technology and the technological. My aim is to formulate a better understanding of what I have begun to call 'African cultures of technology' in different regions, particularly as they relate to communications and other new technologies. This research has led me down various interesting paths. I have come to recognise that African-orientated positions regarding technology cannot be clarified without a closer look at the contextual histories that surround them. In short, one cannot look to the future without looking at the past. My research has shown that it is not simply about addressing existing histories of technology and culture but also, and more importantly, identifying what may be missing from these histories. The future cannot be predicted, but is rather equal to the possibilities of change. Change is a creative force, but for change to occur we must first understand the position from which we are changing.

[sub-header] Self-organising systems

In my search for historical positions on technology and culture I was disappointed to find that most of the scholarship is either: archaeological and anthropological, or contained within anthropologically led art history. Apart from being written from Euro-American perspectives, much of this scholarship is largely empirical and non-theoretical. In historical archaeology and anthropology, research tends to focus on a limited number of key areas. There is a large body of scholarship focussed on metal smelting sites from the early Iron Age. The writing is largely fact based and contributes nothing to understanding a philosophy of technology from the time. Another area that has received some attention is the role of broadcast media, in particular radio, in the revolutionary movements of the wars of independence. This history is viewed through the lens of appropriation theory and deals with media imperialism; it is also flawed in that it does not address the significance of cultural development. In African art history, technology is dealt with as a cursory subject addressing the decorative aspects of objects and artefacts; very little attention is given to the socio-cultural role or philosophical positions of the technical systems through which the objects are made.

In the last ten to fifteen years, however, there has been growing interest around pattern making and performed mathematics as subjects that historically position cultures of technology on the continent. *African Mathematics: From Bones to Computers* (2011) by Mamokgethi Setati and Abdul Karim Bangura is a good example. The book explores Africa as the home of some of the earliest mathematics in human history. A case in point is the Lebombo Bone found in Swaziland, a bone marked with counting marks dating back to 35000 BCE. The authors explore a number of instances of the historical use of mathematics, including how it aided ancient Egyptians to track the Nile, and the Maghrebian contribution through inheritance division, water-table calculations and compositions of medicines. *African Mathematics* also explores mathematics in the geometric forms of African art, in

sub-fields that include fractals, combinatorics, bifurcation, tiling and tessellation. The authors make clear that these mathematical engagements are found in a large variety of cultural instances, from art practices, religious activities, games, products and social processes. These are important associations that bring to light the significance of mathematics in socio-cultural as well as socio-political practices.

The popularity of African mathematics owes a debt to the work of Ron Eglash and his book *African Fractals: Modern Computing and Indigenous Design* (1999). Eglash is perhaps the most quoted ethno-mathematician on the subject of African mathematics. *African Fractals* describes the presence of mathematical fractals evolving from self-organising social systems. These include fractal systems and other mathematical forms found in traditional ways of constructing homesteads, pattern generation, designing sigils and religious rites. What is most fascinating about his findings are the relationship between self-organising or communal constructions with spiritual signification representing the continuation of life and the exploration of probability.

African Fractals draws on multiple disciplines – political, cultural, religious and computational – to define and contain the understanding of mathematical forms that originated in Africa. Eglash shows a clear trajectory of the transfer of these methods, moving from Africa through Spain and eventually forming part of the now well-known and dominant trajectory of European mathematics. More importantly, what Eglash shows through these iterating mathematical functions is that their function is egalitarian at the core. There is a clear emphasis on the social rather than material culture. Eglash for example compares the fractal-like structure of pre-colonial African cities, which followed a bottom-up form of social organisation, to the grid system found in European and American cities, where societal organisation is top-down.

Eglash goes into some detail on the cultural significance of the mathematics found in Africa, also making reference to the Lebombo Bone but with particular emphasis on the presence of doubling. Doubling is a binary numeral system, which is prevalent in African mathematics and a widespread cultural theme. Twins are sacred in some cultures, as are spirit doubles and double vision with material objects. Doubling is further very significant in divination. Eglash believes these binary systems, originating out of the logic and predictive systems of divination, are the cultural origins of digital computing.

Eglash further shows that African pattern making and performed number systems are far from purely decorative, but rather reflect a knowledge system. This knowledge system, he states, is present in many instances of African culture. In a 2000 review of Eglash's work, Abdul Karim Bangura remarked that his 'scientific work contributes significantly towards shattering long-held myths and misconceptions about Africans ... the most pervasive and pernicious of which is the notion of Africans as inactive agents in history – a people devoid of writing systems, technological background and culture'.

[sub-header] Renegotiating traditional knowledge

Another, smaller and easier to read book on the subject of performed mathematics is *Drawings from Angola: Living Mathematics* (2007) by Paul Gerdes, about the sona (singular

lusona) drawings produced by the Chokwe of Angola. A lusona is a procedural drawing, produced in sand during cultural rites and story telling. They are complex and procedural drawings that are constructed around a pattern of dots, which can essentially be understood as performed algorithms with a narrated and aesthetic outcome. Eglash describes them as geometric algorithms where the 'Eulerian path' – a pattern of dots in this case – provides a means 'to compare designs within a single framework, to show how increasing complexity can be achieved within the constraints of space and logic'. *Drawings from Angola* presents the Chokwe cultures, along with three stories associated with three sona, to show how complex mathematics are used in cultural practices such as the performance of age-grading and initiating rites.

Outside of their significance in presenting African mathematics in a cultural context, sona have an interesting history in how they have been documented by colonial researchers. In her essay 'From Hut to Monitor: The Electrification of Chokwe Wall Murals, 1953–2006', art historian Delinda Collier looks at the documented history of sona and revisits the Portuguese anthropologist José Redinha's 1953 book *Paredes Pintadas da Lunda* (Painted Walls of Lunda). Her essay looks at the historical difficulties surrounding how African knowledge systems have been interpreted and appropriated using western media practices. Redinha, for instance, interpreted sona drawings as 'wall drawings', if only because this static form was the only manifestation he was able to access in his position as 'museum' director for the Companhia de Diamantes de Angola, a large diamond mining company active in Angola during Portuguese colonial rule.

Diamang, writes Collier, 'was a "state within a state" with its own police force, radio station, museum, health services and agriculture'. In 1957, Diamang completed a hydroelectric dam in northeastern Angola, in the Lunda North province. According to Collier, 80% of Diamang's workforce there was made up of ethnic Chokwe people. She explores Redinha's dubious role as anthropologist and curator in his representation of the Chokwe drawings and inability to see them outside of their decorative function. Collier addresses the 'scientific colonialism' performed by Diamang in setting up a 'living' museum for Chokwe culture, as well as the Chokwe community's resistance to initiating Redinha in how the drawings are performed. Her research also covers a 2006 revised representation of the contents of Redinha's book at the Trienal de Luanda.

Collier points out that in colonial situations, 'the abstraction of information that develops with mediation is inextricably bound up with extraction of materials such as diamonds, achieved as it was most often through coerced labour and societal violence'. She explores how mechanisms for recording anthropological research, such as audio recordings, film and 'living' museums, were offered as a 'real' presentation by anthropologists. This 'realness' was supported by the assumed logic of the media used for documentation and presentation. Collier states:

The conditions that Diamang established were coterminous with the electrification of production and the ephemeralization of information. In the case of colonialism in Africa, the ghosting of indigenous media practices was not an unfortunate consequence of colonial rule, as most scholars of the time understood it, but rather an intentional divestment of indigenous populations of power by participation. The

now-common knowledge that Europe created the notion of Africa as practicing unchanging traditions amounted to the limited definition of medium in Africa to that of objects and performances as emblems of superstitious practices. Under that logic, they had to remain static.

This 'intentional divestment' of indigenous people of their 'power of participation' did not allow those documented to participate in the media ecology of the time. Rather, it established, through media, an imposed separation of forms in the practice of domination. Through her case study, Collier critically addresses the need for contemporary African scholars and artists to re-visit and re-negotiate older and traditional knowledge systems. These systems have largely been overlooked outside the scope of African colonialism.

[sub-header] A social construction of technology

Collier's position brings me back to my search for historical African positions on technology and culture. These, as is probably evident, are few and dominated by positions that present a serious disjuncture between empirical research and historical approaches to African subjects. One text that stands out for me is *Society, Culture, and Technology in Africa* (1994), a collection of papers edited by *archaeologist* S. Terry Childs that investigates the relationship between culture and technology in Africa. Childs argues for the need to study the African subject matter from a socio-archaeological rather than a purely archaeological point of view. Childs, however puts particular emphasis on the importance of an integrated perspective when addressing technology.

[T]echnology is completely interactive with the socio-culture context in which it is developed and changes. Local social relations, economics, politics and ideology impact and help structure the behaviour involved in technological process, and visa versa.

Child's 'sociotechnical' system is directly based on technology anthropologist Bryan Pfaffenberger's 1988 essay, 'Fetished Objects and Humanised Nature: Towards an Anthropology of Technology'. Pfaffenberger essay sets out to 'illuminate the unreliability of the culturally-supplied western notion of technology', which he believes has its roots in Christian metaphysics. He states that this can be seen in its positioning of technology as a domination of the natural world, rather than as an integrated and evolving socio-cultural construct (as we have seen with Eglash). For Pfaffenberger, definitions of technological determinism and somnambulism show an underlying unity stemming from the roots of Christian metaphysics.

What is so striking about both naive views of technology, the view that emphasises disembodied ways of making and doing (technological somnambulism) and the other that asserts technology's autonomy (technological determinism), is that they both gravely understate or disguise the social relations of technology.

Pfaffenberger believes that technology should be studied as a product of human choices and social processes. Technology, in his view is shaped from interaction within a network of interrelated components that include economics, politics, culture and society. And in this there is an emphasis on the social construction of dominant technologies. This social

construction is the consequence of the weight of particular social groups in selecting one technology over competing forms. Pfaffenberger writes:

The social construction of technology, in sum, occurs when one set of meaning gains ascendancy over other ones, and wins expression in the technical content of the artefact.

Siting David Nobel's *Forces of Production* (1986), Pfaffenberger adds that a technology is thus 'hardened history' or 'a frozen fragment of human and social endeavour'. For African research therefore, Childs encourages Pfaffenberger's approach to better perform socio-archaeology, and to keep in sight the socio-technical system. For Childs it is a view that allows for a non-western perspective on African culture in relation to technology, and also how it is interpreted in a largely westernised field.

[sub-header] Transferring knowledge systems

Pfaffenberger proposes that technology should be seen in a system of related social behaviours that, like cultures, are passed through a knowledge system. Pfaffenberger states that technology can be defined as 'a set of operationally replicable social behaviours'. He adds, 'no technology can be said to exist unless the people who use it can use it over and over again'. Knowledge and knowhow of technology requires a codification or verbalisation in order to be effectively transmitted. Pfaffenberger's point is important when we concern ourselves with what knowledge exists for and about African cultures of technology. The same line of thinking applies to contemporary socio-cultural practices around technology, and should be addressed in the same manner.

My enquiry into understanding pre-colonial systems therefore asks questions to how these systems of knowledge may have or have not been maintained, and the reason for their subsequent survival or obsolescence against other knowledge systems. What the histories show, and rather quickly, are the consequence of imposing a knowledge system onto a culture that has not evolved that knowledge system itself, and may therefore battle against it. Certainly, this is what makes the evolution of contemporary African cultures of technology that much more worthy of attention.

W.K. Omoka shares Pfaffenberger's sentiment highlighting a system of knowledge transfer as key to the socio-cultural integration of technology. In a 1991 essay collected in *Culture, Gender, Science and Technology in Africa*, Omoka argues that the view of technology as an applied science is a distorted principle when addressing the relationship between science and technology for regions in Africa. Like Pfaffenberger, Omoka's in-depth argument primarily criticises a deterministic view of technology. Omoka's more contemporary and somewhat politicised position is that a deeper interrogation of a society's culture, histories, traditions and subsequent systems of knowledge transfer needs to be taken into account when understanding the role and advance of contemporary technologies. His essay argues against an increased dependence on the relationship between science and technology, which he states erroneously fosters 'a societal technologism *a priori* that tenaciously precludes people from the raw material of technology in respect of the instrumentation of reason as one of the pre-requisite conditions to the development of the nation'.

Omoka speaks to the trend among African states to place excessive value on the categorisation of 'development' in line with scientific research, with particular emphasis on how western nations identify development goals on what type and how much 'scientific' research is being conducted. Omoka believes this position disenfranchises the role of technology from people and appropriates it as a race for acknowledgement.

Similar positions on how science and technology are used to further the progress of dominant ways of thinking, though not orientated towards the position of the state, can also be found in feminist research. Historian Richard Langhorne has written how this research interrogates not only the positioning of science and technology within the political realm, but challenges the role of networked media to further these forms through globalisation and the globalised information economy. Pfaffenberger also weighs in on this, writing:

Technology, defined anthropologically, is not material culture but rather a total social phenomenon in the sense used by [Marcel] Mauss, a phenomenon that marries the material, the social and the symbolic in a complex web of associations. A technology is far more than the material object that appears under the sway of the western penchant for fetishism, the tendency to unhinge human creations from the social relations that produce them.

Pfaffenberger's reference to western fetishism is couched in a Marxist framework. For Pfaffenberger this fetishism indicates a western focus on the product of technology, rather than the social phenomenon that produced it. In Childs' editorial, the existence of a long-standing acceptance of the intimate relationship between technology and society in Africa is made apparent. In the tradition of archaeological research, Childs presents proof of this relationship between technology and society. He draws on two examples. The first appears in ethnographic record keeping:

[E]xplorers, missionaries, administrators, and anthropologists ... defy any notion that necessity was a driving force behind the material and behavioural choices made during the technological observations observed or that technology dictated social life in Africa. The social political relationships between the participants, as well as the significance of taboo's control over technical and esoteric knowledge, scheduling other activities, and ritual were much more evident than basic necessity.

The second relates to the opportunity that African scholars have to 'witness and experience the operation of pre-industrial technologies in their social and natural contexts'. It is interesting to me that both these examples show not only a limit to the resources from which the research is being made, but the latter importantly emphasises tradition as a location for the transfer of knowledge. It is important to note that 'tradition' in contemporary Africa is not as it may be in contemporary Euro-America. In many contemporary African cultures 'traditional' practices are very much entwined with contemporary ones. The presence of a strong socio-cultural knowledge system and the opportunities it offers cannot be viewed as developed versus underdeveloped. Rather, it contains the potential of a different evolution in the culture of technology, an evolution that contains the possibility for distinction from determinist and material orientations.

The intersection between contemporary positions on African and Euro-American engagements with technology bear scrutiny. The concept of modernity is important here. In a 2012 essay, Argentine semiotician Walter Mignolo points out that coloniality and western modernity are one in the same in African history. Comparing western modernity to development in Africa is therefore only a question of the west's development and is not valid as a definition of 'modernity' or 'technological advance' for Africa. My own research going forward looks to evolve a critique of technology when viewed from a Euro-American perspective.

[sub-header] A question of style

Trends, reminds S. Terry Childs, are danger when addressing African concerns. One such trend is the significance of style, as when pattern making, colour schemes and decoration that accompany artefacts are given more prominence over other concerns. Childs states that trends are advocated as contextual to understanding how social, material and symbolic factors influence stylistic choices. Childs' concern, however, is that the resultant research, which may begin as theoretical discussion, cannot be fully theoretically contained as it too closely deals with a trend.

An emphasis on style is certainly seen in online cultures, as well as in contemporary Euro-American interpretations of African cultures of technology and African digital arts. While this plays an important role in acting as the substance through which African concerns are translated – or are willing to be received – the appropriation of the literary concept 'Afrofuturism' and use of design as a medium to broadly contextualise a continent show how important regional experiences and positions are too easily overlooked by the overemphasis of style.

So how do we value and implement style at this time? Are we aware of the socio-technical and what systems of knowledge are present in the way we use and negotiate new technologies? Does innovation in the boarder sense meet our needs, or are we simply contributing to an enactment of neo-colonialism through networked media? More importantly, how can Africans innovate not just new tools but our *relationship* to technology? These are the questions we should be asking as we hold technologies in our hands and as the world looks towards Africa for innovation.

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Abstract

This paper is an exploration of research around and on the presentation of the Post African Futures exhibition. The exhibition, held at the Goodman Gallery Johannesburg in South Africa in 2015, acted to challenge the understanding of contemporary digital and communications technologies in relation to contemporary African cultures. Through this the paper explores scholarship around African positions and philosophies of technology, both the paucity of theoretical engagement in this area and the development of new approaches. In extension, two primary frameworks are explored. The first addresses the importance of unpacking regional cultures of technology. The second is the conceptual framing and locating of concerns around historical and contemporary cultures of technology in Africa under the notion 'Post Africa Futures', which puts particular emphasis on a relationship to the global information economy.

Keywords

African, Philosophies of Technology, Culture, Technology, Digital Arts, Post African Futures

Introduction

The Post African Futures exhibition, which will be the final focus of this paper, was a responsive endeavour directed at research outcomes and the subsequent theorisation of positions on contemporary African cultures and their intersection with the globalised information economy. The exhibition explored contemporary positions on digital technology cultures in and alongside contemporary African cultures. Thereby this paper, outside of addressing the framing research, additionally addresses the framing of the notion 'Post African Futures' and how the subsequent exhibition acted as a methodological call to action to participating artists and creative technologists. This was a pointed response enacted within a decolonising methodologies framework.

The Post African Futures exhibition was held at the Goodman Gallery in Johannesburg in April and May 2015. The exhibition showed the work of twenty-four practitioners; this included artist groups and creative developers. The exhibition ran for just over a month as a gallery exhibition, with additional performances, talks, screenings and a podcast series.

The need for the research that led to Post African Futures was born from my experience of teaching at Wits University in Johannesburg, South Africa, at which I am currently head of postgraduate study in Interactive Media Art in the Digital Arts Division of the Wits School of Arts. The program model is similar to the ITP program of New York University, but runs at a much smaller scale. In the MA programme I work with candidates from various backgrounds and expertise, all of whom learn and develop together in a 'laboratory' style teaching

environment, while simultaneously learning relevant histories and theories of technology and writing research expanding on these topics. The curriculum I inherited on my arrival in 2007 contained only Euro-American theory in communications media, digital media and digital art. This subject matter was internationally relevant and competitive, containing Euro-American histories and theories of computing, hacking, cybernetics, cyber-feminism, systems theory and media art. Important subjects that critically and carefully engaged, from a cultural, philosophical and development perspective, how technology and particularly communication technology are culturally significant and influential. What was strikingly lacking in the curriculum, however, was an understanding of how Africa and its cultures were positioned within these histories. Neither did it include an understanding of regional histories of media, or philosophies of technology distinctive to different regions of Africa and their particular cultures. This thereby acted as impetus to find and understand regional African positions and histories of technology and culture.

At Wits University, the lack of regional content was (and still is) associated with the colonial origins of the Universities in South Africa, which meant that most curricula emulate and promote British and Euro-American movements in scholarship. The issue, however, is not University wide; therefore, along with the general prevalence of Western knowledge systems in curricula at Wits, various departments have a focus on the post-colonial in extension of Euro-American scholarship. Additionally, a recent and growing emphasis on the de-colonisation of knowledge within the cultural and philosophical schools has acted to continue these traditions. The digital and technological, however, are rarely addressed in this manner. Technology, it seems, is a difficult location from which to view either African or decolonising perspectives. The scholarly histories of technology and the digital are almost all intertwined with Western history, its theories, systems of knowledge production and its subsequent transfer, making it difficult to unravel or identify specific regional African histories and positions. In these fields there is a default assumption that 'the digital' is a Western technology and its influence and use should therefore be dominated by Euro-American influences. This is problematic for two primary reasons: firstly, it negates the consequence of neo-colonialism through new and communications technologies. Secondly, it presupposes the possibility of any regional African histories and practices associated with technology.

Through this research I began to ask questions on how digital and communications technologies were not only perceived by, but further questioned in, African cultures, both historical and contemporary. This became an interrogation, which was focused for purposes of clarity on the cases of Johannesburg and Nairobi that came to challenge the positioning of histories and practices of technology within scholarship on Africa. The questions posed brought new views on knowledge systems and subsequently a critique of the globalised information economy and its effect on Africa and her cultures.

Research and Exhibition Context

At the onset of this research it became increasingly clear that contemporary African scholarship is dominated and corralled by a post-colonial discourse in which there is a tendency, as in most rebuttals, to circle in on itself and not easily evolve new scholarship. In addition, the manner in which Africa was engaged in scholarship was either reliant on this

framework or did not adequately contain its histories. Achille Mbembe and Sarah Nuttal, in "Writing the World from an African Metropolis" (Mbembe, 2004), state that "Africa as a name, as an idea, and as an object of academic and public discourse has been, and remains, fraught" (348). They go on to state:

So overdetermined is the nature of this sign that it sometimes seems almost impossible to crack, to throw it open to the full spectrum of meanings and implications that other places and other human experiences enjoy, provoke, and inhabit. The obstinacy with which scholars in particular (including African scholars) continue to describe Africa as an object apart from the world, or as a failed and incomplete example of something else, perpetually underplays the embeddedness in multiple elsewheres of which the continent actually speaks. (348)

What I found, as I began to engage existing scholarship in the field, was both an epistemological and ontological problem. Scholarship on Africa did not adequately contain the subject of technology in Africa, and it was even rarer to find content in this field written from an African perspective. Most content was biased towards Euro-American perspectives and interests. The consequence of this bias was a serious underplaying and simplifying of the subject through inadequate comparisons and incomplete histories. I therefore found in existing scholarship an interstice between what I observed and the ability to sufficiently write it within an existing framework of scholarship on Africa.

The writing I did encounter that explored African cultures and technology generally fell within ethnographic research. These had a predominance towards Western-centric perspectives on technology and did not explore African philosophies or African cultural notions of technology. In African art history, technology is most often dealt with as a cursory subject addressing the decorative aspects of objects and artefacts, with little attention given to the socio-cultural or the philosophical positions of technical knowledge systems. In the areas of archaeology and anthropology research tended towards a limited number of core areas. These include, in archaeology, a large body of research on metal smelting sites from the early Iron Age in different parts of the continent, all of which was largely empirical. In cultural anthropology, the trend in mid-century scholarship was towards broadcast media, in particular radio and its role in the revolutionary movements of the wars of independence. These histories however were predominantly viewed through the lens of media imperialism and appropriation theory. This process of locating scholarship that reflected a better theoretical engagement with African cultures and technology only reiterated what was missing and how tightly bound the existing scholarship was to the power deferential of colonial knowledge.

In the last ten to fifteen years there has, contrary to the above, emerged growing interest in African mathematics as a subject that historically positions cultures of technology on the continent. *African Mathematics: From Bones to Computers* (2011) by Mamokgethi Setati and Abdul Karim Bangura explores Africa as the home of some of the earliest mathematics in human history. More significantly, the authors make clear that these mathematical engagements occur in a large variety of cultural instances: art practices, religious activities, games, products and social processes. This brought to light the little-known significance of mathematics as a socio-cultural practice on the continent, which expands the potential for

understanding of alternative philosophies of technology unique to pre-colonial African cultures. These explorations, while not directly influential in what would become Post African Futures played an important part, for me, in unravelling cultures of technology on the continent.

The popularity of African mathematics owes a debt to the work of Ron Eglash and his book *African Fractals: Modern Computing and Indigenous Design* (1999). The book describes the presence of mathematical fractals evolving from self-organising social systems. These include fractal systems and other mathematical forms in traditional ways of constructing homesteads, pattern generation, designing sigils and religious rites. What is most fascinating about his findings is the relationship to communal structures. What Eglash shows through the exploration of these mathematical functions is that their function is egalitarian, and so there is clear emphasis on a social rather than material technology culture. In a 2000 review of Eglash's work, Abdul Karim Bangura remarked that this "scientific work contributes significantly towards shattering long-held myths and misconceptions about Africans ... the most pervasive and pernicious of which is the notion of Africans as inactive agents in history – a people devoid of writing systems, technological background and culture" (no page, online reference).

Following this, and in a further attempt at finding theoretical positions on African cultures and technology, I came across a short editorial for the journal *Society, Culture, and Technology in Africa* (1994). In this, editor S. Terry Childs positions the need to study the African subject from a socio-archaeological rather than a purely archaeological encounter. Childs puts emphasis on the importance of an integrated perspective, referring to this as a "socio-technical system". Childs states:

[T]echnology is completely interactive with the socio-culture context in which it is developed and changes. Local social relations, economics, politics, and ideology impact and help structure the behaviour involved in technological process and visa versa. (8)

Child's socio-technical system is not referencing what Eglash identified as an egalitarian technology culture. It is a reference to an exploration of alternative philosophies of technology found in Bryan Pfaffenberger's paper "Fetished Objects and Humanised Nature: Towards an Anthropology of Technology" (1988). Pfaffenberger proposes, within a framework of the philosophy of technology, an opposition to the two dominant Western positions, technological determinism and technological somnambulism. Pfaffenberger proposes in this influential paper to "illuminate the unreliability of the culturally-supplied Western notion of technology" (237). A notion of technology he believes has its roots in Christian metaphysics. He states that this can be seen in its positioning of technology as a domination of the natural world rather than as an integrated and evolving socio-cultural construct. For Pfaffenberger the definitions of technological determinism and technological somnambulism show an underlying unity stemming from the roots of Christian metaphysics. He states,

What is so striking about both naive views of technology, the view that emphasises disembodied ways of making and doing (technological somnambulism) and the other that

asserts technology's autonomy (technological determinism), is that they both gravely understate or disguise the social relations of technology. (241).

Technology in his view is shaped from interaction within a network; a network of interrelated components that include economics, politics, culture and society. Pfaffenberger believes therefore that technology should be studied as a product of human choices and social processes because technology is the consequence of the weight of particular social groups in selecting one technology over competing forms. Pfaffenberger states:

The social construction of technology, in sum, occurs when one set of meaning gains ascendancy over other ones, and wins expression in the technical content of the artefact. A technology is thus, [...] 'hardened history' or 'a frozen fragment of human and social endeavour' (Nobel, 1986: xi). (240)

For Childs, it is a view that assists a non-Western perspective on African culture in relation to technology. And while it does not act to describe pre-colonial African cultures of technology, the position can counter a largely Western view dominating the field. When we look at the instance of Eglash's findings, which sees pre-colonial technology systems as embedded in socio-cultural forms and the subsequent influence of colonial knowledge systems on how technology is understood in Africa, we see not only an interstice of knowledge systems but a domination of one over the other.

This same line of thinking should be applied not only to an understanding of pre-colonial and colonial systems but to how alternative systems have been maintained or been lost in this period. The reason for their survival or obsolescence is of some significance. What these show, and rather quickly, are the consequence of imposing one knowledge system onto cultures and societies that have not evolved that knowledge system themselves and, for this reason, battle against it. What is clear, when addressing which systems of knowledge survived colonialism and apartheid, is that these were dominantly transferred through cultural practices, as other knowledge and its transfer was systematically devalued and disenfranchised. In the evolution of the research towards Post African Futures and developing a better understanding of concerns in contemporary practice, distinct African cultures became important.

In an exploration of contemporary engagements with communications technologies in light of knowledge systems, I identified through field research what I came to call regional 'cultures of technology'. Focused as a series of interviews in South African and Kenya (2012 – 2014),

the field work assisted in defining regional difference at the intersection of culture and technology. Special attention was paid to these differences in contemporary communications technologies, which showed how cultures interpreted regional knowledge systems (both pre-and post-colonial) alongside contemporary systems.

South Africa and Kenya were chosen as cases because they are leading nations in ICT in Africa and therefore have the most active technology communities. I chose to explore the respective cities of Johannesburg and Nairobi as both are the largest and most culturally diverse cities in each country. In each city, I endeavoured to understand how individuals

working at the intersection of culture and technology formed their practices and how they then identified themselves against a globalised information economy. This was an inquiry not only in how individuals in the field are negotiating the technological in their own working practice, but how they are negotiating them in line with their communities and the cultures in which they were embedded.

The interview process sought local insight from thirteen creative practitioners, technologists and educators in each city. The interviews were carried out in reflection of the initial literary research I had conducted, which made visible the concerns around anthropological research on Africa and led to a deeper inquiry into issues and concerns around ICT and ICT for development in the regions of focus. In the latter, I paid particular attention to how new technology was being implemented and how this implementation was written about from a Euro-American and neo-colonial perspective.

In this paper, I will not cover all the interviews or the methods employed (which is part of a larger research project). Rather, I aim to point out key themes that emerged from the fieldwork that went on to be explored in the Post African Futures exhibition. As mentioned previously, due to the paucity and concerns of existing scholarship in the field, I found it necessary to invite participation in the research from practitioners in the field. This was done both through interviews and as an invitation to participate in the exhibition as a response to the research findings.

What became significantly apparent in this process was that contemporary cultures of technology in each region are dependent on specific of socio-cultural and socio-political influences; most dominantly, their respective colonial influences on each region. Apartheid and colonialism, and the difficulties that surrounded independence and nationalism that followed, are of significance to how contemporary communications technologies are used and interpreted today. Artists and practitioners in the respective locations have evolved new practice in relation to these cultures of technology, emphasising these regional distinctions. These 'cultures of technology' not only hold in them what is implicit in the knowledge carried through varying histories, but additionally the experiences of contemporary politics and governance in relation to the globalised information economy. In the following, I briefly substantiate these claims but do not present the research in full.

Nairobi first saw the significant use of digital communications technology with the mobile phone at the end of the Moi regime. It was additionally at the end of the Moi Regime that many Kenyan's living abroad returned and brought with them technology development practices. Some would go on to build what are known as Africa's leading ICT innovations, such as Ushahidi. Use of communications technologies prior to this, in response to colonialism, was restricted and access to internationalised media and communication technologies was restricted. For Kenyan's the use of mobiles as new communications tool was initially not strongly linked to a globalised media imperialism, but was rather - due to developments like Ushahidi and MPesa - more synonymous with innovation that assisted in solving problems via community access. Therefore, the prevailing understanding I gained from Nairobi in my fieldwork was the importance of community within its culture of technology.

Many respondents (Hopkins, King, Mureithi, Mboya) referred to both the culture of Harambee and Masikani in how communications technologies augment the importance of community values in Kenya. Harambee and Masikani share a pre-mobile and pre-colonial emphasis on community that plays an important role in problem solving, idea sharing and overall socio-cultural communication. Harambee is a Swahili term that literally means 'working together' or 'joining forces' and is used to describe a community forum at which issues are voiced and problems solved. Generally, Harambee are public forums and events that can last a few hours when organised by word of mouth, particularly after urgent issues have arisen in a community. They are, however, often very formal events and can last a few days. In these cases, the event is advertised in newspapers as an open public forum. To expand on an understanding of Harambee and its importance, Checkoway, in *Core Concepts for Community Change* (Checkoway, 1997), describes Harambee as a community forum in which "[j]oining together helps people realise that their individual problems have social causes and collective solutions" (15). This is a strong philosophical position that exists in Kenyan cultures.

As a practice that predates colonial rule, Harambee is driven primarily by the impetus of self organised communities. King (respondent) stated that there is a general mistrust of government to adequately value community concerns, and practices like Harambee therefore remain in place. In the interview with Mureithi (respondent) I asked about the validity of Harambee in decision making., He made a point of indicating that legislation had recently been put in place to ensure that the personal agendas of government officials did not take precedent at these forums. Harambee is understood as a strongly autonomous, influential and well supported community-led forum and this is reflected in how Kenyan's see the role of technology. In the same set of interviews Hopkins (respondent) stated:

Digital culture varies in different countries, the cultures vary because they fit into a different kind of map. On the Kenyan coast [for instance] there is thing called Masikani - it's basically like a public space where you meet and its base isn't necessarily the closest one nearest to you, it's the one you are affiliated to by interest. These are public spaces where people meet to talk and experience this form of conversation, but they also become somehow [an] impact on how these digital networks are connected. The digital end is invisible. I suppose these networks are the physical [version]. (Hopkins Interview, 22-23)

Along with an emphasis on community forums, what was significant about the Nairobi culture of technology was its unique history and influence of broadcast radio on its media history, a medium brought to Kenya for British colonialists, and which acted to exclude a dominant part of the population for decades before being used as a nationalising tool post-independence by the Jomo Kenyatta government. The medium's ability to segment and exclude the population via language, however, led it to being a detrimental tool in the Moi Regime, and the reason why media transmission was largely restricted in this time (Ogola, 2011).

With the onset of mobile and the possibility for self-publication and the augmentation of an existing communality, the concerns of media imperialism that were found by the Moi Regime in radio and television now tended towards how and by whom knowledge was being transferred via the internet. I found in the interviews that this was not only a concern

for the Westernisation of an information economy, but a concern for how long held traditions are being eroded by its capitalist intensions.

Chief Nyamweya (respondent) is an ex-lawyer and now a designer and political comic book writer. Nyamweya reflects on some of this disjuncture felt by young people engaging technology as part of their work and daily rituals:

[...] technology has helped to restore something of our culture, as since we have started living in silos, we have started becoming a bit more individualistic, we have started basically going the way of New York. You can be living in the same city with your relatives and see them once in a year, that's where we are going and Nairobi is actually bad at that. Nairobi is a different country from the rest of the country, it has a way of really breaking us down. [In this situation] technology has started to restore Ubuntu, these days people are concerned about working together, every morning you are on Twitter and saying hello to the community, it's like opening your window and yelling out onto the sea "we are fine what not". It makes it very easy when you need to protest the MP when he's doing something silly. But I don't want to be too optimistic, I mean it won't completely restore what has been lost in that sense of community and the whole African concern. It excludes certain segments like the older people and the poor, those are sometimes the most vulnerable, the ones that need the most care. So, I mean in getting us together to that degree it could do more. (Nyamweya Interview, 36 - 37)

Nyamweya battles to articulate fully a disjuncture between technology and community that is being played out in Nairobi society. Nyamweya, however, by indicating that older people and the poor are excluded, brings our attention to the fact that in Nairobi (like other cities), communication technology and its development is in the hands of a generation of young, middle class, digitally literate users and developers. The very newness of its mechanisms, and how the globalised information system is aimed at young people, means that its effectivity is entirely in the hands of this group. And while this is not an uncommon phenomenon in the world, it is important to understand it has dangers, particularly as an encounter for Kenyans, whose traditional culture strongly orientates towards communal knowledge and a cultural relationship between young and old.

Another theme that emerged from Nairobi was a concern for what I term 'development binaries' in the ICT sector. In Nairobi, the technology and innovation scene is beset with NGO's attempting to use technologies to uplift the lives of the poor, and yet little attention is given to how economically and socially crippling solutions from Euro-America can be on these communities. Murphy and Carmody, in *Africa's Information Revolution* (2015), identify in ICT for development a deepening of existing financial inequalities:

The "poverty-washing" of ICTs, where they are presented as the cure to global poverty, but in actuality are being primarily used to promote capital accumulation, may then serve to disguise deeper problems of the ideology of consumerism and over-consumption (Sklair, 2001). As Castells (2011) recently argued, interdependent and intertwined global finance and multimedia networks play a dominant role in promoting and enabling such consumerist ideologies, and they wield tremendous power and control over the world economy today. (116)

The implications to regions in Africa are multi-fold; not only are individuals and nations in Africa treated as markets expected to follow behavioral trends towards technology consumerism, but are further subject to definitions of 'developed' versus 'developing' in an attempt at 'closing' the digital divide.

These key points - communality, colonial media histories, the neo-colonial intentions of a contemporary ICT and the globalised information economy - all play an important part in Kenya's culture of technology and how artists and creative technologists interpret and apply these systems and mediums.

In contrast, South Africa's culture of technology is vastly different and is one that begins with Apartheid. It still suffers this history some twenty years later through the infrastructures formed around the role and organisation of technology at that time. The Apartheid government was one of the first and few governments in Africa that by the early 1980s was using computing. This was because Apartheid was a system run on the distinction of demographic, spatial and workforce data; and computing was an advancement that assisted in this prioritisation. A little-known fact is that of those in the Apartheid resistance movement a few were hackers (before the internet) trying to find ways to destabilise these Apartheid systems. Prof. Dwolatzky (respondent), when asked what he thought the most influential technology was on South African society prior to mobile, stated:

[...] computers and what computational devices meant. And it was abused by the previous regime, so it was what made Apartheid work in many ways is having computers ... because there's the population register, ways of dealing with the bureaucratic registration of names. The State under apartheid was horrendously bureaucratic and although they were not of today's terms, it's interesting that in the fifties when computers first appeared, this country led the world. It was the second country in the world to have a computer society. (Dwolatzky interview, 4)

Prof. Dwolatzky's goes on to state:

So, through the fifties, into the sixties, into the seventies, this country took to computers almost like no other in the world and I've often wondered about why that was and I think the kind of top down repressive nature of Apartheid South Africa was like a cosy bedfellow with the kind of organisation of information that computers provided, this country took to it like a duck to water. So, I think if you look at the pass laws, the Group Areas Act, etc. I would even go so far as to say that censorship laws were kind of supported by a technological infrastructure with help to classify, control lists in doing things that computers do well, store information, retrieve information. (Dwolatzky interview, 4-5).

Prof. Dwolatzky's recollections are part of a fascinating and largely undocumented South African history of computing. The banning and subsequent obsessive-control of broadcast media in the country, which follows a similar history is much better documented and acknowledged. (Nixon, 1993)

When Apartheid ended, many of the minds hired to oversee and manage its computer systems went into banking, which was already one of the most advanced digital banking systems in the world. A veteran of this time once joked that one of the advantages of sanctions was that South Africa could “borrow” and enhance technologies that were being developed in different parts of the world without it really being noticed. Unfortunately for contemporary digital practices, development in South African is still tied to an industry established at this time, which like many already established industries, is silo’ed and therefore finds it difficult to take advantage of innovative practices. This has a major effect on how young black practitioners not only interpret the power of technology, but how limited they are in being able to access these technologies for development.

Apartheid in South Africa left a culturally devastated landscape for black South Africans. Where Kenya benefits from its historic cultural communality, indigenous South Africans began constructing cultures anew. Within a contemporary technology framework this construction in urban cultures manifests as engagement that is highly critical around the concerns of ownership and influence within various knowledge regimes. On this Govendar (respondent) states:

[...] culturally it is a really strong aesthetic. I mean I have felt like there are number of situations where we are quite far ahead of the world, I mean there are very few cities or countries that have the kind of cultural diversity and integration issues that we have had. I think there is innovation based on necessity and there is a lot of necessity, especially on the levels that we reach or reference [urban and digital culture] and I think that is essentially where a large amount of creativity comes from - it’s from street level (Govendar interview, 10)

Like Kenya, South Africa’s technology cultures are being driven by a generation of young digital creatives. But unlike Nairobi, in Johannesburg it is drawn from a raw response to power differentials, commercialisation and its injustices.

The respective differences in the cultures of technology in Nairobi and Johannesburg arise from their unique media and technology histories. These are knowledge systems that not only predated colonialism and Apartheid, but are furthermore heavily influenced by them. The differences in Nairobi and Johannesburg are both fascinating and challenging, in that they negate a generalisation when addressing Africa and technology. Additionally, these differences bring focus to unique regional concerns and criticisms on contemporary technology. Emphasising the importance of understanding technology as socio-cultural and political rather than exclusively technical for Africa.

As Pfaffenberger writes: “The social construction of technology, in sum, occurs when one set of meaning gains ascendancy over other ones, and wins expression in the technical content of the artefact.” (240). In this Pfaffenberger proposes that technology should be seen in a system of related social behaviours that, like cultures, are passed through a knowledge system. Kenyan author W.K. Omoka shares Pfaffenberger’s sentiment, highlighting a system of knowledge transfer as key to the socio-cultural integration of technology. In an essay collected in *Culture, Gender, Science and Technology in Africa* (1991), Omoka argues that the view of technology as an applied science is a further

distorted principle when addressing the relationship between science and technology for regions in Africa. His essay argues against an increased dependence by African governments on the relationship between science and technology as delineated by Euro-American criteria for development and funding. Omoka states that this relationship erroneously fosters “a societal technologism a priori that tenaciously precludes people from the raw material of technology in respect of the instrumentation of reason as one of the pre-requisite conditions to the development of the nation”. (15)

Pfaffenberger writes:

Technology, defined anthropologically, is not material culture but rather a total social phenomenon in the sense used by [Marcel] Mauss, a phenomenon that marries the material, the social and the symbolic in a complex web of associations. A technology is far more than the material object that appears under the sway of the western penchant for fetishism, the tendency to unhinge human creations from the social relations that produce them. (243)

For Pfaffenberger this fetishism indicates a western focus on the ‘product’ of technology, rather than the social phenomenon that produced it. The intersection between contemporary positions on African and Euro-American engagements with technology therefore bear more scrutiny than what they are currently given.

Towards the Post African Futures Exhibition

A large part of the investigations conducted in Johannesburg and Nairobi were spent speaking with young developers and creatives. Through these conversations came a mutual unpacking of critical engagements taking place in and about the digital space in contemporary culture in the different regions. The preposition for the exhibition was therefore laid by an initial engagement with these communities and not existing research. The exhibition was thereby methodologically designed to invite responses to the prepositions, a deliberate act towards including the community in the research process going forward.

In the interviews, there were discussions around whether or not the cultural criticism found through the research was only being played out in arts practice, or whether it was seen more prominently in popular culture and other community-orientated cultural engagements. Post African Futures therefore, while presented as a contemporary art exhibition, rather acts to reflect a broader set of engagements outside of what would be termed ‘fine arts’. A concern for this exhibition was that contemporary art as a format is largely un-recognised as an important cultural location in many African cultures. The exhibition goes on to interrogate the location of creative critical engagement for contemporary cultural practices. Furthermore, as the digital is largely un-addressed as a medium in contemporary art, this made framing digital engagements difficult within a ‘fine arts’ exhibition framework.

Post African Futures as a title or notion evolved from a better understanding of the regional culture of technology and from conversations in the fieldwork that pointed to trends that

outlined concerns shared across regions. One shared trend that was explored in the exhibition was the mutual concern towards the naming by the Euro-American art and music scene of any creative practice with technology coming out of Africa as Afro-Futurist. In the interviews I conducted, most artists and creatives were concerned with how they had become labelled Afro-Futurist; a label which was not their own. The reason this was treated with some caution locally was that Afro-Futurism is a historic African-American movement. Identifying practice from Africa as Afro-Futurist generalised it and negated understanding the uniquely African criticisms present in this work. The term Afro-Futurist, therefore, categorised practice without a need for a better understanding of the intentions or the culture of technology from which it evolved. So, where the re-use of Afro-Futurism may have aided in a healthy reimagining of Africa in Euro-American contemporary art and music scene, it did not favour a better understanding local practice and criticism.

Another shared trend between the two cities, one orientated specifically to their urbanism, was what was evolving out of poorer areas of the cities. Both Johannesburg and Nairobi are made up of clear economic divisions. What are known as informal settlements in Johannesburg and slums in Nairobi are probably some of the most interesting places with regard to how digital and communication technology is engaged. The reason is that these are some of the most culturally diverse locations in each city, housing not only regional migrants but also immigrants and refugees from across the continent. How cultures are negotiated in these spaces does not only cross more boundaries between language and cultures but is a location where survival and innovation are tested daily. On the one hand, this innovation is of some importance to the commercial interests of global multi-nationals that now bank on functional innovation for the poor. On the other hand, and in direct response to the former, what evolves out of these spaces is perhaps the most defined criticism of technology and the globalised information economy. How consumer digital culture is addressed in these areas is paramount to understanding this criticism.

In South Africa, a practice like iZhiKotane is a case in point. iZhiKotane is performance in the streets and public spaces of poorer areas in Gauteng and the Eastern Cape. It involves young men (sometimes women) who purchase expensive items of clothing and luxurious foods to burn and destroy in a public display of fictitious wealth (Mnisi, 2015). iZhiKotane is a challenge in the face of consumer culture, and has become an important conceptual kicking off point for many young artists engaging in criticism of the commercialisation of African urban culture. Nairobi's poorer areas allow for an interrogation of the growing interest in "digital innovation" in the guise of ICT for development via innovation. It is important to recognise that technologies hold in them the intrinsic values of the cultures that produce them, not only in the content they offer but more so in how this content is present in a system. When this is done through the lens of a saviour complex it only acts to perpetuate this thinking and the value of innovation and criticism that emerges naturally from these spaces is often overlooked.

Post African Futures became a framework through which I began to discuss and unpack the criticism the two cities hold. Post African Futures additionally proposed thinking 'post' what was being termed 'African Futures' and became an opportunity to interrogate what 'African Futures' is and by whom it is being defined. Post African Futures was a location in which I could anchor not only unique cultures of technology, but the critical engagements found in

their practices. These practices held in them actions towards alternative knowledge systems and thereby fall into what Semiotician Walter Mignolo refers to as actional methodologies, a technological de-colonization.

An Invitation to Respond

In an attempt expand on the development of Post African Futures as a framework, I sought responses in two ways. The first was as a call for papers to a panel called Post Afro-Future at a conference convened at the end of 2014 titled the Fak'ugesi Digital African Conference . The second was the Post African Futures exhibition and the focus of this paper.

Rather than take the traditional curatorial route of choosing work that I felt fitted the sentiment of Post African Futures, I produced together with the Goodman gallery a call to action that was sent out to a long list of artists and creative developers. The list was made up of people I had encountered through the fieldwork in Johannesburg and Nairobi; people I had encountered in the processes of the research in other parts of the continent; and people that the Goodman Gallery identified as working in the field. The process itself was designed to engage a community of practitioners in an extension of a research process. The exhibition therefore contributes to how Post African Futures is defined.

The outcomes resulted in an exhibition that included photography, video installation, sculptural installations, mobile media interactions, film screenings, a podcast series, series of talks by artists and a large scale musical performance. While I will not be able to speak to all fourteen works, three films and performances in this paper, I aim to engage de coloniality and highlight key works to show how they fit into the themes identified earlier..

The works on the exhibition weere either presentations of existing works, which the practitioners in question felt reflected the premise of Post African Futures, or were new works produced for Post African Futures. For the sake of organisation I will start by exploring the latter, as they are most directly a response to the call for action.

The first of the works commissioned by the Goodman Gallery was a podcast series. Designer and digital artist Jepchumba came back with a request to produce a podcast series interviewing all the artists and groups who were to participate in the exhibition. The series, now called Future Lab Africa, was created by Jepchumba based on what she perceived to be a serious lack of information and dialogue about African practitioners working in this field. Jepchumba in her rationale aligned the international art world's interest in Africa, as a new destination to which only the airport is visited and little attention is given to the greater context and history. The series therefore offered insight and intimate conversation with participants in relation to the work presented at or produced for the exhibition.

A number of works were proposed by artists living and working in Johannesburg. Unsurprisingly, these all reflect the concerns of Johannesburg's culture of the technology. Tabita Rezaire's *Sorry for Real* (2015) was a 17 minute long video holographically projected into a smoky dark space built for the work in the exhibition. The work is described by the artist as:

A virtual apology on behalf of the Western world. This fantasised smart-phone conversation questions the power imbalances within the apology-forgiveness narrative. What is the function of an apology? Who benefits from the apology? What are the power structures hidden behind our apologetic age? The work virtually captures the violent histories of slavery, colonialism, the continuous exploitation of African and Indigenous' bodies and lands, and the way these legacies shape current global systems of institutionalised oppression. Unapologetically, this cyber exchange addresses the politics of "reparations," and the need to decolonize our technologies and healing strategies.

The work is a beautifully constructed video of a cell phone hanging in holographic space, the audio is a phone call with a computerised voice of the 'Western world' which is apologising for its exploitations and histories in Africa. Simultaneously, text messages pop up on and around the screen, these text messages are from 'Africa'. In these text messages, the role and validity of the apology is questioned in response to the computerised call from 'the West'. Rezaire's work responds to a failure in society's structures to make up for and repair the exploitations of the past and is a comment on how deeply embedded colonial structures are in contemporary technologies.

Figure 1: Installation at Goodman Gallery, 2015. Artwork by Tabita Rezaire, Sorry for Real 2015.

Johannesburg based CUSS GROUP produced a large billboard advertisement that was situated in the primary, street facing windows of the gallery. These windows face Jan Smuts Avenue, a major arterial road that runs from downtown to the richer suburbs of Johannesburg. The work titled *Coming Soon (Change Initiated)* (2015) comments on the invasiveness of corporate engagement in the innovative and creative spaces of Johannesburg. CUSS GROUP focus in their practice on the issues that exist around the commercialisation of creative work. This is the fine line between critical creative practice and corporate sponsorship, and where ownership begins to make indistinct through their sponsorship, the work of young designers and creatives in Johannesburg. *Coming Soon (Change Initiated)* is described by the artists as:

A cross section of a number of elements prevalent in new Johannesburg urban regeneration. Trends that have appeared within youth culture as well as inner city property developments. The vacuousness of language and the change that is being contrived.

Stock trend creates less room to breathe within this world class African city, removing the chance of a unique voice being forged. Lifestyle, repackaged and sold back to people repeating the same colonial cycles mined previously. The city as a blank canvas, urban cliches, redundant renewal, all features of these flagship precincts.

We rented it once and we'll soon be able to rent it again.

The work of CUSS GROUP has historically engaged the important role of cultural criticism acted out in popular culture in Johannesburg. They have engaged practices such as the previously mentioned *iZihikotane* and the low fi media recycling via mobile media. *Coming Soon (Change Initiated)* speaks at how livelihoods and cultures are threatened by a

corporate understanding of what is understood as 'better' for communities and cultures in Johannesburg.

Another Johannesburg based group, NTU, responded to the call with new work. NTU is a collective started in 2015 made up of Bogosi Sekhukhuni, Nolan Dennis and Tabita Rezaire, who describe themselves as:

an agency concerned with the spiritual futures of technology. NTU seeks to enhance intersubjective virtual user possibilities by providing decolonial therapies for the digital age. Drawing from African spiritual philosophies, NTU embrace the interdependency of the organic, spiritual and technological realm to restore energetic imbalances.

NTU produced a work titled NERVOUSCONDITIONER.LIFE.001 (2015) (Figure 2). This installation presented an office environment with NTU corporate signage. In this was showcased - in a specially constructed server box made of smoky reflective glass - a server hosted on a closed local network. Alongside the server box was a workstation (similar to those found in a corporate spaces or internet cafes) at which visitors could access the content of the server. Hosted on the server was a localised chat room. The artists describe the work as:

An independent online network, created to explore the possibilities of a safe and independent space on the Internet: free of discrimination, speech control and surveillance.

NTU created its own web server on which to host NERVOUS CONDITIONER.LIFE.001 a closed network prototype on the deep web. Nervous Conditioner was specifically conceived as a safe place for people of colour to discuss, share and organise, free of the white-supremacist-patriarchal-hetero-normative suppression that governs the public Internet. While it is run via public Internet protocols, Nervous Conditioner exists on a private server which is controlled by NTU, and accessible only when installed under secure NTU conditions.

The installation is a direct comment on the Internet as a highly bigoted and racialised space, and how young Africans don't feel safe or adequately represented on it. The work additionally challenges where the ownership and origins of networked information and systems lie. Most of the world's servers exist in America and Western Europe, meaning that most traffic and information stored is orientated towards those cultures. By creating their own closed off server, the artists present their feeling of insecurity associated with the world wide web.

Figure 2: Installation view at Goodman Gallery, 2015. Artwork by NTU, NERVOUSCONDITIONER.LIFE.011 (2015)

Artistic duo Pamela Phatsimo Sunstrum and Thenjwe Niki Nkosi, also Johannesburg based, constructed a diorama into which they performed. The work titled DISRUPTER X Project: NOTES FROM THE ANCIENTS (2015) (Figure 3) extended two previous iterations of the DISRUPTER X narrative in which the legend of DISRUPTER X was constructed. The first was a theatrical performance produced on residency in France. The second was a development of the first, what the artist called an operatic anti-opera that was developed and took place in

Germany at the Iwalwewahaus African Art Archive in Bayreuth. The iteration for Post African Futures evolved from the previous two, this time a diorama styled installation on The Legend of Disrupter X. The Legend is briefly explained by the artists as follows:

X is a soldier in the Disrupter Army. The Disrupters are dissidents. They are the only force in The World still fighting against The Agency. The Agency turns living things into programmable, interchangeable pieces of data for their army. The Agency will stop at nothing to incorporate everyone and everything into their data-army.

The legend was constructed by the artists in response to debate around the archive and how museums have archived African culture and African art. The artist responded with a futuristic tale of X who intercepts and understands the communications of The Agency, and in so doing avoids capture and fights for the Disrupters. The artists describe the installation:

NOTES FROM THE ANCIENTS was a diorama featuring the work of The Archivists – the custodians of the legend of DISRUPTER X, who travel the world telling her tale. Audiences could explore the diorama to learn about DISRUPTER X's relationship to The Geomancer: a beautiful but powerful weapon that plays a vital role in her fate. The background of the diorama depicted DISRUPTER X's terrain – a lifeless landscape of abandoned mine dumps. The diorama included a live performance by The Archivists; a video display of DISRUPTER X's lineage; a recording of the legend sung as an operatic aria; a live-feed into a storeroom of the Iwalwewahaus African Art Archive in Bayreuth, Germany where her ancestors lie; and a centrally displayed hologram of the spinning Geomancer.

What is most interesting to me about all these works is that they distinctly challenge historical authoritative structures and emphasise how these are still prevalent and influential in contemporary culture. These works weave together experiences and narratives that both challenge and question those domains.

Figure 3: Installation view at Goodman Gallery, 2015. Artwork by Pamela Phatsimo Sunstrum and Thenjiwe Niki Nkosi, DISRUPTER X Project: NOTES FROM THE ANCIENTS (2015)

A new theme that did not distinctly appear in the interview process - apart from explorations into readdressing pre-colonial histories of technology - became distinctly apparent in two of the works and was reflected in others. This theme was the relationship between the spiritual and the digital. Specifically, how the digital as a material form allows for an engagement with the spirituality through an algorithmic and an aesthetic exploration. Of these was a work by Dineo Sheshe Bopape titled *I am sky* (2013), which was not produced as a response, but was presented as one. Inspired by a poem by Afro-Futurist Sun Ra, this video work allows the materiality of the digital to speak about a slippage between the physical and the spiritual. *I am sky* responds to the feeling of being present both in the world and in the spirit.

I am sky uses digital video to glide between the felt, the emotive and the known. The material quality of the digital video is used to explore and unpack the spiritual, offering a visual and aural experience for the viewer. Bopape's work is significant in that it allows for

the exploration of a knowledge system that is strongly tied to African thinking and the paranormal. The work is accompanied by a poem rather than a description, through which Bopape explores notions of being:

is i am sky...
closer to the sky (I) sang some songs,
(I wondered if/
how one can marry the sky)
On my mind for a number of years has been the 1985 poem by SunRa called 'the
endless realm'... there might be a line in the poem that says- is I am sky...
Which is where the title of the video has come from...
is I am sky... am I the sky? Is the sky i? am I the sky? Do I exists as the sky?
(beginning with existence)
'All that and this are mine, and all together they are nothing.... How treasured rich
I am...'
I have been thinking about interiority and exteriority... mirrors...
Internal mirrors/external mirrors...
One's sense self... possession/loss
The loss of self, the capturing/possession of one's self
Where and also how is the self located? (How to find it once it is lost)
Whose sky? whose green grass- all that is nothing, together they are mine,
mountains of nothing, eternal nothing
Which self, whose self, how self?
What is the sky?
Can the sky see me? could I see me?
Like in the abott book- flatland:a romance of many dimensions...
And like 'the way a pepperoni on a pizza pie cannot see the whole pie...'
During the making of it, I have visited the work of tlokwe sehume, george lewis,
sun ra and others unconsciously too!they are on a cosmic groove that I get
dazzled by from the inside...
Kerry James Marshall's works also sprung to me whilst editing the work too!!
Cyprian shilakoe.... Ralph Ellison...
There is something about the night too...
the sky too...
this nothing too,
how treasured rich I am...
I have the beauty of nothing
Looking into space- empty space- nothing space filled with nothing- (stars
planets inbetween all the nothing)
The self recedes into nothing
Shinny shimmering nothing
the eve of nothing, (a beautiful death)

Haythem Zakaria's Anamnesis (2015) (Figure 4) expands on a similar exploration of abstract spirit, though an exploration of Sufism. The digitally altered framed photographic work comes with a text written by poet Joël-Claude MEFFRE which concludes:

Haythem Zakaria's photographic vision renders visible what should only belong to the realm of the Hidden. The three polyhedral forces are only there because they contain a nebula of words compressed into the revelatory powers of an imagined effervescence. And because of this, the image leaves an atmosphere of suspense, expectation, the all-absorbing, deafening presence of an imminence about to explode. It could illustrate what Ibn Arabî has to say of the Hidden and the Absolute: "Ordinary people are utterly mistaken in their belief that the visible world is what can be seen and the Absolute a hidden mystery. In fact, the Absolute is the eternal Apparent which never went into hiding."

It was interesting that both Bopape and Zakaria felt that poetic text rather than descriptive statements should accompany their work. This practice affirms their engagement with the digital in allowing their audience to move through the visual into the spiritual. Both works, as responses to Post African Futures, speak to the artists concern with where knowledge is held. The consequence of the domination of colonial knowledge regimes is that 'other' knowledge remains hidden and here artists explore alternative knowledge repositories available through the technological.

Figure 4: Installation view at Goodman Gallery, 2015. Artwork to the left: Kapwani Kiwanga's *in Ifa-Organ* (2013) Artwork to the right: Haythem Zakaria's *Anamnesis* (2015)

In the same frame, but unlike Bopape or Zakaria, Kapwani Kiwanga presented a work that explores the role of mathematics in African religious rites. *Ifa-Organ* (2013) (Figure 4) juxtaposes an exploration of various 'technologies': the computer as a system, music as a system and divination as a system; aligning computational and logical systems with Ifa divination. On the work, the artist states:

Ifa-Organ associates Ifa; a binary divination system practiced principally in Nigeria, Benin, and their diasporas; and the barrel organ originating in eastern and central Europe. An Ifa priest in Benin performed a remote consultation at my request. This divination produced a series of signs that were then transposed onto a card for a barrel organ through perforations. When played, the card produces a repetitive music which broadcasts the oracle into public space. The perforated card is at once a sonic and visual object when inactivated by the organ. The card is displayed in the exhibition space inviting the viewer to decipher the divination codes.

The punch card of the barrel organ is reminiscent of early fortran computer punch cards and references that binary system in relation to the binary system of divination. The work was presented as a video of the artist playing the piece on a Barrel organ in the streets of France, and across the room from the video was displayed the open card book (13 x 450 cm). Kiwanga's focus on performing the divination via the barrel organ in France is a tongue in cheek commentary on the "spreading" of systems of knowledge via religion and media.

Beyond its interrogation of systems, Kiwanga's work, among others at the exhibition, brought attention to the role of performed narratives that came to the fore in how these practitioners chose to experientially 'tell' audiences about African concepts and histories. Many of these histories are seen to only reside in 'alternative' repositories.

The work of Cameroonian artist Jean Mukendi Katambayi is another example of the importance of the interaction between concept and interactive telling. Katambayi, more a self-taught philosopher and mathematician than artist, presented a work constructed a year before while Katamabyi was on residency with VANSAs in Johannesburg. When the sphere deviates to the Right, Migration or Mutation? (2014) (Figure 5) is an interactive sculptural work that explores a playful conceptual and mathematically-described understanding of African migration to Europe. The work is constructed from paper and card, and includes electronic circuits and components, making it a working and interactive 'machine' that activates both sound and light when engaged.

Katambayi explores a playful theory around why more Africans should spend time in countries closer to the poles and why people closer to the poles should spend more time in central Africa. Katambayi proposes that as most Africans live close to the equator, and therefore are in the world for more time (the centre of the equator is the thickest part of the earth and the rotation therefore larger) and people close to the poles are spending a lot less time in the world and are less tired, it is necessary for them to exchange for periods of time. The artist states, "I'm looking for the optimum meeting point of the cosmos energy. It is permanent research and a kind of performance for me." Katambayi's exploration solves a problem by constructing a mathematical 'machine' that interrogates the problem. In this case it is the problem of migration. The artist stated that in this work he challenges the notion of a shared world and shared existence within it.

The work is a conceptual machine, rather than an artwork and thereby reiterates a concern for how art and cultural practice are addressed differently in some African cultures, in which concepts are explored as social and interactive engagements rather than objects to be commodified.

Figure 5: Installation view at Goodman Gallery, 2015. Artwork by Jean Katambaryi Mukendi, When the sphere deviates to the Right, Migration or Mutation? (2015)

Kenyan film maker Muchiri Njenga produced an installation titled KT2 (2015). The installation is a continuation of the narrative he started in a short film titled Kishwateli (2011). In this Njenga begins to question the informational role of media in relation to traditional knowledge in Kenya. The film interrogates not only its effect, but the systems through which it is constructed and broadcast. KT2 was a photographic and sculptural exploration of a sequel to Kishwateli in planning. In this, the role of communal production becomes an important question for Njenga. KT2 was essentially the pre-production for the next film, in which his film sets and props, made with local crafters and makers, are presented. The artist states:

KT2 explores the relationship between African traditions, which can themselves be futuristic in nature and future technology. KT2 explores the dynamic between environment, local subcultures and high technology within a dystopian Africa.

The culture of technology of Nairobi orientates towards the role of communality and the construction of shared narratives. By showing the props for KT2 Njenga brings our attention

to his working process, which is heavily embedded in working with a community of makers and storytellers around him.

Through my research I have found that narrative, particularly in Kenya but largely on the continent, is a more comfortable, interactive and traditional way through which to produce and engage cultural critique. This is apparent and present in the works presented as responses in Post African Futures. Sam Hopkin's *Carol* (26.11.2012) *Lucy* (11.10.2012) *Moroko* (08.10.2012) (2012 - 2015) extends this understanding around the construction of social narratives. Hopkin addresses closely the role of narrative within mobile media use in Kenya. He unpacks how mobile media in Kenya is becoming intertwined with everyday life and asks how communally constructed stories manifest in these digital and mobile space. On the work, the artist states:

[...] a space for the articulation of narratives which disturb and disrupt official narratives. These counter-narratives are singular, every day and authored by the character in the film. The artist's criterion is not to represent a universal and objective truth; based on a subjective, and possibly idealised diary, these films are intended to be documents of a process, not Documentary films.

The films were represented in the gallery with a poster installation which included an SMS code for the films. Visitors SMS the code, and receive a URL on their phone with which they can access and watch the films on their own device. Hopkin's choice of medium is fundamental to the work. It was important for Hopkins that the works not be viewed in the gallery, but rather as a more public (on the street) or more private encounter through one's mobile phone.

The actions and methods these works explore are revisited in more works on the exhibition. The musical performance *The Afterlife of Mr Gold: Episode 4* itself held narratives wrapped with African mythology and pop culture, where characters were played out in contemporary dance music. The musical performances, prints, sculptures and videos throughout Post African Futures revisit alternative knowledge repositories, methodologies engaging communality in cultures of technology and the continued abrasion of Western systems to African lives. While this paper does not allow the scope to discuss all the works in full, for the purposes of this paper those discussed give a focus to the concerns faced at the intersection of culture and technology in contemporary sub-Saharan Africa.

Conclusion

This paper starts by identifying a view on technology as a socio-technical system. In this it brings attention to the concerns of one system having dominance over another. It shows how contemporary digital and communications technology within a globalised information economy is overtly orientated towards positioning technology's influence as Western and deterministic, thereby promoting its continuation. The abrasion found between this and cultures that do not hold the values of this system, or have historically been exploited by it, therefore becomes an important location for critique. It is from this juncture that Post African Futures present and interprets actions exploring this abrasion, as a dialogue towards the decolonisation of technology and culture.

The primary themes outlined in this paper and through the works presented, assist in unpacking the Westernisation of cultures and systems of knowledge through technology. These works are thereby addressed as actional methodologies that attempt to invert the development rhetoric of culture and technology on the continent. Post African Futures thereby acts, through this demonstration, to look beyond the future of Africa predicated on the needs and systems of others.

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